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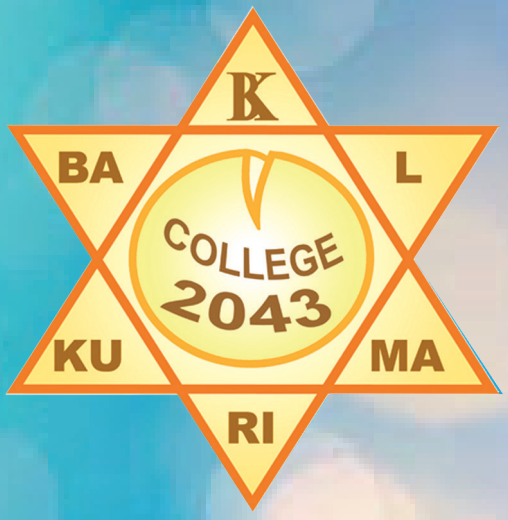

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- Independent Management audit to assess its system, effectiveness & sustainability
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- Functional Procedures for all academic and administrative units
- Daily Monitoring Mechanism consisting of Vice Principal & Program In-charges
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- Self Study Report being prepared for reassessment by UGC, QAAC
- Educational Management Information System (EMIS) established
- Regular Mini-research Program
- Regular Internship Program
- Field Visit
- Academic and Industrial Tour

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EDITORIAL NOTE

It is my immense pleasure and great privilege to present third edition of Nepalese Journal of Management Research. It is an annual, multidisciplinary, peer reviewed journal that publishes research articles in the field of General Management, Financial Management, Accountancy, Marketing, Banking, Business Administration, Managerial Economics and so on.

The objective of this journal is to include highest quality empirical, theoretical and methodological and original research papers alongside relevant and insightful reviews. It encourages interested professionals, academicians and research organizations working in the above field to share new idea or new perspectives on existing research. The essential purpose of this journal is to provide an opportunity to the faculty to publish their academic research work and make significant contribution in the above mentioned disciplines. I hope the academicians, researchers and practitioners will make good use of this valuable research finding for the publication in this journal.

At last but not least on behalf of committee and myself, I am thankful to all who contributed to fulfill our dream. First and foremost, let me thank our Chairman Mr. Pramod Kumar Shrestha who was always with us, to provide a wonderful platform to nourish the talents. I extend my sincere thanks to our Principal Mr. Jagadishwar Khanal who is always in the forefront to encourage and inspire to execute wonderful ideas. It would be totally unfair if I am not mentioning the effort of editorial team who dreamt together to bring out Nepalese Journal of Management Research, 3rd volume. I would like to extend my heartfelt thanks to contributors, advisors and peer review team for joining us in this fascinating and promising academic development.

Dr. Guna Raj Chhetri
Editor in Chief
January, 2023

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Impact of e-Banking Services on Customer Awareness in Nepalese Commericial Banks

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ABSTRACT

The main purpose of this research is to examine the impact of e-banking services on customer awareness of Nepalese commercial banks. To achieve the objective, descriptive as well as explanatory research designs were used. Primary data were collected from both questionnaires and interview that were distributed among the customers of all commercial banks. The descriptive result of the study indicates that the composite mean value of customer awareness is highest where as the mean value of reliability is the least. Similarly, the most consistent variable is privacy/security. The correlation analysis shows the positive and significant relationship among all dependent and independent variables. Furthermore, in terms of the values of the R square of the results of the regression, e-banking services such as accessibility, reliability, convenience and privacy/security explain 96% of variation on customer awareness. This study concludes that the convenience and privacy/security have significant positive effect on customer awareness of Nepalese commercial banks. More over the researcher recommend that the commercial banks should pay more attention to improve the overall level of customer awareness on accessibility and reliability.

Key words: e-banking, customer awareness, accessibility, reliability, convenience, privacy, commercial banks

INTRODUCTION

E-banking is the use of electronic means to deliver banking services, mainly through the Internet. The term is also used to refer to ATMs, telephone banking, use of plastic money, mobile phone banking and electronic funds transfers. Electronic Banking offers different online services like balance enquiry, request for cheque books, recording stop payment instructions, balance transfer instructions, account opening and other form of transitional Banking services. With online banking, individuals can check their account balances and make payments without having to go to the banking halls. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash. For example: bank customers can pay for airline tickets and subscribe to initial public offerings by transferring the money directly from their accounts, or pay for various goods and services along with utilities payments by electronic transfers of credit to the sellers account. E-Banking has made banking transactions easier around the World and it is fast gaining acceptance in Nepal. Virtually almost all Banks in Nepal have Electronic Banking. E- Banking greatest promise is timelier, more valuable information accessible to more people, at reduced cost of information access (DeYoung, 2005).

Information and communications technology (ICT) is a broad term that includes any simple or sophisticated communication devices or application like radio, television, cellular phone, computer and network hardware and software, satellite systems. And so on used in producing distribution, processing and transforming information *(Marcelle, 2001).* ICT not only means mobile and televisions but it includes the system in our day to day use like transportation means, banking, shopping and many more technological progress is a considerable driving force behind economic growth, citizen engagement and job creation for countries of all development levels *(Hanna, 2010)*. Information and communication technologies (ICTs), in particular, are reshaping many aspects of the world's economics, governments and societies. In developed countries, public officials, businesses and citizens are working together to harness the transformative power of ICTs to make services more efficient, catalyze economic development and strengthen social networks. ICT helps countries connect and control anything easily and efficiently. Globally now the strength of the countries are not just measured in the means of their military strength but also in their ICT advancement. Defining ICT as an integral part of development United National has also been

actively promoting ICT for development (ICT4D) as a means to bridge divide *(Steyn & Jonanson, 2011).*

ICT is the technology of computers, telecommunication and other devices that integrate data, equipment, personal and problem solving method in planning and controlling businesses activities. Information technology provides the means for collecting, storing, encoding, processing, analyzing, transmitting, receiving and printing text, audio and video information. ICT has empowered top management of banks of Nepal to gain greater visibility and control. It also provides a wide range of financial options and greater convenience with borderless approach. Besides, it has opened the banking services and products beyond local market, especially for Nepalese residing abroad to have banking relationship with their banks in Nepal. At present context, Nepalese banks are ready to provide world-class service to their customers. Revolution in information and technological innovations and its use in banking activities have led credence to transformation of manual system banking operations to technology based banking all over the world and in recent years information and communication technology (ICT) have been recognized as heart of banking sector while for a robust economy banking sector is playing a significant role *(Sadekin & Mukta, 2021).*

Internet banking, sometimes called as online banking is an outgrowth of PC banking. Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring fund, paying bills, viewing checking and saving account balances, paying mortgages and purchasing financial instrument and certificate of deposits. An internet-banking customer accesses his or her accounts from a browse-software that runs internet banking programs resident on the banks World Wide Web server not on the user's PC. Net banker defines a 'net internet bank' as on that provides account balance and some transactional capabilities to retail customers over the World Wide Web. Internet banks are also known as virtual, cyber, net, interactive or Web banks. The bank updates accounts and records of transaction almost instantly on the internet. This focus of banking comes with both benefits and scans. Banks needs to enhanced security measures to ensure the safety and privacy of internet transactions but also it is said that internet provides a secure medium for transferring funds electronically between bank account and also for making banking transactions over the internet. By this system, all banking activities that were conventionally done by visiting a bank can now be done through a computer with internet access *(Shaji & Mathews, 2020).*

Internet technology holds the potential to fundamentally change banks and the banking industry. An extreme view speculates that the internet will destroy old models of how bank services are developed and delivered *(DeYoung, 2005).* The widespread availability of internet banking is expected to affect the mixture of financial services produced by banks, the manner in which banks produce these services and resulting financial performances of these banks. Whether or not this extreme view proves correct and whether banks take advantage of this new technology will depend on their assessment of the profitability of such a delivery system for their services. In addition, industry analysis outlining the potential impact of internet banking on cost saving, revenue growth and risk profile of the banks have also generated considerable interest and speculation about the impact of the internet on banking industry *(Bander & Dennis, 2016).*

Banking through internet has emerged as a strategic resource for achieving higher efficiency, control of operations and reduction of cost by replacing paper based and labor intensive method with automated processes thus leading to higher productivity and profitability. However, to data researchers have produced little evidence regarding these potential changes. Nonetheless, recent empirical studies indicate that internet banking is not having an independent effect on banking probability *(Amruth, 2018).*

Among the different channels of internet banking is increasingly becoming popular because of convenience and flexibility. Under internet banking customers perform their banking activities electronically over the internet through their personal computer or laptop at time convenient to them, without having to be restricted to regular branch operating hours. Internet banking reduces not only operational cost to the bank but also leads to higher levels of customer satisfaction and retention. Internet banking is an innovative distribution channel that offers less waiting time and a higher spatial convenience that traditional branch banking with significantly lower cost structure than traditional delivery channel *(Amin, 2016).*

After the establishment of first bank, banking sector as well as bank customer have to wait nearly about 65 year for internet banking, and the Kumari Bank ltd. was the first start the internet banking in Nepal in 2002 *(Mishra, 2008).* After ten years of introduction of internet banking, it is still not popular in Nepal, people still rely on traditional way of banking. Although the major cities like Kathmandu, Pokhara, Biratnagar have good internet facilities and majority of the bank provides the internet banking in urban cities but still internet banking is in its early stage and is not utilized by most of the bank customers. Study shows that there are about 200,000 internet users in Nepal, out of which 50% user are inside Kathmandu valley. However only about 3000 (1.5%) internet

user is using internet banking *(Banstola, 2007).*

Among the BFIs, the number commercial bank customers using mobile banking services stands at 1.43 million. Mobile banking services covered under this product include account enquiry, fund transfer, and recharge phones, changing of passwords and bills payment *(Siu & Mou, 2015).*

Internet banking also uses the electronic card infrastructure for executing payment instruction and for final settlement of goods and service over the internet between the merchant and the customer, currently the most common internet payment are for consumer bills and purchase of air ticket through the website of the merchants *(Lin & Chia, 2017).*

Using an ATM, customer can access their bank deposit or credit accounts in order to make a variety of financial transactions such as cash withdrawals, check balances, or credit mobile phones.

While the strategy may complement an existing bank branch network for giving customer a range of channels through which they can access financial services, branchless banking can be used as a separate channel strategy that entirely forgoes bank branches *(Zhengwei, 2012).*

The types of financial transactions which customers may transact through telephone banking include obtaining account balances and list of latest transactions, electronic bill payment, and fund transfer between a customer and another's accounts. Service rendered through telephones banking include account balance funds transfer, change of pin, and recharges phones and bills payment *(Konalingam & Ratnam, 2017).*

Information Technology (IT) or E-business or E-commerce is not about routine information management or automation, it is about using these unique tools to create opportunities, create new market, new processes and growth or increase the creation of e-wealth *(Malhotra & Singh, 2019).*

Customer's awareness is one of the most important elements to build up trust on e-banking. Low educated people are afraid of doing e-banking operation. Problems or difficulties are directly related with customers trust. If customers trust is reduced if they face difficulties to do an e-transaction.

Neha (2020) investigated the *Customer Satisfaction on E–banking Service Quality in Public and Private Sector Banks*. This research paper aims to focuses on what customer think about the services of Public and Private sector banks. In this study, the primary data was collected from 236 respondents through a structured questionnaire. The main objective of this paper is to study the significant impact of Gender and Age on customer satisfaction towards E-Banking service quality. The scope of study has been kept limited to customers who belong to Jalandhar City. The primary data was collected for the purpose of study of customer satisfaction towards E-Banking service quality in Public and Private Sector Banks. For this study, descriptive statistics is used and Independent t-test is applied through SPSS. This study proves that on the 5% level of significance, the null hypothesis is accepted. There is no significant impact of Age, Gender and choice of public and private sector bank on the factors ease of use, conservation of time, convenience, security, accuracy, reliability, responsiveness, online request handling, frequent and overall efficiency.

Shaji and Mathews (2020) studied the *Awareness of Electronic Banking Services among Rural Women of Nelamangala, Bangalore, India.* The study seeks to examine the extent to which rural women are aware of electronic banking services. In this study analysis of the responses was made by using statistical tools such as: simple percentage analysis and weighted rank method. The current research was based on the usage of electronic banking services among rural women customers. It was an effort to examine the customers' awareness level and satisfaction level, and also helped to check whether there is any difference in the satisfaction level of the customers. As far as the awareness level is concerned highly educated customers have more awareness, and awareness levels among the younger respondents are greater compared to older respondents. So, effective measures need to take to enhance the awareness level of the customers of all age groups. In the present study, it was evident that rural women customers need more support and guidance to adapt fully to the electronic banking services offered by banks as only 15% of the rural women respondents have a good understanding of the various e-banking services.

Nyiranzabamwita and Harelimana (2019) analyzed the *Effect of Electronic Banking on Customer Services Delivery in Commercial Banks in Rwanda.* The aim of the study was to assess how electronic banking affected customer delivery channels in Rwanda commercial banks. The specific objectives include assessing the effectiveness of e-banking, analyzing the factors affecting the customer delivery system, and also finding out the affiliation that exists between customer service delivery and e-banking in the bank of Kigali. Study participants included 1215 employee and about 350000 bank clients. The total number was 351215 study participants. The sample size was 400, which included both the staff and clients. And to achieve the target objective the study applied multiple regression analysis. The study revealed that customer service delivery in Bank of Kigali was explained by the probability of 0.0374 for internet banking; by the probability of 0.0004 for mobile banking; by probability of

0.0010 for electronic tax and that are respectively expected to 3.74% & 0.04% & 0.1% and of probabilities which are less than 10%. If we consider the simple regression theory, there is a probability of less than 10% by each electronic banking factor, which represents functional fitness variability. The R^2 is 0.969, whereas the Adjusted R^2 is 0.965, which indicates estimated model goodness. Up to 96.9% of the long-run appreciation in customer service delivery is influenced by changes in internet banking; mobile banking; electronic tax as implemented by the organization. Hence, the study revealed of essential affiliation between electronic banking and the observed factors, and the customer delivery channel in Bank of Kigali. The study recommended on sensitization of clients on the utilization and advantages of electronic banking services through having public awareness programs that boost their knowledge of the service.

Research Framework

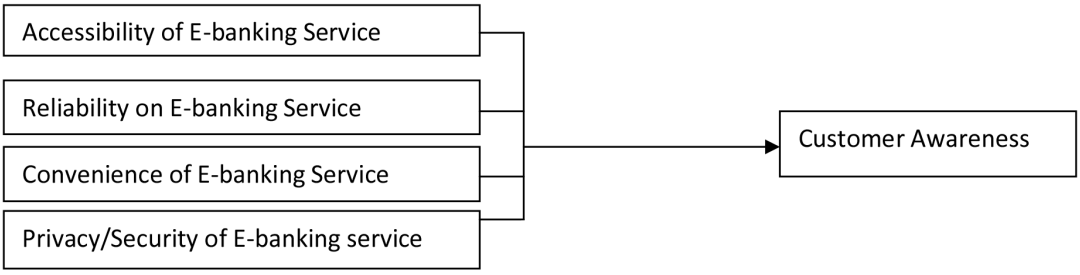

Figure: 1

The main focus of current study is to assess the influence of awareness on customers' attitude towards E-banking. For this purpose, the influence has been assessed by measuring the degree of awareness of constructs defined in Technology Acceptance Model (TAM) and of two new constructs perceived security and perceived risk. Customer awareness of E-banking has been considered significant to influence customers' attitude with respect to perceived ease of use, perceived usefulness, perceived security issues and the perceived risk. The study is expected to examine whether there is any significant relationship between the degree of awareness, perceived ease of use, perceived usefulness, perceived security and privacy, perceived risk and customers attitude towards E-banking. The study is seeking to find out the answer of the following research question:

- What is the level of understanding of customers about e-banking?
- Is there any relationship among different variables?
- Is there any impact of e-banking on customer awareness?

Objectives of the Study

The general objective of this study is to measure the customer awareness on e-banking services at Nepalese Commercial Banks. To achieve the general objective, the specific objectives are as follows:

- To measure the understanding level of customer about e-banking.
- To identify the relationship among various independent and dependent variables.
- To examine the impact of e-banking on customer awareness.

METHODOLOGY

This study is based on descriptive and causal correlation research designs. The population of this study includes all the customers of 27 commercial banks in Nepal at the end of July, 2021. Primary data were collected using a structured questionnaire technique through online. More than 2000 questionnaires were distributed to the customers through online for data collection. Among them, only 450 questionnaires were returned. The questionnaire includes demographic profiles, five points Likert Scale questions and some open-ended questions. Descriptive as well as inferential statistical tools are used for analyzing data and interpret them. Descriptive statistics tools such as mean and standard deviation used to describe result obtained and inferential statistics is used to show the relationship and impacts between dependent variables and independent variable. In inferential statistics, coefficients of correlation and multiple regression models are used. The collected data are processed, analysed and interpreted by using several tools like SPSS, Ms-excel.

RESULTS AND DISCUSSION

Results

Table: 1

Demographic profiles of customers Dimension	Frequency	Percent
Age (in years)		
Under 25	131	29.1
25-35	245	54.4
36-45	66	14.7
46 and above	8	1.8
Total	450	100
Gender		
Male	237	52.7
Female	212	47.1
Others	1	0.2
Total	450	100
Marital Status		
Unmarried	273	60.7
Married	177	39.3
Total	450	100
Academic Qualification		
Up to SLC	16	3.6
Plus 2	59	13.1
Bachelor	192	42.7
Master	176	39.1
Above master	7	1.6
Total	450	100
Occupation		
Government Service	56	12.4
Private Employee	186	41.3
Self Employed	68	15.1
Student	118	26.2
Others	22	4.9
Total	450	100
Source: Online Survey, 2021		

Table 1 shows the demographic profiles of respondents. Demographic characteristics are measured by gender, age, qualification, income level and type of employment. The percentages of male, female and other are 52.7, 47.1 and 0.2 percent respectively. Age is grouped into under 25, 25 to 35, 36 to 45 and 46 and above. The percentages are 29.1 percent, 54.4 percent, 14.7 percent and 1.8 percent respectively. Marital status of the respondents is grouped into two categories unmarried and married with the percentages of 60.7 and 39.3 respectively. Academic qualification is divided into four parts; up to SLC, +2, Bachelor Degree, Master Degree and above Master Degree with the percentages of 3.6, 13.1, 42.7, 39.1 and 1.6 respectively. Occupations are subdivided into government service, private employee, self employed, student and others. The percentages are 12.4, 41.3, 15.1, 26.2 and 4.9 respectively.

Descriptive analysis

Table 2

Composite means and standard deviation of dependent and independent Variables		
Statements	Mean	Std. Deviation
Accessibility of e-banking service	3.669	0.938
Reliability on e-banking service	3.715	0.908
Convenience of e-banking service	3.778	0.909
Privacy/Security of e-banking service	3.910	0.869
Customer awareness on e-banking service	3.956	0.964
Total	450	
Source: Online Survey, 2021		

Table 2 shows the summary of all the variables of the study through composite means and standard deviations. The highest composite average of customer awareness is 3.956 with standard deviation is 0.964. Among the factor of e-banking service "Accessibility of e-banking service", "Reliability on e-banking service", "Convenience of e-banking service" and "Privacy/Security of e-banking service" have mean value 3.669, 3.715, 3.778 and 3.910 with standard deviation of 0.938, 0.908, 0.909 and 0.869 respectively. Among them, privacy is most consistent variable.

Correlation Analysis

A Pearson correlation was run to establish how the variables were related to each other. In this section the study established the statistical relationship between independent factor (accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service and privacy/security of e-banking service) with dependent factor (level of customer awareness).

Table 3

Karl Pearson's Correlation Coefficient

	Level of Customer Awareness		
	Pearson Correlation	Sig. (2-tailed)	N
Level of Customer Awareness	1		450
Accessibility of E-banking Service	.941**	.000	450
Reliability on E-banking Service	.957**	.000	450
Convenience of E-banking Service	.966**	.000	450
Privacy/Security of E-banking Service	.977**	.000	450

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

Source: Online Survey, 2021

Table 3 shows the relationship between the level of customer awareness and accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service and privacy/security of e-banking service. All variables are positively correlated at 1 percent level of significance. There is significant positive relationship between accessibility of e-banking service (r=.941, sig= .000), reliability on e-banking service (r=.957, sig= .000), convenience of e-banking service (r=.966, sig= .000) and privacy/security of e-banking service (r=.977, sig= .000) with customer awareness. Table intended to determine the correlation between factors of e-banking service as implemented by all independent variables with customer awareness.

Regression Analysis

In this study multiple regressions were conducted in order to examine the relationship between accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service and privacy/security of e-banking service with level of customer awareness. Here, the regression between the factors of e-banking

service and customer awareness in the form of stepwise is analyzed.

It has been used to test the relationship between independent variables and customer awareness.

$$Y= \beta0+\beta1\ X1 +\beta2\ X2 +\beta3\ X3 +\beta4\ X4 +\ldots\ldots\varepsilon i$$

Where, Y = Customer awareness on e-banking service,

β0 = Constant parameter

β1, β2, β3 and β4 are the parameters to be estimated

X1 = Accessibility of e-banking service

X2= Reliability on e-banking service

X3= Convenience of e-banking service

X4= Privacy/Security of e-banking service

Table 4

Regression model of Impact of e-banking services on customer awareness.

Model		Unstandardized Coefficients		Standardized Coefficients		
1		B	Std. Error	Beta	t	Sig.
	(Constant)	-0.274	0.047		-5.876	0.000
	Accessibility of e-banking service (X1)	-0.042	0.068	-0.041	-0.618	0.537
	Reliability on e-banking service (X2)	-0.206	0.109	-0.194	-1.886	0.060
	Convenience of e-banking service (X3)	0.360	0.094	0.34	3.824	0.000
	Privacy/Security of e-banking service (X4)	0.968	0.062	0.872	15.549	0.000
	R^2=0.96 F= 2464					

a. Dependent Variable: Customer awareness on e-banking service

Source: Online Survey, 2021

It is observed that the explanatory power of the R^2 is 0.96 indicating that 96 percent variation in the level of customer awareness is explained by variation of the independent variables included in this model. The F statistic of this model is also statistically significant at 1 percent. It is hypothesized that the signs of all independents variables are positive and significant. The sign of accessibility and reliability observe with a negative impact on customer awareness on e-banking service which is just the opposite as per priori. The signs of convenience and privacy observe with a positive impact on customer awareness which is just the in favor of as per priori. It is found that other variables keeping constant, one percent point increase in privacy/security leads to 0.968 percent on the level of awareness of customers. Similarly, it is noted that one percent point increase in convenience increases by 0.360 percent on the level of satisfaction of customers if other variables keeping constant. Out of four independent variables used in above regression model, only two independent variables i.e. convenience and privacy/security are significant at 1 percent level of significance.

Discussion

The finding of this study shows that there was a positive significant relationship between all the variables of service quality and overall customer awareness. The finding for the sampled banks in Nepal confirms the empirical work of Parasuraman et al (1985).. The issue of time as discussed in the literature by Ledingham (1984) shows that time savings were essential to individuals who used electronic banking and shopping.

Additionally, the finding of this study goes in line with that of by Parasuraman, Zeithaml and Berry (1988). In their empirical work they argue that "if the expected quality of service and actual perceived performance is equal or near equal the customers can be satisfy, while a negative discrepancy between perceptions and expectations or 'performance-gap' lead to customer dissatisfaction, and positive discrepancy leads to consumer delight". This study found that customer of the various bank sampled viewed service quality to be equal to performance hence they were very satisfied with the services offered. This led to the results recorded in the study.

Furthering the discussion, the regression result of this study showed a positive relationship between all the service quality variable and customer awareness. This confirms the model used for the study. The model

indicates that there is a positive relationship between customer awarness and service quality. The degree of significance varied from variable to variable. The results show that with the exception of control and pleasure, all the other variables were significant at 5% significance level. The reason for this result was because customers of internet banking were of the indicated that they did not have control over internet banking activities. The control findings of this study runs contrarily to that of Bateson (1985) and Bowen (1986) who indicated that persons like self-service technologies because of the feel of control than the monetary savings. Since customers or individuals were thought of using the services because of other variables or dimension of service quality. The findings does not come as a surprise as authors like Dabholkar (1996) have indicated the perceive difficulty of defining the control variable makes it quiet troublesome to articulate its attribute hence its findings.

The issue of pleasure or enjoyment is also very important since it recorded an insignificant result. A further probe into this findings shows that customers were not interested in the fun aspect of internet banking but rather were interested in the utility that comes with internet baking hence the recorded results. This finding contradicts the findings by Davis et al. (1992) who stated that individuals assess more positively the fun generated by internet banking.

Sadekin & Mukta (2021) investigated the *Customers Trust on E-Banking System in Bangladesh*. The study was designed to investigate practices, impact, security, problems and prospects of e-banking in Bangladesh which are directly related with the trust on electronic banking. The result shows that customers trust depends basically on security measures, customers awareness, educational qualification, authentication of e-transaction, e-service quality of banks, bankers behavior etc which is consistent with the findings of this research. The findings have suggested that there was a strong correlation between the factors of e-banking service with customer awareness.

CONCLUSION AND IMPLICATIONS

The main objective of this research is to appraise in the customer awareness on e-banking services at Nepalese Commercial Banks. This study mainly aims at examining the e-banking factors and its impact on customer awareness. The results of correlation indicate that accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service and privacy/security of e-banking service were positively correlated with customer awareness in selected commercial banks. It is noted that there is a significant relationship between independent factor of e-banking and customer awareness.

The research indicates that there is a negative relationship between accessibility of e-banking service, reliability on e-banking service with customer awareness, whereas convenience of e-banking service and privacy/security of e-banking service with customer awareness has positive relationship. So, independent variables expect accessibility of e-banking service, reliability on e-banking service has statistically significant impact on customer awareness. The result implies the coefficients of the regression. According to the findings, independent variables were all significant in predicting the customer awareness of selected commercial banks since all the p values were less than 0.005.

Thus, the major conclusion of this study is that accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service, privacy/security of e-banking service have been found as significant factors of e-banking in determining the customer awareness in selected commercial banks. However, the significant negative relationship of customer awareness and reliability which are inconsistent with the theory and findings of most of the previous studies. Based on these results it can be concluded that accessibility of e-banking service, reliability on e-banking service, convenience of e-banking service, privacy/security of e-banking service are the significant factors of e-banking that affecting the customer awareness in selected commercial banks.

This study has important implication for both academics and Managers of the various banks visited. Given the insignificant valued obtained on the control and enjoyment of the use of internet banking services of the various banks it is essentially recommended that banks take a critical look at those variables since they can affect the profitability and the switching intent of the customers.

It is also recommended that Nepalese commercial banks invest in understanding the needs of customers of internet banking and try as much as possible to meet their various needs associated with the services provided by internet banking.

There is the need to educate majority of the banking population on internet banking. This was because most of the customers administered with the questionnaires rejected or refused to answer the questionnaire because they did not know of the services nor had minimal education of internet banking services.

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Accounting information and stock price changes in Nepalese hydropower companies

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ABSTRACT

The study aimed to examine the relationship between accounting information (earnings per share, dividend per share and book value per share) on stock price changes (volatility) in Nepalese hydro power companies. It examined the impact of dividend per share, earnings per share and book value per share on stock price changes. Out of the 51 hydropower companies listed in Nepal Stock Exchange, Butwal Power Company Limited (BPC) and Chilime Hydro Power Company Limited (CHPC) were randomly selected for the study. The study period was covered 2073/2074 to 2078/2079 and data collected through the annual reports as well as data based on the Nepal Stock Exchange. Market value per share (MVPS) was taken as dependent variable and earnings per share (EPS), dividend per share (DPS) and book value per share (BVPS) as independent variables. Multiple regression analyses was used to identify the impact of accounting information on share price changes. A positive relation was found between EPS and MVPS in both companies. However DPS and BVPS showed mixed relationship (negative and positive) with MVPS of BPC and CHPC. The EPS of BPC found positive impact on MVPS. However DPS revealed negative impact on MVPS of both companies.

Keywords: Accounting information, share price, volatility, hydropower companies.

Introduction

The changes (volatility) of share price is the systemic risk faced by investors who possess ordinary shares investment (Guo, 2002). According to Nel & Krugler, (2001), share price changes refers to the degree, to which share prices vary over a certain length of time and measures the frequency and size of fluctuations in the price of a share. Moreover it is a benchmark for measuring risk which indicate changing pace in the stock's price over a determined period; the more considerable volatility implies that the possibility of gain or loss is higher in short term. Investors are by nature risk averse, and the volatility of their investments is important to them because it is a measure of the level of risk they are exposed to. Moreover, the price of volatile stock would differ considerably over time and it is very difficult to predict the future price of this stock (Hashemijoo & Ardekani, 2012).

Investors are considered one of the most important group of decision makers that use accounting information. Reliable accounting information has been considered to be an essential pre-requisite for stock market growth as investors require adequate information about the stock market to take informed investment decision (Oyerinde, 2006). Azrak et al. (2021), indicated that the significant impact of accounting information disclosure on stock price volatility. Accounting information such as earnings per share (EPS), book value per share (BVPS) and dividend per share (DPS) helps investors to determine the expected returns on their investment and variations if any from one accounting period to another (Wang & Chang, 2008). The financial key indicator like earnings per share (EPS) informs investors and potential investors about the earning capacity of an entity for a specific period (Adams & Media, 2014) and helps to predict which entity would render the best return on their investment (Moles, Parrino & Kidwell, 2011). Smart & Graham (2012) pointed out that an entity's growth rate is determined by performance indicators such as EPS which is disclosed in the financial statements. The study by Sharma (2011) highlighted that both dividends and earnings contained explanatory power with regard to share price changes. Likewise Menaje, (2012) also identified that the EPS had a significant impact on share prices. Chang et al. (2008) found the positive relationship between growth rate of the EPS and share prices. However the study of Haque & Faruquee (2013) indicated that EPS did not correlate with share prices. Iqbal et al. (2015) pointed out that EPS was a significant determinant of share price changes in the oil and gas, and cement industry, listed on the Karachi Share Exchange for the period 2008 to 2013. Auret & De Villiers (2000) identified both EPS and dividends per share as factors that influence share prices. De Villiers et al. (2003) suggested that EPS and cash flow per share can explain share price behavior and indicated that changes in EPS could better explain changes in share prices than cash flow per share.

Dividend policy has been a strong bone of contention in the area of finance (Al-Malkawi, 2007; Al-Najjar & Hussainey, 2009). Dividends are the proportion of total residual profits distributed as dividend to shareholders (Bali, 2003; Gill, Biger & Tibrewala, 2010) and which are usually distributed in the form of cash (cash dividends) or share (share/stock dividends). It indicates the retention policy of the company as investors would always prefer higher ratio to continue to retain investment in the company (Siyanbola & Adedeji, 2014). According to Khan (2012), dividend per share is important for investors as they consider dividends not only the source of income but also a way to assess company from investment point of view. Companies also realize that investors pay close attention to their dividend returns, and makes the volatility of stock prices as important to firms as it is to investors (Okafor & Mgbame, 2011). Profilet & Bacon (2013), and Shah & Noreen (2016) suggested that share price volatility is inversely related to both dividend yields and the dividend payout ratios. Different results were presented by Hussainey et al. (2011) who found that the dividend yield of the firms listed on the London Stock Exchange were positively related to share price volatility while the payout ratio was negatively related to stock price changes. Zainudin, et al. (2018) identified a significant negative relationship between dividend payout ratio of firms and stock price volatility. In the context of the Tehran Stock Exchange, Lashgari & Ahmadi (2014) reported a negative relationship between the dividend payout ratio and stock price volatility, whereas Gunarathne et al. (2016) reported a positive relationship in case of the Sri Lankan stock market. Jahfer & Mulafara (2016) found a positive relationship between dividend yield and share price volatility. The findings of Menike & Prabath, (2014) indicated that dividend per share was most useful in predicting share prices, followed by EPS and book value per share.

The sum of the cumulative retained earnings and other entries under stockholder's equity is the book value of the equity of the entity (William, Gordon & Jeffery, 2004). Book value per share is one of the important variable which affect the market value of equity share as it is the value of own funds of a company per share and it expresses the worth of each share in a company. The book value is a reflection of the past earnings, dividend distribution policy of the company and investment decisions, hence, a high book value indicates that a company has huge reserves and is a potential bonus entity, while a low book value signifies a liberal distribution policy of bonus and dividends, or a poor track record of profitability (Pushpa & Sumangala, 2013). Khan et al. (2012) explained that book value per share has direct and positive association with the stock return in the Karachi Stock Exchange in Pakistan for the period 2005 to 2011. Further the study found that BVPS has more explanatory power than the earning yield and dividend yield. Dontoh, Radhakrishnan, & Ronen, (2004) documented that book values of equity are highly associated with stock prices volatility. Some of these studies show that the statistical association between stock prices and book equity is typically stronger than the association between stock returns and earnings.

The focus of this study was to examine the impact of information on share price in Nepalese hydropower companies. The existing empirical evidence so far is observed to be vacillating and largely polarized. The arguments have been between theories that suggest that accounting information has no effect on stock prices and those who think otherwise. Hence, the broad objective of this study is to examine accounting information and share price changes in Nepalese hydropower companies. More specifically, the objectives are:

1) To examine the relationship between earnings per share and the stock price changes.
2) To examine the relationship between dividends per share and the stock price changes.
3) To examine the relationship between book value per share and the stock price changes.
4) To identify the impact of earning per share, dividend per share and book value per on stock price changes.

Methodology and Results

Multiple regression analysis was used to describe these relationships and a correlation analysis was done amongst the variables. The dependent variable stock price changes (market value per share –MVPS) was regressed against the three main independent variables, earnings per share, dividend per share and book value per share. Butwal Power Company Limited (BPC) and Chilime Hydro Power Company Limited (CHPC) were randomly selected from 51 hydropower companies listed in Nepal Stock Exchange. The study period was covered 2073/2074 to 2078/2079 and data collected through the annual reports as well as data based on the Nepal Stock Exchange.

Table 1 Descriptive statistics

		MVPS	EPS	DPS	BVPS
BPC	Mean	491.1667	24.9067	22.2500	255.5417
	Std. Deviation	123.74072	11.00138	5.98122	29.56898
CHPC	Mean	650.6667	16.6533	20.8333	192.1717
	Std. Deviation	218.14002	6.88625	4.91596	35.60831
Combined	Mean	570.9167	20.7800	21.5417	223.8567
	Std. Deviation	188.48798	9.75429	5.27196	45.48591

Table 1 shows the mean value of MVPS, EPS, DPS and BVPS of sample companies. The mean value of MVPS is higher (650.6667 >570.9167) in CHPC than the combined mean. However the mean value of EPS, DPS and BVPS are higher in BPC than the combined mean. It indicates that the earning capacity, dividend distribution and book value of share are better in BPC than CHPC.

Table 2 Relationship statistics Butwal Power Company Limited (BPC)

	MVPS	EPS	DPS-BPC	BVPS
MVPS	1			
EPS	.520	1		
DPS	-.115	.712	1	
BVPS	-.058	.708	.972	1

Table 2 highlights the relationship between dependent and independent variables of BPC. The correlation coefficient .520 indicates moderate positive (.50 to .70) relationship between MVPS and EPS. However DPS (-.115) and BVPS (-.058) have negligible negative (-.00 to -.30) relationship with MVPS.

Table 3 Relationship statistics Chilime Hydro Power Company Limited (CHPC)

	MVPS	EPS	DPS	BVPS
MVPS	1			
EPS	.901	1		
DPS	.605	.798	1	
BVPS	.870	.979	.892	1

According to Table 3 the relationship between MVPS and DPS shows .901 (.90 to 1.00) very high positive relation. The correlation coefficient .870 indicates high positive (.70 to .90) relationship between MVPS and BVPS. Likewise the correlation coefficient .650 between MVPS and DPS indicates moderate positive (.50 to .70) relationship. It revealed that EPS, DPS and BVPS are associated with MVPS in CHPC.

Regression model:

$MVPS = \beta 0 + \beta 1\ EPS + \beta 2\ DPS + \beta 3 BVPS + \varepsilon$

Table 4 Regression coefficients statistics

Model		BPC	CHPC
Coefficients	(Constant)	215.372	-1162.557
	EPS	13.492	-32.268
	DPS	-32.525	-53.814
	BVPS	2.596	18.066
R Square		.768	.914

Dependent Variable: MVPS

Table 4 shows the regression coefficients and R Square. The independent variables EPS, DPS and BVPS explains MVPS of BPC by 76.8 percentage. Likewise the independent variables explains 91.4 percentage MVPS in CHPC. The EPS of BPC has positive impact on MVPS. However it shows negative impact on MVPS of CHPC. The BVPS of both companies shows positive impact on MVPS. However DPS has negative impact on MVPS of both companies.

Conclusion and discussion

This study investigated the relationship between accounting information variable and market value of stock price by using correlation and multiple regression analysis. This study selected two companies for the period 2073/2074 to 2078/2079. Multiple regression analysis revealed that a positive as well as negative impact of accounting variables earnings per share on the stock price changes and lies in the line of Iqbal et al. (2015) and contradicts with Haque & Faruquee (2013). Compared to the results of the developed market and developing market earnings per share showed less impact to the price in the NEPSE. DPS showed negative impact on stock price changes and lies in the line of Lashgari & Ahmadi (2014). However it contradicts with the findings of Menike & Prabath, (2014). The overall findings revealed that the higher the earnings per share, the higher the changes in a stock price. The study, contributes to current knowledge in accounting information and share price changes. In future, the findings of this research could be compared and used for further research by taking different accounting information like cash flow and operational profit on stock prices changes.

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VAT elasticity on Nepalese economy without agriculture

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ABSTRACT

This paper seeks to examine the elasticity of Value added tax (VAT) on Nepalese economy without agriculture. It, therefore, analyzes the impact of VAT on GDP in aggregate level without agriculture. This study adopts explanatory research design and attempts to determine the relationship between VAT and the GDP, exchange rate, market capitalization money supply and government spending being the intervening variables included in the model.

In order for the specification of a model of cointegrated regression model with a time series data of the variables are employed for the study period of 20 years, from 1998/99 to 2017/18. The values of all the variables are converted into real price (constant price) by GDP deflator. The GDP deflator and CPI year 2013/14 have been assumed equivalent to the base year 2013/14 according to Nepalese fiscal year. Since it is observed that residuals are not normally distributed, autocorrelation and multicollinearity problem in the model, it is necessary to improve the non-normal distribution, autocorrelation and multicollinearity problem in the model. Therefore, the data are transposed into first difference and run the model with error correction model.

The diagnostic test suggests that the residuals do not violet classical assumptions. The lagged residuals from 5.7.2 equation of Table 5.9 are statistically significant indicating the acceptable ground to take variable as cointegrated set. The result allows long-run and short-run dynamics of all the relationship between GDPWA and VAT. The estimated coefficient of VAT in error correction model shows that one percent point rise in VAT has led to 0.438 percent point increase in real GDPWA in short-run, whereas it is found 0.558 percent point in long-run. It means that short-run marginal productivity of VAT is 0.438 percent point, whereas its long-run percent point is 0.558

Keywords: Elasticity, GDP, VAT, Remittances, Exchange rate, Market Capitalization, Money Supply, Government spending,

Introduction

VAT as being the neutral tax can avoid inefficiency of some other indirect tax. This implicates that the VAT is argued to be a powerful method to promote economic growth (GDP) without agriculture. Taxing on intermediate transactions, business tax leads to the loss of the production efficiency. Sales tax also inevitably leads to loss of productivity due to the difficulty in distinguishing the final sales (Ring, 1999). Therefore, in practice, VAT is used to replace the business tax and the single stage sales tax. But some scholars believe that VAT, in simplicity and universality, has the potential advantages compared with the turnover tax, but the comparative advantage is not dramatically remarkable in economic efficiency in the thought of an ordinary person.

Income level is an indicator of the purchasing power of the people in the economy, increase in income leads to the higher demand for import of goods and services and also increase in the production level and further increase in the purchasing power of the people of the country. Higher purchasing power forces higher consumption and higher consumption increases VAT revenue collection. The factors such as exchange rate, remittance, market capitalization, money supply and government spending affect the VAT revenue. The theoretical logic behind this argument is that increase in exchange rate, market capitalization, money supply and decrease in government spending and remittance discourage the purchasing power of the people in the country. When purchasing power decreases it leads to decrease in consumption, whereas VAT is consumption-based tax so it also decreases.

Review of literature

In some developing countries, VAT is the core content of the modern tax management system as it sim-

plifies the tax management, improve tax compliance. But, VAT has also some potential disadvantages and is not conducive to efficiency. When the transaction chain once broken, VAT leads to the loss of the production efficiency (Desai-Hines, 2005). In addition, because tax system is not perfect, and the statutory tax rebate is too high, it means the VAT does not help the export and trade; hence reduce exports and domestic output. Meanwhile, VAT has a negative impact on informal sector of the economy (Piggott and Whalley, 2001, Emran and Stiglitz, 2005, Keen, 2008). Therefore, since it is not clear whether the performance of VAT is conducive to the improvement of the efficiency, there is only one empirical study, i.e. how to explore the efficiency gain or efficiency loss is a problem in the experience (Keen and Lockwood, 2010). The existing domestic research has not distinguished the composition of productivity, and many research studies only have simple narrative, or just a simple list of data, the lack of empirical econometric analysis is a weak point of these studies.

In the literature it is sometimes argued that Indirect taxes have a dominant role in the whole tax structure of developing countries like Nepal. Most of the revenue has been raised from indirect taxes, as it is easy, less expensive, and convenient method for a developing economy. Indirect taxes are excise duty, import and export tax or custom duty, Value Added Tax (VAT/GST), sales tax, entertainment tax, road tax, air flight tax, vehicle tax, etc. In any developing economy, indirect taxes occupy the most important means to finance. Among the indirect taxes VAT is the pivotal one (Tait, 1991). Khadka (2008) maintains that in Nepal, the average growth rate of expenditure over revenue during 1996 to 2008 is increasing. Under such a condition, Nepal is facing a serious problem of resource gap and dependency on foreign aid and loan. The widening resource gaps: revenue-expenditure, saving-investment and import-export gaps of the country have further affected the level of macroeconomic stability of the country (Dahal, 1996).

Six of the eight countries that form part of the SAARC comprises of Nepal, India, Bangladesh, Maldives, Sri Lanka, Bhutan, Afghanistan and Pakistan. The VAT was introduced by Pakistan in 1990, Bangladesh in 1991, Nepal in 1997, Sri Lanka in 1998, India in 2003 and the Maldives in 2011. Afghanistan and Bhutan still do not levy VAT. Afghanistan and Bhutan, levy a standard destination-based consumption type tax credit method VAT, extend right through the retail level (Khadka, 2015).

Methodology

To examine the relationship between Value added tax (VAT) and economic growth proxied by GDP in aggregate level, the study employs explanatory research design considering VAT as independent variable and GDP as the dependent variable in aggregate level, along with remittance, exchange rate, market capitalization, money supply (M1, M2), and government spending as intervening variables. In so doing, it is hypothesized that there is significant positive impact of VAT on GDP. Similarly, it is also hypothesized that the intervening variables government spending and money supply have positive relationship, while exchange rate and market capitalization have negative. In the process of using and testing the relationship between remittance and GDP with other intervening variables, error correction model (ECM) is used. Various other tests such as unit root test, DF and ADF, autocorrelation, partial correlation, correlogram test, Durbin Watson, HDW, Jarque-bera normality test, serial correlation test, heteroscedasticity, Glejser test, specification test, test of Exogeneity, structural break test, multicollinearity test, Ramsey test and Chow-test have also been used to justify the model.

The quantitative data used in the study have been collected from the Economic Survey published annually by MOF, Annual Reports of IRD, annual customs statistics, various publications of NRB and CBS, and other published sources.

The data points for these variables include annual observation from the fiscal year 1998/99 to fiscal year 2017/2018. The values of all variables are converted into real price (constant price) by GDP deflator. Particularly, real GDP without agriculture , real Remittance, real money supply, real market capitalization, and real exchange rate are calculated as nominal exchange rate (i.e. NPR to USD) multiplied by GDP deflator or CPI of USD divided by CPI of Nepal (i.e. base year 2013/14=100) over 20 years period. The GDP deflator and CPI year 2013/14 has been assumed equivalent to the base year 2013/14 according to Nepalese fiscal year. The simple linear model has been converted into natural log linear model. In order for the specification of a model of cointegrated regression model with a time series data of the variables are employed for the study period of 20 years from 1998/99 to 2017/18. Econometrically, the modeling of such behavior requires a stationary data process which is absent in many of the economic variables (Wood, 1995).

Model I: GDP without agriculture as dependent, VAT revenue and other intervening variables as independent variables

The logical relationship as specified in the research framework hypothesize that VAT revenue, remittance

and money supply have positive impact on national economy without agriculture (GDPWA), while there is a negative effect of market capitalization and government spending but mixed effect of exchange rate on national economy (GDPWA). In order to examine the effect of each of these independent variables on economic development, a multiple regression model has been used. The relationship between the dependent and independent variables has been specified as under:

= (, ,)

For the purpose of examining the factors affecting national economy without agriculture (GDPWA), the empirical models have been specified, as in equations I, II and II.

= + + +++ ++… + … .(I)

= + + ++++… …+ ...(II)

= + + ++++… … + …(III)

where,

= Represents Domestic Products without agriculture at constant price at time 't' in logarithm.
= Represents Value Added tax revenue in constant price at time 't' in logarithm.
= Represents Exchange Rate at constant price at time 't' in logarithm.
=Represents Remittance at constant price at time 't' in logarithm.
=Represents Market capitalization at constant price at time 't' in logarithm.
=Represents Money Supply at constant price at time 't' in logarithm.
=Represents Government spending at constant price at time 't' in logarithm.

*: VAT has significant impact on GDP excluding agriculture with other intervening variables***.**

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Analysis and Results

Many of the economic variables do not possess the characteristics of stationary, it is necessary to keep in mind the type of data series used in the model. Valid estimation and inference is not possible when a set of non-stationary variables is cointegrated. After the estimation of three different equations to find out appropriate variables for the estimation, an Error Correction Model (ECM) is employed to measure the VAT productivity with the use of lagged dependent variable also facilitates to obtain short and long-term effect of remittance on the GDP. The first difference data is used for ECM. The cointegration of a set of variables provides sufficient ground for specifying a corresponding error correction or dynamic equation for these variables and is compatible with long-run equilibrium behavior.

Unit root test

A unit root test verifies whether a time series variable is non-stationary using an autoregressive model. A well-known test that is valid in large samples is the augmented Dickey–Fuller test. The optimal finite sample tests for a unit root in autoregressive models are developed. Dickey and Fuller (1979) developed a procedure for testing whether a variable has a unit root or, equivalently, that the variable follows a random walk. Hamilton (1994) described the four different cases to which the augmented Dickey–Fuller test could be applied. In the process of checking whether the variables has a unit root or not. If the absolute test statistics is more than critical value then null hypothesis that the series is non-stationary cannot be accepted. That is the guidelines. However, if the absolute test statistics is less than critical value, null hypothesis can be rejected and the alternative hypothesis will be accepted.

: The variables log linear at constant price has not stationarity or unit root.

: The variable log linear at constant price has stationarity or no unit root.

Table:1
Dickey fuller, Augmented Dickey fuller and Unit root test

Variables	Test	Dickey-fuller	Augmented Dickey-fuller	p-value	Coefficient At lag	Unit root	
						t-stat ( )	p-value
	At level	-1.9662 (-3.029)	-3.0299 (-1.4044)	0.5581	-0.0471	1.238 (812.40)	0.000
	At first difference	-1.9628 (-4.125)	-3.0521 (-3.9937)	0.0081	-1.4106	1.6245 (309.399)	0.000
	At level	-1.9662 (0.3950)	-3.0299 (0.2921)	0.9712	0.0124	1.3581 (196.271)	0.000
	At first difference	-1.9614 (-4.6728)	-3.0403 (-4.8812)	0.0013	-1.1717	2.1093 (62.918)	0.000
	At level	-1.9601 (-1.4005)	-3.0299 (-3.1243)	0.0417	-0.01874	1.2948 (159.197)	0.000
	At first difference	-1.9614 (-3.5551)	-3.0403 (-3.4501)	0.0226	-0.8662	1.8292 (56.0503)	0.000
	At level	-1.9601 (-0.5294)	-3.0299 (-0.9999)	0.7312	0.0746	1.2805 (144.245)	0.000
	At first difference	-1.9644 (-3.7019)	-3.0655 (-3.6319)	0.0174	-1.3269	1.7718 (51.8051)	0.000
	At level	-1.9601 (0.3886)	-3.0299 (0.2740)	0.9701	0.0140	1.2857 (401.905)	0.000
	At first difference	-1.9614 (-4.1423)	-3.040 (-4.0708)	0.0065	-1.0714	1.7992 (143.491)	0.000
	At level	-1.9601 (-0.5063)	-0.30299 (-0.4639)	0.8783	-0.0614	2.1073 (113.8986)	0.000
	At first difference	-1.9614 (-5.4741)	-3.0403 (-5.3507)	0.0005	-1.2857	-12.910 (-6.2871)	0.000
	At level	-1.9601 (-1.5863)	-3.0299 (-1.7535)	0.3903	-0.2887	1.2420 (375.850)	0.000
	At first difference	-1.9614 (-6.8129)	-3.0403 (-6.6097)	0.000	-1.4639	1.6378 (142.2958)	0.000

It is evident from Table: 1 that the variable has the p-value that is 0.5581 > 0.05 so it cannot reject the null hypothesis, meaning that the variable at level has a unit root. The test statistics guidelines indicate that if test statistics is more than critical value at 5%, it cannot reject null hypothesis but the test statistics -1.404466 and critical value at 1%, 5% and 10% is less than the test statistics. So it cannot reject null hypothesis, meaning that, has a unit root and all the other variables , , , have the P-value >0.05, so it cannot reject null hypothesis, meaning that all the variables have a unit root at level. In addition, the coefficient at lag one is also negative i.e. -0.047171of all the variables, so the model is viable. ***When the Variables are converted into first difference:*** *A*fter the first differences level of the probability or the p-value that is 0.0081<0.05. So, it can reject the null hypothesis, meaning that has no unit root or stationary after the first difference, including all variables in the model.

Correlogram test

A stationary time series is one whose statistical properties such as mean, variance, autocorrelation, etc. are all constant over time. In various times lag the probability value or p-value < 0.05 indicates the null hypothesis cannot be rejected, which means that the variables have autocorrelation at level. By checking all the variables including variables,,, and . In various times lag the probability value or p-value < 0.05 indicates the null hypothesis cannot be rejected, meaning that the variables have autocorrelation at level. At first difference level correlogram an image of correlation statistics is ups and downs and highs and lows changes indicate very low changes and ups and downs, which means there is no presence of autocorrelation. This randomness is ascertained

by computing autocorrelations for data values at varying time lags. In various times lag, the probability value or p-value > 0.05 indicates the null hypothesis can be rejected which means that the variables have no autocorrelation at first difference level. All the inclusion variables have checked its autocorrelation by using correlogram.

Regression results: GDP without agriculture as dependent, VAT and other intervening variables as independent variable.

The logical relationship as specified in the research framework hypothesizes that national GDP without agriculture (GDPWA) is positively affected by VAT revenue, remittance and money supply, while there is a negative effect of market capitalization and government spending. For the purpose of examining the factors affecting national economy without agriculture GDP (GDPWA), the empirical models have been specified. As given in equations I, II and III.

= + + +++ +++ (5.7.1)

= + + ++++… …+ … (5.7.2)

= + + ++++… … + … (5.7.3)

Where,

= Represents Gross Domestic Products without agriculture at constant price at time 't' in logarithm.
= Represents Value Added tax revenue in constant price at time 't' in logarithm.
= Represents Exchange Rate at constant price at time 't' in logarithm.
= Represents Remittance at constant price at time 't' in logarithm.
= Represents Market capitalization at constant price at time, 't' in logarithm.
= Represents Money Supply at constant price at time 't' in logarithm.
= Represents Government spending at constant price at time, 't' in logarithm.

The model of regression equations I, II and III specifies for economic development without agriculture as dependent variable in aggregate level and the Value Added Tax revenue () as independent variable and exchange rate remittance , market capitalization money supply and government spending as intervening variables.

The long-run cointegrating economy of the country (GDP) is estimated using ordinary least square (OLS). In this study, regression has been used to predict productivity of VAT revenue collection. Different test statistic has also been employed to identify the violation of multiple regression assumption. This represents the second model of the specified model. The results are presented in Table: II

The results of the models describe the direction and magnitude of the relationship between dependent variable economic development without agriculture (GDPWA), independent variable, VAT revenue and other intervening variables in the specified model. The constant of the entire model has positive, which means that the model has been positive impact on economic development without agriculture (GDPWA). The regression results of all the three different equations provide equation II as an appropriate model. It is because the sign of the coefficient of all the variables are as per the expectations. The coefficient of VAT revenue, remittance, market capitalization and money supply are positive while sign of exchange rate appeared with negative. Moreover, the coefficient of the variable including in the equation II also provides more satisfactory results as compared to other two equations I and III

Table: II
Regression of GDP without agriculture with VAT and other intervening variables

Parameters/variables	Equation: I	Equation:II	Equation: III
Constant ()			
	[0.467248]	[0.160873]	[0.43857]
	{7.35850}	{19.19504}	{7.24182}
VAT revenue (			
	[0.199118]	[0.0626837]	[0.167388]
	{3.00730}		{2.64102}
Exchange rate (			
	[0.093615]	[0.0923954]	[0.0959691]
	{-1.137080}	{	{-0.979031}
Remittance (			
	[0.027257]	[0.0254700]	[0.0267950]
	{1.437461}	{1.824025}	{1.87614}
Market Capitalization (			
	[0.029848]	[0.0294351]	[0.0289024]
	{0.228376}	{0.197078}	{0.715704
Money Supply (	0.067377	0.0430533	---
	[0.049464]	[0.0385091]	---
	{1.362147}	{1.1179999}	---
Government Spending (		---	0.0105864
	[0.282932]	---	[0.229874]
	{-0.799943}	---	{0.046037}
Adjusted	0.983742	0.988328	0.987288
Durbin –Watson	1.5875	1.236159	1.281280
F-statistics			
Jarque-Bera statistic			
Breusch-Godfrey LM :	1.418	3.586	3.4450
Breusch- pagon	5.140	4.878	4.099
Glejser test	5.288	6.141	4.391
RAMSEY TEST: :			
ARCH Observed:	0.669	0.581	0.393
Chow test			

Figures in parentheses [ ], { } indicates standard error and t-statistics of the concerned variables and p-values

Significant at (0.01) 1% level
Significant at (0.05) 5% level
Significant at (0.10) 10% level

It is because the coefficient of all the variables is significant too. This indicates the inclusion of appropriate and relevant variables in the model. The regression coefficient also shows the presence of regression as the F-test is significant at more than 99 percent confident limit. Similarly, the coefficient of determination is 0.988 indicating that 98.8 percent of the variations in GDP are explained by the variation of the regressors included in the model.

Durbin Watson test: Durbin Watson d statistics of the model is 1.5875, 1.236 and 1.281 that are shown in Table II using VAT and 5 intervening variables with 20 observations and the table values of upper and lower bound at 5% level. The result of DW test has been reported in Table 5.8, with the table values of upper and lower bound of d at 5 percent level. The econometric theory points out that the d-statistics has to lie between) and) to confirm autocorrelation in the model. From the result, it shows that d-statistics 1.5875, 1.2361 and 1.2812 lie between upper bound) and) [i.e.< d <]. Thus, it confirms absence of auto correlation in the entire model, whereas the value of DW d statistics lies in indecisive area.

Normality test: Table II presents the application of the JB statistic which is 9.7057, and the probability of obtaining such a statistic under the normality assumption is 0.007<0.05. Therefore, the null hypothesis has been rejected indicating that the error terms are distributed normally.

Serial correlation test: ***Null hypothesis: There is no serial correlation in the residuals.*** Observed is 1.41805 and the p-value is 0.2337>0.05. So, the null hypothesis is not rejected that means there is no serial correlation in the model.

Heteroskedasticity test: Null hypothesis: ***there is no heteroskedasticity.*** The observed is 5.14015 and p-vale i.e. 0.5770>0.05. Therefore, null hypothesis is not rejected, implying that there is no heteroskedasticity in the residuals of this model.

Glejser test: *The observed value* is 5.28810 and p-value i.e. 0.6417>0.05. So it cannot reject null hypothesis, which means there is no heteroskedasticity in the residuals of this model.

Specification test: *Null hypothesis****: dependent variable is stable.*** The 8.8923 and p-value i.e. 0.0114 < 0.05. Hence, it cannot reject null hypothesis, indicating that the predicted value or value of dependent variable is stable over the study and prediction period.

Structural break test: 96.593815 and p-value i.e. 0.0176<0.05. So, it can reject null hypothesis and accept the alternative hypothesis, implying that there is no structural break on time series data used for the model of the study period.

Multicollinearity test: Variables	VIF (I)	VIF(II)	VIF (III)
VATLOGC	150.399	15.299	100.165
EXRLOGC	2.611	2.611	2.862
RLOGC	8.355	7.488	7.610
MCLOGC	10.231	14.412	12.758
MSLOGC	14.438	6.346	-----
LNGSPDC	161.664	-----	100.571

The values 150.399, 10.231, 14.438 and 161.664 are fairly very large. The VIF for the predictor indicates that the variance of the estimated coefficient of *Weight* is inflated by a factor of VIF because *Weight* is highly correlated with at least one of the other predictors in the model or the VIF>10. Therefore, null hypothesis can be rejected and alternative hypothesis be accepted. That means explanatory variables are collated or the model has Multicollinearity problem. Again, this variance inflation factor indicates that the variance of the weight coefficient is inflated by a factor.

From the above three equations I, II and III the second equation II is being employed for the error correction model. The time series data is in the model involves at first difference. The residual of the equation II is taken as independent variable as shown in equation IV as in Table III. Since it is observed that residuals are not normally distributed, autocorrelation and multicollinearity problem in the model, it is necessary to improve the non-normal distribution, autocorrelation and multicollinearity problem in the model. Therefore, the data are transposed into first difference and run the model with error correction model.

Error correction model (ECM) without Agriculture GDP

With the identification of cointegration of set of variables, the dynamics of economic development prox-

ied by GDP is explored. Following the general to specific modeling methodology, an initially over-parameterized model with one lag on the dependent and independent variables has continually specified and re-parameterized until a parsimonious representation of data generation is meant for obtaining careful and sufficient representation in terms of degree of freedom. The inclusion of large number of lag length reduces the degree of freedom. However, because of the small sample size (need to preserve the degree of freedom) the initial model includes only one lag on the dependent and independent variable.

Δ () = + + + +

+ + + - - (IV)

Where Δ is the first difference operator, is the lagged error correction term from equation II of Table II. The use of first difference lagged GDPWA facilitates to obtain long-run and short-run impact of the variable included in the model.

Table III
Cointegrated Regression Results

$\Delta(\ln GDPWA_{ct}) = \beta_0 + \beta_1 \Delta \ln VAT_{ct} + \beta_2 \Delta \ln EXR_{ct} + \beta_3 \Delta \ln R_{ct} + \beta_4 \ln \Delta \ln MC_{ct} + \beta_5 \ln \Delta \ln MS_{ct} + \beta_6 \Delta \ln ECM_{t-1} + \beta_7 \Delta \ln GDPWA_{t-1}$

$0.00689 + 0.43859^{*} \Delta \ln Vt_i + 0.07838 \Delta \ln EXR_i + 0.043779\ \Delta \ln R_i - 0.03012 \Delta \ln MC_i$

[0.00732] [0.10781] [0.11612] [0.04249] [0.03339]
{0.9419} {4.06801} {0.6750} {1.02998} {- 0.9019}

$+0.020 \Delta \ln MSi + 0.846^{**} \Delta \ln ECM_{t-1} - 0.214 \Delta \ln GDP \beta_{t-1}$

[0.02247] [0.36556] [0.19951]
{0.8900} {2.3153} {- 1.070}

$F_{(7,10)}$: $(3.727307)^{**}$ Adjusted R^2 : 0.528984
DW: 1.9239

Jarque-Bera	J-B stat	: 21.129
Breusch-Godfrey LM	χ^2	: 0.4297
Breusch- pagon	χ^2	: 2.04211
Glejser test	χ^2	: 3.8793
RAMSEY TEST -F	$_{(2,7)}$	: 3.9004
ARCH Obs.	R^2	: 0.188760
Chow-test	$F_{(7,3)}$	: 1.69792

Multicollinearity test:

Variables	VIF
VATLOGC_1	1.157
EXRLOGC_1	1.361
RLOGC_1	2.546
MCLOGC_1	2.194
MSLOGC_1	1.458
RES_1	2.511
GDPWALOGC_2	1.531

Figures in parenthese [ ], { } and ( ) indicates standard error, t-statistics of the concerned variables and p-values.
(*) *Significant at (0.01) 1% level*
(**) *Significant at (0.05) 5% level*
(***) *Significant at (0.10) 10% level*

Table III, shows that, the necessary econometric conditions are satisfied in the model. This indicates the presence of a sound model of GDPWA and VAT relationship and the prediction of VAT productivity. The first difference of intervening variables market capitalization, exchange rate, remittance, money supply and error term

keeping constant, there is a positive significant impact of VAT in the economic development of Nepal.
The first order conditions of statistics as shown by F-statistics, t-statistics, and in the table are satisfactory. The calculated value of F-statistics is higher than the table value at 0.01 levels. The coefficient of VAT, market capitalization, remittance, exchange rate and money supply error and lagged GDP are simultaneously and jointly equal zero that rejects the null hypothesis in favor of the alternative hypothesis. The shows that the explanatory power of the model is 0.528 indicating that 52.89 % of the variation of GDP is explained to the extent of 52.8 percent variation of the independent variable in the model.
The diagnostic test suggests that the residuals do not violet classical assumptions. The lagged residuals from 5.7.2 equation of Table 5.9 are statistically significant indicating the acceptable ground to take variable as cointegrated set. The result allows long-run and short-run dynamics of all the relationship between GDPWA and VAT. The estimated coefficient of VAT in error correction model shows that one percent point rise in VAT has led to 0.438 percent point increase in real GDPWA in short-run, whereas it is found 0.558 percent point in long-run. It means that short-run marginal productivity of VAT is 0.438 percent point, whereas its long-run percent point is 0.558
Normality test: *Null hypothesis: residuals are not normally distributed.* Since Jarque-Bera p-value is 0.000028 < 0.05 at 5% significant level, null hypothesis is rejected and alternative hypothesis is accepted, meaning that residuals are normally distributed after the first difference level with error correction model.
Durbin Watson test: *Null hypothesis: residuals are correlated:* DW test-statistics is 1.9239 and p-value is 0.039 < 0.05 that is significant at 5% level, which means that null hypothesis is rejected and alternative hypothesis accepted. This implies that residuals nave no auto correlated after first difference. The econometric theory points out that the d-statistics has to lie between) and) to confirm autocorrelation in the model. From the result, it shows that d-statistics 1.9239 lies between upper bound) and) [i.e.< d <]. Thus, it confirms the absence of auto correlation in the error correction model.
Serial correlation test: *Null hypothesis: There is no serial correlation in the residuals*. Since observed is 0.4297 and the p-value is >0.05, null hypothesis cannot be rejected implying that there is no serial correlation in the model.
Heteroskedasticity test: *Null hypothesis: there is no heteroskedasticity.* Since the observed is 2.04211 and p-vale is 0.9575 >0.05, null hypothesis cannot be rejected, indicating that there is no heteroskedasticity in the residuals of this model.
Glejser test: *Null hypothesis: there is no heteroskedasticity in the residuals.* Since the observed value is 3.8793 and p-value 0.7936 > 0.05, null hypothesis is not rejected, meaning that there is no heteroskedasticity in the residuals of this error correction model.
Specification test: *Null hypothesis: dependent variable is stable.* Since the 3.9004 and p-value is 0.0657 < 0.10, the null hypothesis is not rejected implying that the predicted value or value of dependent variable is stable over the study and prediction period.

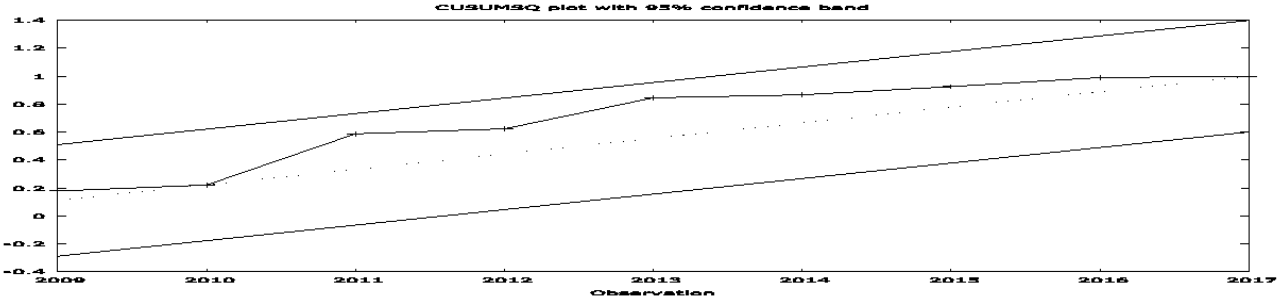

Figure: 5.2 shows the predicted value within the upper bound lower bound and the predicted value. It can be well observed from the figure that the predicted value is perfectly stable between the upper bound and lower bound.

Multicollinearity test: Null hypothesis: explanatory variables are not correlated. The VIF < 10. Hence, null hypothesis is not rejected indicating that explanatory variables are not collated or the model has no multicollinearity problem. Again, this variance inflation factor implies that the variance of the weight coefficient is not inflated by a factor. The estimated value of Y has normally moving around the actual value of Y. The model is the best fit.

Conclusion

The study sought to examine the impact of VAT on the economic growth in Nepal during FY1998/99 and FY2017/2018 using regression analysis. Unit root, cointegration, Correlogram test, Durbin-Watson test, error

correction model, and cointegration techniques have been used in the econometric procedure. The results of the study suggest that VAT has significant impact on the economic growth both in the short and long run. This implies that the government should develop and implement such policies which could utilize the VAT to the economic development of the country.

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Motivating Employees through Job Design and Compensation: An Observation

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ABSTRACT

This study aims to examine the relationship and impact of job design and compensation on employee motivation. It is based on primary data obtained by distributing questionnaires to 15 Nepalese business organizations. The results show that job design has a significant positive relationship with employee motivation. In the same way, the results demonstrate that compensation has a significant positive relationship with employee motivation. In fact, employees who think their jobs are well-designed are highly motivated at work. Moreover, employees are highly motivated at work when they perceive a fair and efficient compensation system. Therefore, to enhance employee motivation, organizations must redesign job policies and foster employee trust. They also need to develop trusting compensation and incentive systems for their employees to increase employee motivation.

Keywords: Business organizations, Compensation, Job design, Employee, Motivation

Introduction

Motivation is the act of increasing employee enthusiasm. It is one of the important aspects, which is crucial for the success of business organizations (Tumi *et al.,* 2022). However, motivating employees is one of the key challenges for today's organizations. Both line managers and HR managers need to devote a lot of time and energy to motivating employees and improving their performance and productivity. It is believed that how motivated individuals are and how well they perform at work are significantly influenced by the types of jobs they are assigned and the compensation they receive. Well-designed jobs and an equitable compensation system lead to improved individual and group organizational performance outcomes, such as their membership (joining/leaving an organization), reliable role behavior, and innovative/spontaneous activity (Ugboro, 2006).

As new types of technology and communication across numerous industries are made possible by technology, the nature of the job is changing (Gagné *et al.,* 2022). In such a case, effective job design is a key factor that motivates employees. It is a concept that describes achieving goals and objectives by arranging the tasks and responsibilities to be carried out into a unit of work. Moreover, it illustrates the nature of work and how it affects the workers. It refers to a range of employment elements that affect what people do at work and how successfully they can accomplish it, from internal and external organizational aspects to how tasks are organized (Pradhan, 2020a). Work can be made highly specialized through job design, and such well-designed tasks are crucial for establishing employee management that is motivated (https://www.ukessays.com/essays/management/the-impact-of-job-design-on-employee-motivation-management-essay.php). Furthermore, compensation is one of the key aspects that affect motivation, since people are naturally more likely to work better when they believe that their efforts will result in a suitable compensation or return. Even though people work hard for a variety of reasons, today's society and competitive economic climate have elevated compensation to the status of possibly the most significant motivational driver (Pradhan, 2020b). Conventional work design theories concentrate on developing or altering the nature of the employee's employment to enhance their psychological state and, as a result, improve performance outcomes (Grant & Parker, 2009). Based on these discussions, it appears that both job design and compensation can help to boost employee motivation.

Hence, this study aims to address this reality by enquiring about the effect of job design and compensation on employee motivation considering the Nepalese context. The main objective of this research study is to assess the job design and compensation system in Nepalese organizations and examine their impact on employee motivation. In this study, the characteristics of work design are considered to be skill variety, task identity, task significance, autonomy, and feedback. Similarly, compensation includes both monetary and non-monetary advantages and rewards. Extrinsic and intrinsic rewards may both serve to motivate employees.

Review of Literature

Conceptualizing Employee Motivation

Motivation is a key factor in determining an individual's action, together with capability (such as talent) and opportunity (such as resources) (Boxall & Purcell, 2003). When someone is motivated, they are more likely to engage in an activity. A person's motivation can provide him/her the strength s/he needs to work hard, persevere for a while, and not give up easily when faced with challenges on the way to a goal. Consequently, a person's motivation is crucial and the key factor in making something successful (Samosir *et al.,* 2021).

Motivation is important in team-based environments as well as where employees work independently (Pradhan, 2020b). In order to establish and sustain high levels of performance, motivation entails coordinating employee objectives and values with the organization's mission and vision (Campbell, 2007). Motivation drives employees internally to take the necessary actions to complete the tasks or goals assigned to them (Sohail, 2014). Most people believe that motivation is an inside phenomenon. Yet, because employees are a part of a wider organizational structure, it is important to acknowledge that organizational-level factors also have an impact on employee motivation. The evaluation, feedback, involvement, job design, and compensation systems are significant organizational practices that affect employee motivation. Employee motivation at work is also influenced by company culture as well as workplace rules and practices pertaining to diversity, development opportunities, and job security (Boswell *et al.,* 2008).

Conceptualizing Job Design and Hypothesis Development

As a significant factor in determining an individual's motivation and effectiveness at work, job design has attracted significant theoretical and empirical research in the 20th century. The necessity to consider the evolving workplace circumstances in order to more thoroughly comprehend the impact of job design in this evolving environment is a significant finding from the literature on job design (Fried *et al.,* 2008). Job design entails planning the elements of a job as well as the interactions among team members. The tasks that are necessary for a particular job are determined by the job design. In order to meet both the social and personal needs of the jobholder and organizational and technological requirements, it also determines the contents, processes, and interactions of occupations (Armstrong, 2006).

Job design is the function of putting tasks, duties, and responsibilities into an organizational unit of work (Opatha, 2002). It is the approach of organizing the contents, processes, and relationships of employment in order to fulfill organizational goals and objectives as well as job holders' satisfaction. Job design can be done in a number of ways. Aswathappa (2016) outlined numerous techniques to job design, including job rotation, job engineering, job enlargement, and job enrichment in this regard. Performance is positively associated with one's sense of job significance, importance in the eyes of others, self-awareness of one's competence, and decision-making flexibility (Ambrose *et al.,* 2013).

Several job design ideas have supported scholars and practitioners in describing, clarifying, and altering employee experiences and behaviors (Hackman & Oldham, 1980). Fried and Ferris (1987); Hackman and Oldham (1976) show that job design has an impact on behavioral outcomes like performance, absenteeism, and turnover, as well as psychological outcomes like job satisfaction, and internal and work motivation.

Job design is the process of combining a variety of tasks, responsibilities, and duties to produce a composite that people can carry out in their work and view as their own. It is essential to complete the task effectively, affordably, dependably, and safely. It also serves as the foundation for personal fulfillment and professional success (Torrington, 2011). Many previous studies (e.g., Amstrong, 2012; DeNisi & Griffin, 2008; Guest, 2002) have shown the effects of job design on employee motivation. Therefore, the goal of job design is to match human characteristics to job requirements that ultimately motivate employees to do their organizational jobs. Based on these observations, this study proposes the following hypothesis:

H1: There is a significant relationship between job design and employee motivation.

Conceptualizing Compensation and Hypothesis Development

A company pays its employees for the work they do. While the majority of people mistakenly believe that pay and compensation are synonymous, the truth is that compensation encompasses far more than just the financial benefits offered by a company (Surina *et al.,* 2015). Compensation includes all monetary gains, as well as tangible services and benefits that workers receive in exchange for their labor (Milkovitch *et al.,* 2008). Employee compensation, according to Dessler (2011), includes all forms of payment made to employees as a result of their job. For employees, compensation is the most crucial factor. Compensation includes things like a

salary, gift, paid time off, bonuses, and incentives that an employee receives as feedback on their job.

According to Henderson (1989), compensation is a broad term that refers to anything that a company is able or willing to offer in exchange for an employee's contribution. An organization's productivity and human resource management are directly related to one another. If employees are managed properly, including through job analysis, recruitment, training, and motivating methods like compensation, they are likely to deliver good performance in their duties, which will increase the organization's total productivity (Ichniowski *et al.,* 1997).

According to Campbell (2007), as the market becomes more competitive, it is clear that businesses must pay special attention to the contribution of employees in creating a competitive edge. Campbell (2007) also notes that highly motivated individuals are top performers who consistently produce high-quality results, maintain high levels of productivity, and overcome challenges and obstacles. For at least their most fundamental needs and desires, most people are driven by money. The most obvious extrinsic incentive is compensation in whatever form, because it serves as the carrot that most individuals seek (Amstrong, 2012). Catanzaro (2001) asserts that compensation has a favorable impact on employee motivation. The idea is based on psychological research and theories of work motivation that aim to raise employee performance and satisfaction and, in turn, boost organizational productivity and efficiency (Campion *et al.,* 2005). Many previous studies (e.g., Amstrong, 2012; DeNisi & Griffin, 2008; Guest, 2002) have shown the effects of compensation on employee motivation. Based on these observations, this study proposes the following hypothesis:

H2: There is a significant relationship between compensation and employee motivation.

Research Methodology

This is a descriptive, correlational, causal comparison type of research. It is based on primary data obtained by distributing questionnaires to 15 Nepalese business organizations. To examine the employees' perception of job design, compensation, and motivation, simple random sample processes were utilized to distribute questionnaires to them. However, employees who have fewer than six months of experience in their current job were not included.

Paper-based questionnaires were given out and collected during several follow-up visits to ensure that as many employees as possible responded. A total of 300 questionnaires were circulated, and 205 completed questionnaires with a response rate of 68.33 percent were collected. The responses of respondents were evaluated on a five-point Likert scale (strongly disagree = 1 to strongly agree = 5). The data was analyzed using descriptive and inferential statistics. Moreover, a reliability test has been used to ensure that the results are accurate. Table 1 presents the demographic characteristics of the respondents:

Table 1: Demographic Characteristics of Respondents

Demographic Characteristics		Number	Percent
Gender	Male	152	74.15
	Female	53	25.85
Age (in years)	Below 30	58	28.29
	31–35	103	50.24
	36–40	30	14.63
	41 and above	14	6.829
Education	High School (+12)	20	9.756
	Graduation	126	61.46
	Masters' Degree	59	28.78
Experience (in years)	up to 1	28	13.66
	2–6	105	51.22
	7–12	43	20.98
	12 and above	29	14.15

Results and Findings

Descriptive Statistics and Correlation Analysis

The means and standard deviations of the employees' perceptions of the study's variables, as well as the Cronbach alpha for each variable and its corresponding variables, are shown in Table 2. Also, it displays the correlations among all the study's variables.

Table 2: Descriptive Statistics, Correlation Results and Reliability Coefficients

Study Variables	Mean	S.D.	JD	Com	EM	Cronbach Alpha
Job Design (JD)	3.51	0.79	**1**			0.91
Compensation (Com)	3.48	0.81	0.39*	**1**		0.93
Employee Motivation (EM)	3.69	0.71	0.64**	0.69**	**1**	0.87

***Note**:*
*Correlation is significant at *p<0.05, **p<0.01 (2-tailed).*
Cronbach alpha values for all of the variables are more than 0.70. Sekaran (2006) emphasizes that the measurement instrument is better the higher the coefficients. So, it may be said that the data gathered is a "good fit" for the study. In conclusion, the instruments used to measure each variable in this study are accurate enough and produce useful information.

All of the variables have means that are more than 3.00, as shown in Table 2. In the meantime, these three variables' standard deviations are under 1.00. The mean for job design is 3.51, and the S.D. is 0.79. While the mean of compensation is 3.48 and the S.D. is 0.81. Employee motivation has a mean of 3.69 and an S.D. of 0.71. The findings show that employee motivation and compensation have the highest association ($r = 0.69$, $p<0.01$), whereas job design has the lowest significant correlation ($r = 0.64$, $p<0.01$).

Inferential Statistics

In this section, the regression analysis is used to find the impact of job design and compensation on employee motivation. The regression result is as follows:

Table 3: Regression Results

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	18.4	0.72	25.56	0.00
Job Design	0.52	0.078	6.572	0.00
Compensation	0.86	0.167	5.171	0.00

$R^2 = 0.839$, Adjusted $R^2 = 0.837$, F-Value = 338.679, Sig = 0.00
*Note: *p<0.05, **p<0.01, ***p<0.001*

According to Table 3, the R^2 value is 0.839, which suggests that this model explains 83.9 percent of the overall variation, with other factors not included in the study accounting for the remaining part of the explanation. Because the F- value is significant at the 1% level of significance, as shown in the table, the multiple regression model utilized in this study is fit and adequate. While the significant value is 0.000 ($p<0.001$), both the job design ($\beta = 0.52$) and the compensation ($\beta = 0.86$) have a substantial effect on employee motivation. The result demonstrates the significant relationships between employee perceptions of their own motivation, job design, and compensation. Hence, the two hypotheses —H1 and H2— are both supported. In light of this, both variables serve as predictors of employee motivation. In contrast to job design, compensation has a greater influence on employee motivation.

Discussion and Conclusion

This study aimed to examine the relationship and impact of job design and compensation on employee motivation. The results show that job design has a significant positive relationship with employee motivation. It ultimately affects their level of motivation. These findings align with the literature that is currently accessible (i.e. Fried *et al.,* 2008; Hackman and Oldham, 1976; Amstrong, 2012; DeNisi & Griffin, 2008; Guest, 2002; Pradhan, 2020b). So, organizations always need to choose a job design that satisfies organizational standards for excellent performance, delivers a good fit with individual needs and skills, and creates chances for job happiness (Schermerhorn, Hunt, & Osborn, 2005) and employee motivation. In fact, clearly defined jobs, and specialized tasks and jobs that are designed through scientific management or job simplification always motivate employees for better performance.

In the same way, the findings demonstrate that compensation has a significant positive relationship with employee motivation. These findings align with the literature that is currently accessible (i.e. Ichniowski *et al.,* 1997; Campbell, 2007; DeNisi & Griffin, 2008; Guest, 2002; Amstrong, 2012; Catanzaro, 2001; Pradhan, 2020b).

In conclusion, employees who think their jobs are well-designed are highly motivated at work. Moreover, employees are highly motivated at work when they perceive a fair and efficient compensation system. Therefore, organizations should redesign job policies and build employee trust in order to enhance employee motivation. Supervisors should also make an effort to create a positive work atmosphere and treat all employees fairly. In order to enhance employee motivation, organizations should design fair and transparent compensation and reward policies and build their confidence. Furthermore, organizations must lessen their views of unfair job design and compensation systems and make the required efforts to create a supportive work environment if they want to motivate and keep their best employees.

Research Implications

This study sheds light on the relationship between employee motivation, compensation, and job design in the context of Nepal. This study examines how job design and compensation practices in Nepalese organizations affect employee motivation. Employee motivation is seen as a crucial element of an organization's competitive strength, since motivated workers carry out their tasks to the best of their abilities and talents and have a good attitude toward their organizations.

Limitations

This study is based on primary data gathered from a small number of business organizations, which could not be representative of all institutions. Just two variables such as job design and compensation may not motivate employees. Although this study aims to understand how job design and compensation affect employee motivation, other factors may also have an impact.

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Effectiveness of Training of Software (Excel) for Bachelor Level (Bsc) Students in Birendra Multiple Campuses, Bharatpur

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ABSTRACT

This study aims to evaluate the knowledge levels on statistical software excel for the BSc 1st and 2nd year students in Birendra, Campus, Braratpur, Chitwan. Moreover the study also aims to examine the effectiveness of statistical software excel training for them. Out of 201 BSc physical group students in 1st and 2nd year, 52 students are taken as sample excluding nonresponses. To examine the knowledge about statistical software excel, 30 multiple choice questions had been asked to them before conducting training. 7 hours training for each (52) students had been conducted on statistical software excel. 15 days later from the end of training, the post-test has been done to them.

The post-test average knowledge Score is (20.73±5.27) and pre-test score was (9.35±6.35). The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis with normal curve and Shapiro-Wilk normality test. The average score after training (total 52 students) is much greater than that of before training and the standard deviation after training is slightly lower. The t-test is statistically significant and the training is effective for BSc level students in Birendra Multiple campus, Bharatpur.

Introduction

Due to changes in technology and the competitive environment, it is challenging for students to keep up with trends and best practices in their future careers. Learning and professional development turns them into strong and more fitting skills by allowing them to produce fruitful and personalized knowledge and skills for the students today. Professional well-planned curricular activities in the teaching-learning activities grow students' achievement. Knowledge alone is not enough in their entire careers to support them. Students are studying to achieve only academic certification according to the university curriculum. Hence training and workshops (except the given curriculum of the university) remain essential in assessing the needs of bachelor-level students.

Training effectiveness refers to the quality of the training provided by the institutions and measuring whether training met its goals and objectives. It attempts to obtain information about the training program and to assess the value of pieces of training in light of that information for improving further training. The cause of evaluating training and workshop programs is to decide whether the training programs are achieving their specific training objectives.

Review of Literature

Dhungana, Piryani, Chapagain, & Neupane (2015) have explained the training is one of the important aspects of faculty development at Chitwan Medical College (CMC) and the study was conducted to assess the effectiveness of the faculties' training pretest, posttest experimental group design. They found only 5.6% of the participants had adequate knowledge in pretest whereas after training, 27.7 % had adequate knowledge. The mean (±SD) knowledge score before and after the intervention was 26.7 ± 5.6 and 33.6 ± 5.6 respectively. Hence the software training was statistically significant and then effective.

Hassan, Vishna, & Nadarajah (2021) have found out that Workshops are the most common models to enhance knowledge and skills in a specific subject area with the intent to explore, solve a problem and invent new things. The most main aspect of a workshop is the transfer of knowledge in a safe learning environment as a faculty development activity (FDA). They concluded that a significant difference of the mean pretest and post-test score within the group was also significant between the groups. A post-test score, controlling on pretest score, was found not significant and is suggestive of an effectively delivered workshop for all participants.

Sajjad (2010) conducted a study in the Faculty of Arts, University of Karachi to determine the effectiveness of various teaching methods used for teaching students at the graduate level and found the lecture method as the best teaching method. Reasons included; teacher provides all knowledge related to the topic, time-saving, students attentively listen to lecture and take notes, etc. The group discussion was rated as the second best method of teaching because of; more participation of students, the learning is more effective, the students don't have to rely on rote learning, and this method develops creativity among students, etc. Students' perception and ratings about the interesting and effective teaching methods is a way to suggest improvements in the teaching-learning process.

Chaves, Wangenheim, Furtado, Oliveira, Santos, & Favero (2015) had conducted a study and found that Software process modeling (SPM) is an important area of software engineering because it provides a basis for managing, automating, and supporting software process improvement (SPI). Teaching SPM is a challenging task, mainly because it lays great emphasis on theory and offers few practical exercises. Furthermore, as yet few teaching approaches have aimed at teaching SPM by introducing innovative features, such as games. The use of games has mainly been focused on other areas of software engineering, for example software project management. The paper describes a formal experiment carried out to assess the learning effectiveness of a serious game (Desig MPS), designed to support the teaching of SPM, and to compare game-based learning with a project-based learning method. The results indicate that playing the game can have a positive learning effect and results in a greater degree of learning effectiveness than does the project-based learning instructional method.

Sweta, Vimal, Sharma, Kushwaha, & Kumar (2018) conducted a study and found the average score before and after the administration of a structured teaching program. They found a significant difference in scores. According to the findings, the average knowledge score before the intervention was 11.5, which increased to 17.5 after the intervention. The paired t-test was statistically significant with a very high level of p-value.

Statement of Problems

Hlushak and others (2020) explained in their article that mathematics in the system of higher education has enlarged the status of the general education subject and should become an integral part of the professional training of future bachelors, including economists, on the basis of inter-subject connection with special subjects. Such aspects as the importance of improving the scientific and methodological support of mathematical training of students by means digital technologies are revealed.

They realized that it is necessary to introduce digital technologies in two directions: for the organization of educational space and in the process of solving applied problems at the junction of the branches of economics and mathematics branches.

Cole (2016) studied in his dissertation that experimental and comparison groups were used to manage a spatial skills software-based intervention. The standardized test, the Revised Purdue Spatial Visualization Test for Rotations (PSVTR) was used to measure students' spatial skills. The Results of his study showed higher gains for students who used the statistically significant intervention software.

Ntakana (2011) investigated the effectiveness of support programs offered by universities with special reference to Walter Sisulu University. In the literature study and through the empirical research it was established that, for an effective and successful holistic student development, different student support programs are necessary. Academic, social, emotional, physical, and financial support needs to be effectively addressed to meet students' needs. Student development practitioners require being adequately equipped for the efficient and effective provision of student support programs.

Today's technology changes at an exponential rate. Software training comes in convenient to get a jump on new technologies and become skillful and familiar of new knowledge with them. Students will gain to do research activities; they learn real-world situations from both the trainers as well as the other students. It is necessary for problem-based learning of students and then increases the market-based knowledge of students. Institutions as well faculties use their resources and develop themselves as per the change in real world. Most of the studies on evaluating training effectiveness have been conducted on faculties of colleges and employees of any organization. But no studies have been conducted yet in this context for students. Hence this research is essential in the present context for students.

This article answers the following research questions.

1. Is there adequate knowledge of software for bachelor-level students?
2. How much the level of the knowledge and skills on software for students?
3. What is the effectiveness of training and workshop?
4. Is the software training of students meeting the goals of the program?

Objectives of Study

The objective of this article is to examine the knowledge levels on statistical software excel for Bachelor-level (B Sc 1st year and 2nd year) students of Birendra Multiple Campus, Bharatpur. It also analyses the effectiveness of training on software for them.

Data and Methodology

This article intends to examine the effectiveness of software training on students' achievement as well as the improvement of knowledge of students on software through training on software. Hence, a descriptive and cross-sectional survey design is used.

Out of 201 no of enrollments, 52 students are taken as samples for this study purpose. So 201 no of students are the population and 52 no of students are the sample for this study. Table 3.1 shows the respondents' profiles.

Table No 1 : Respondents Profile

B. Sc.	Enrollment or population of physical group	Participants in Training or sample
1st year	83	23
2nd year	118	29
Total	**201**	**52**

The semi-structured and self-administrative questionnaire has been used before and after training. To test the knowledge score of excel, total 30 numbers of objective-type questions have been given to the 52 no of students of BSc 1st and 2nd year before training. The training has been conducted for each participating student for 7 hours duration. Then these same questions were asked them after conducting training. The post-test questionnaire has been given to the students after 15 days of completing the training.

There are two phases of data analysis. The first phase is the descriptive statistics of students and the second phase is measuring the knowledge before and after the training. A dependent sample test is used to measure the training effectiveness. The difference in knowledge score has been satisfied with the assumption of normality Shapiro-Wilk normality test (W = 0.9881, p-value = 0.8801). Hence, the parametric test (pair t-test) is used to test the improvement of skills and knowledge after training.

Analysis and Results

Knowledge of the Excel among BSc Student before and after the Training

Knowledge regarding Excel among BSc students was measured by a structured questionnaire having 30 items. Each correct answer provides one mark whereas the incorrect answer and the non-response have been given zero marks. The total scores before and after the training has been presented in the histogram (Figure 1). The finding reveals that after the training the average knowledge Score is (20.73±5.27) and before the training the score was (9.35±6.35).

The finding of the difference of knowledge score has satisfied the normality by exploratory data analysis like as histogram with a normal curve (Figure 2) and Shapiro-Wilk normality test (W = 0.9881, p-value = 0.8801) it is insignificant. The findings show the normality of expectation. Hence, the paired t-test has been applied

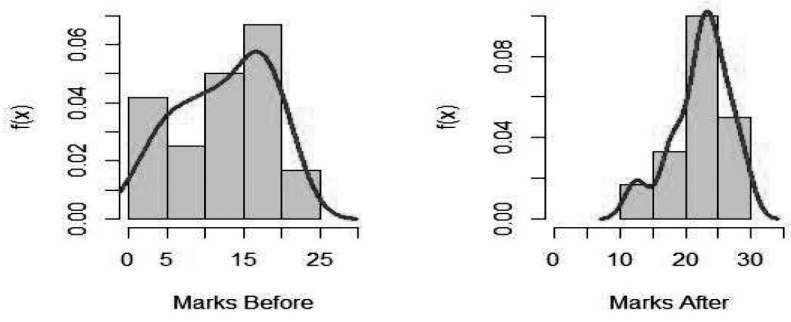

Figure 1: Histogram with Kernel Density of Pre-test and Post-test Marks

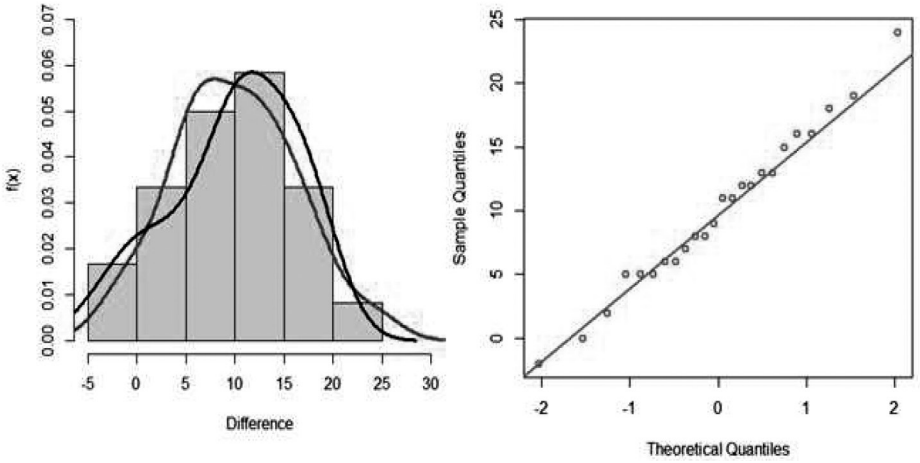

Figure 2: Histogram (Left Panel), Q-Q plot (Right Panel) of Difference of Pre-test and post-test Marks

Table 2: Mean, Standard Deviation, t-Value and p-value

	Before training	After training
Mean score	9.35	20.73
Standard deviation	6.35	5.27
t = -12.69, p-value < 0.0001		

In Table 2, the mean score after training is much greater than that of before training and the standard deviation after training is slightly lower. The t-test and p-value revels statistically significant result. Hence, the training is beneficial to improve the knowledge of Excel.

Knowledge of Excel for BSc 1st year Student before and after the Training

The total scores before and after the training of the first year students has been presented in histogram (Figure 3). The findings revel that after the training the average knowledge score (19.52±5.92) has increased as compare to before the training (9.35±6.06).

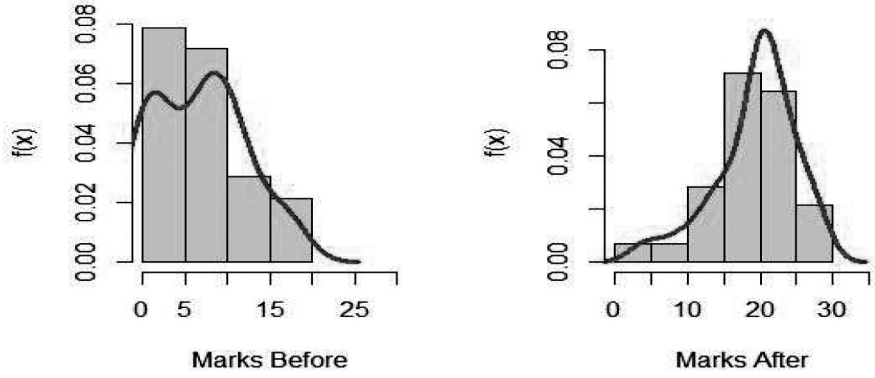

Figure 3: Histogram with Kernel Density of Pre-test and Post-test Marks first year

The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis like as histogram with normal curve (Figure 4) and Shapiro-Wilk (W = 0.95761, p-value =0.4168) which is insignificant. Hence the finding follows the normality as for expectation. Then, the pair t-test has been applied.

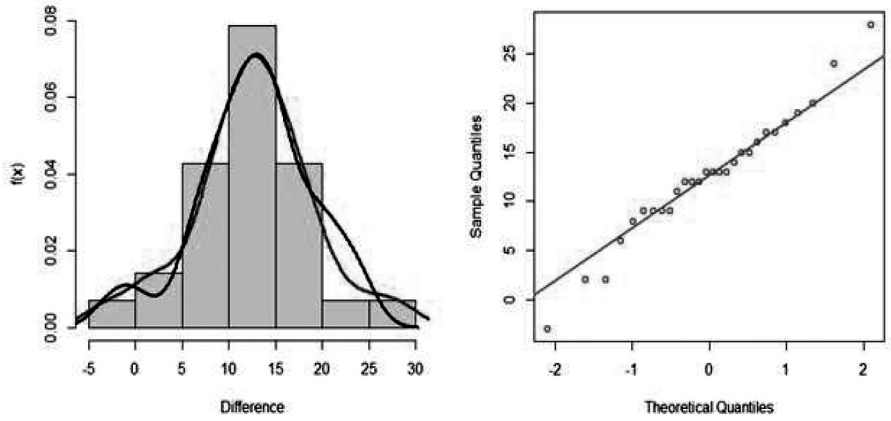

Figure 4: Histogram (Left Panel), Q-Q plot (Right Panel) of Difference of Pre-test and post-test Marks for 1st year

Table 3 : Mean Score, Standard Deviation, t-Value and p-value for 1st year Students

	Before Training	After Training
Mean Score	9.35	19.52
Standard Deviation	6.06	5.92
t = -7.976, df = 22,p-value <0.0001		

Table 3 shows the mean score of BSc 1st year students, there is statistically significant training regarding the knowledge of Excel. In Table 3 , the mean score after training is much greater than before the training, the standard deviation after training is slightly lower.

The t-test and p-value reveal statistically significant results. Hence, the training is beneficial to improve the knowledge of Excel.

Knowledge of Excel for BSc 2nd year Student before and after the Training

The total scores before and after the training has been presented in histogram for the 2nd (Figure 5). From the finding revels that after the training the knowledge score of (21.69±4.57) has increased as compare to before the training of (9.34±6.67).

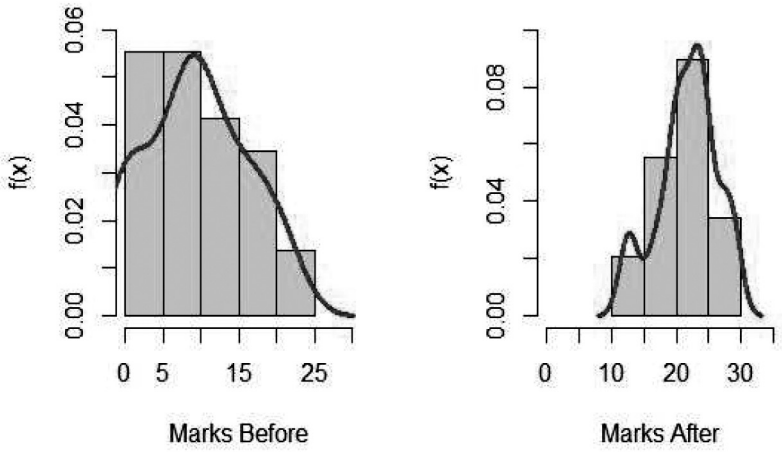

Figure.5: Histogram with Kernel Density of Pre-test and Post-test Marks for 2nd year

The finding of the difference in knowledge score has satisfied the normality by exploratory data analysis like as histogram with the normal curve (Figure 5) and Shapiro-Wilk (W = 0.97907, p-value =0.814) which was insignificant. Hence the finding follows the normality to expectation. Hence, researchers have applied the pair test.

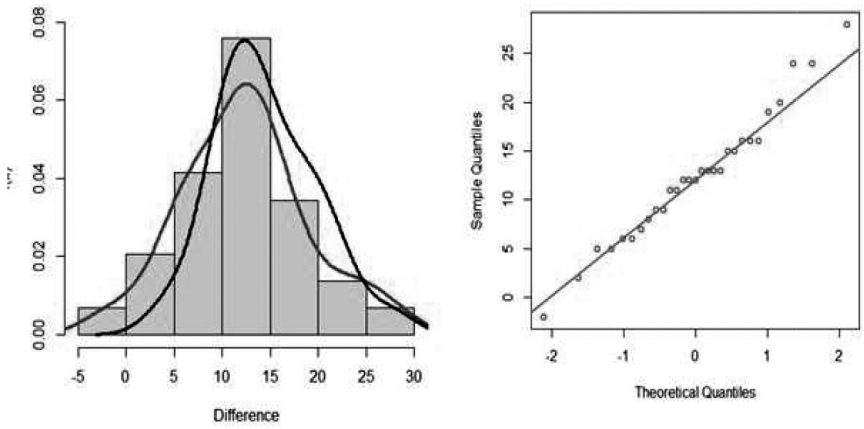

Figure.6: Histogram (Left Panel), Q-Q plot (Right Panel) of Difference of Pre-test and post-test Marks for 2nd year

Table 4 shows the mean score of 2nd-year students' pre-test and post-test scores. There is a statistically significant result of training regarding the knowledge of Excel. This finding revels that the training improved the knowledge of students.

Table 4: Mean Score, Standard Deviation, t-Value and p-value for 2nd year Students

	Before training	After training
Mean Score	9.34	21.69
Standard Deviation	6.67	4.57
t = -9.9475, df = 28,p-value <0.0001		

Knowledge of Excel for no PC Student before and after the Training (n=28)

28 students (54%) have not possessed a personal computer. Figure 7 shows that knowledge score before and after the training for no PC students has been presented in a histogram (Figure 7). After training the average knowledge score is (19.36±5.61) whereas the average knowledge score before the training was (6.75±5.39).

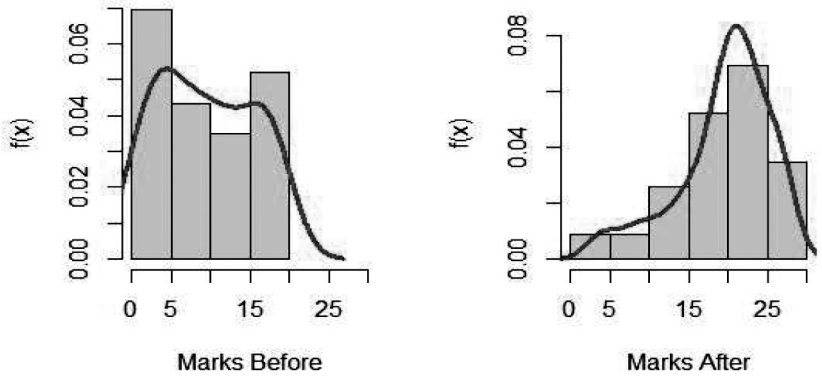

Figure 7: Histogram with Kernel Density of Pre-test and Post-test Marks for no PC students

The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis like as histogram with normal curve (Figure 8) and Shapiro-Wilk normality test (W = 0.97599, p-value = 0.746) which was insignificant. Hence the finding follows the normality as for expectation. Hence, researcher have been applied the paired t-test.

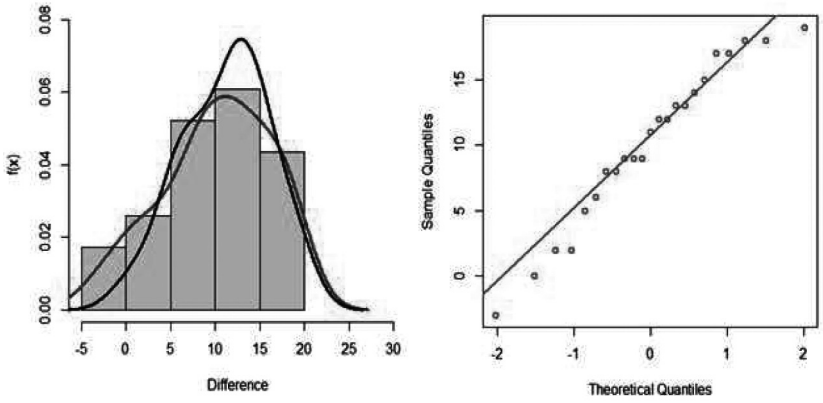

Figure 8: Histogram (Left Panel), Q-Q plot (Right Panel) of Difference of Pre-test and post-test Marks for no PC students

Table 5 shows the mean score of no PC students, there is statistically significant of training regarding the knowledge of Excel. The post-test mean score is much greater than the pre-test score and t value shows the significant result. Hence no pc students also improve their knowledge by the training.

Table 5: Mean Score, Standard Deviation, t-Value and p-value for no PC Students

	Before Training	After Training
Mean Score	6.75	19.36
Standard Deviation	5.39	5.61
t = -10.246, df = 27, p-value <0.0001		

Knowledge of Excel for PC Student before and after the Training (n=24)

The sum of the score before and after the training was presented in histogram (Figure 4.9). The finding shows that after the training the average knowledge score of (22.33±4.43) has increased as compare to before the training of (12.38±6.12).

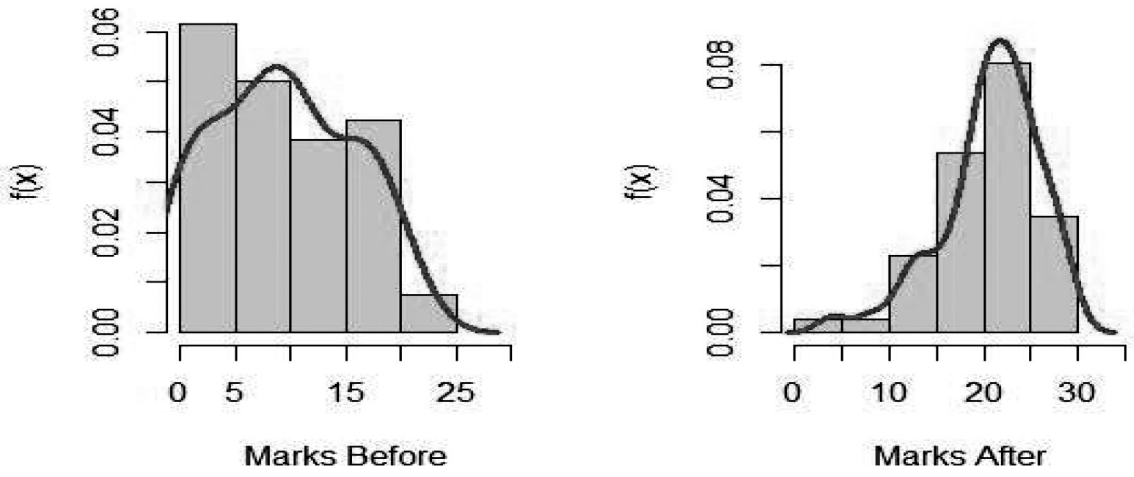

Figure 9: Histogram with Kernel Density of Pre-test and Post-test Marks for PC students

The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis like as histogram with normal curve (Figure 9) and Shapiro-Wilk normality test (W = 0.98806, p-value = 0.9896) which was insignificant. Hence the finding follows the normality as for expectation.

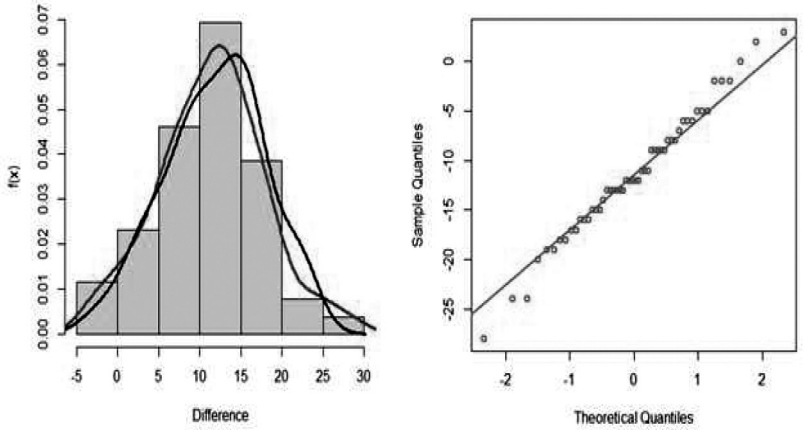

Figure 10: Histogram (Left Panel), Q-Q plot (Right Panel) of Difference of Pre-test and post-test Marks for PC Students

Table 6 : Mean Score, Standard Deviation, t-Value and p-value for PC Students

	Before training	After Training
Mean Score	12.38	22.33
Standard Deviation	6.12	4.43
t = -7.8034, df = 23, p-value < 0.0001		

Table 6 shows that there is statistically significant improvement of knowledge score after post-test than that of the pre-test score. From table 4.10 and 4.11, PC possessed students have comparatively greater knowledge score than that of no PC students.

Results of Analysis

From the analysis, the major findings are as follows:

- Among 30 objective types of questions, the students have provided minimum 0 percent to maximum 79 percent correct answers before training, whereas minimum 21 percent to maximum 94 have corrected the answers after conducting the 5 hours training for each students.
- The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis. Or it shows the normality. Then, the pair t-test has been applied.
- After training average knowledge Score is (20.73±5.27) and before the training the score was (9.35±6.35).
- The average score after training (total 52 students) is much greater than that of before training and the standard deviation after training is slightly lower. The t-test and p-value revels statistically significant result. Hence, the training is beneficial to improve the knowledge of Excel.
- Although, both 1st year and 2nd year students have improved their knowledge by the training with statistically significant results, the knowledge scores for second year students are slightly greater than that of the first year students.
- The knowledge scores for PC possessed students are slightly greater than that of the no PC students. But students with possessed PC or without possessed both have improved their knowledge scores after the training with statistically significant results.

Discussion and Conclusion

Discussion

The major findings of this study are similar to the study of Dhungana, Piryani, Chapagain, & Neupane (2015). They found that the software training was statistically significant and then effective. They found only 5.6% of the participants had adequate knowledge in the pretest whereas, after training, 27.7 % had adequate knowledge. In the present study, the average score after training (total of 52 students) is much greater than that before training and the standard deviation after training is slightly lower. The t-test and p-value reveal statistically significant results. Hence, the result of this study is almost consistent with the result of Dhungana et.al (2015). The finding of the present study is also supported by the study of Sweta, Vimal, Sharma, Kushwaha, & Kumar

(2018). They found a significant improvement in average knowledge scores after the intervention of structured teaching. The paired t-test was statistically significant with a very high level of a p-value.

Conclusion

Knowledge regarding the Excel among BSc students was measured by structure questionnaire having 30 items. Each correct answer provides the one marks whereas incorrect answer and non- response has been given the zero marks. The total scores before and after the training has been presented in histogram. The post-test average knowledge Score is (20.73±5.27) and pre-test score was (9.35±6.35). The finding of the difference of knowledge score has been satisfied the normality by exploratory data analysis with normal curve and Shapiro-Wilk normality test & it is insignificant. Hence, the pair t-test has been applied.

The average score after training (total 52 students) is much greater than that of before training and the standard deviation after training is slightly lower. The t-test is statistically significant and the training is effective for BSc level students in Birendra Multiple campus, Bharatpur.

The knowledge for PC possessed students is slightly greater than that of the without PC students.

Tribhuvan University has recommended teaching basic knowledge on statistical software through the curriculum for BSc 1st year students. But lack of personal computer with the students and lack of adequate lab facilities in the campus and no inclusion of evaluation in the final exam would be the problems that the students have not adequate knowledge on this type of knowledge.

In the present situation, students should have adequate knowledge on this type of software like excel, SPSS, R-software. Hence the university and then colleges should teach or arrange training program each year in BSc students.

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Challenges and Prospects of Nepalese Microfinance program: A Mini Review

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ABSTRACT

The main purpose of this paper is to highlight the challenges and prospects of microfinance program in Nepal. This study is based on descriptive research design. Microfinance has the potential to have powerful impact on poverty reduction and women's empowerment. Microfinance institutions (MFIs) have two missions: outreach through poverty reduction and sustainability. Nepalese microfinance sector faces numbers of challenges like overcrowd in certain geographical region, multiple banking, unhealthy competition, political unawareness, mission drift, and high rate of member dropout, high rate of employee turnover, over-indebtedness, loan overdue, constraint resources and lack of entrepreneurial centric program. Nepalese microfinance institution needs to create healthy environment of microfinance sector with the aim of social responsibility. MFIs need to move beyond the traditional micro credit methodologies and innovative through digitization to extend financial services more effectively to the rural people. This study focuses on current picture of Nepalese microfinance industry which explores current issues. The findings of this study is useful and applicable in BFIs, microfinance expert, economist, regulator, and decision makers.

Keywords: *GGS, income generation, loan portfolio quality, mission drift, over-indebtedness, poverty reduction, Sustainability,*

Introduction:

Microfinance is a successful method for reaching the underprivileged and underserved individuals that the conventional economy does not serve. Both investment and HH consumption demands are satisfied by micro-credit (Dhakal, 2010). Thus, microfinance is a simple financial systems and effective tool that enables the most poor to pull them out of poverty. It is the provision of financial services to low income clients. Financial services includes saving, credit, micro insurance, money transfer, remittance for those who are excluded intuitional financial services. It is a tool for providing financial services for the poor and marginalized people (Dhungana, 2013).

The vision of microfinance is to create systematic financial systems for those people who are deprived from financial services, help them out of poverty, and make them full participation in social and economic development of nation. Microfinance involves advancing small loans serves by local institution called microfinance institutions (MFIs). They provide small loan to smallholders and deprived people with solidarity group guarantee without any physical collateral for income generating activities. They generate additional income and use it for household expense and buy food, cloths, medicine, and education to their children and saving for future betterment. So, it is one of the important and strong pillars of economic creation. It is also known as an important engine of economic transformation and social empowerment of rural people specially deprived women. The demand or need for microfinance comes from the disadvantaged sections of the society who are excluded from the formal sector of financial intermediaries and social networks (Sinha, 2011). Microfinance can play catalyst role in entrepreneurship development for poor women and it can play a key role in income generating activities (Rakhal, 2015).

Microfinance is the provision of a range of financial services to low-income individuals, households, and their small businesses, including deposits, loans, payment services, money transfers, and insurance (Ledgerwood,

1999). Grameen microfinance originated in 1976 after long research studied by Dr. Muhammad Yunus, Professor of University of Chittagong. Professor Yunus lunched a research project to study about designing a credit delivery system to the rural poor. From those research findings he got some ideas about banking services to the poor people. Because of his initiatives, in 1983 the Grameen Bank Bangladesh was established as an independent bank for the poor. It was first formal financial institution for the poor people in the world. Bangladesh is the home of microfinance and Mohammad Yunus, founder of the Grameen Bank, is the first to implement his idea to serve the poor through microcredit for poverty alleviation (Farhana, 2020). The Grameen model started with a few members and the basic idea was to substitute physical collateral with joint liability to overcome moral hazard. After successful implementation of this novel idea in Bangladesh, few other countries particularly in the Southeast Asian region followed the model (Farhana, 2020).

Grameen Bank Bangladesh has shown remarkable achievement in microfinance. As of November 2019, the total members of the Grameen Bank are 9.25 million and 97% of those are women (Monthly progress report: 2019, Issue 479, http://www.grameen.com). Grameen Bank Bangladesh adopted individual lending model then after 2002 which also known as Grameen Generalized System (GGS).

In 1974 Professor Muhammad Yunus provided small loans from his own pocket that is near about US$27.00 to 40 women of poor families who were bamboo handicraft producers in Jobra village near Chittagong without any formal and legal documents. Than after certain duration of time the women repaid that borrowed loans with interest. After that Yunus repeatedly gives them working capital, they timely repaid that money without delay. Then, Yunus was inspired and believed poor people are bankable they can operate their business, they can improve their economic status if financial services are made available in easy ways by formal sector. Gradually, Yunus started Grameen project with technical and financial supports from international organizations for the social and economic improvement of marginalized as well as disadvantaged people. In 1998 the Banks "Low-Cost Housing Program" won a "world Habitat Award" The Bank and its founder Professor Muhammad Yunus were jointly awarded the Noble Peace prize in 2006.

Grameen model Microfinance program was initiated three decades ago to serve the deprived population in the rural and urban areas overlooked by institutional financial systems. Today, the microfinance program has spread all over the country and accounts for about 90 "D" class microfinance institutions (NRB mid-April-May, 2019/020) and 45 were national level. They served over 4.6 million families with a loan outstanding amount of approximately Rs. 256 billion which is 7.5 percent of total GDP and 8 percent of total loan flow of formal banking sector. They covered 77 districts with 2.8 million active clients. They are creating share capital amount of approximately Rs. 21 billion. Likewise they mobilized the amount of Rs. 36 billion capital fund and approximately Rs. 100 billion from group deposit from small depositor. Out of total loan portfolio 65 percent volume is covered without collateral, 15 percent is collateral based and 20 percent is others. The loan portfolio distribution is 50 percent, 40 percent and 10 percent in agriculture, service and small and cottage industries respectively. From the above figure microfinance institutions (MFIs) plays an important role to value add in GDP and contribute poverty alleviation in the nation.

Table 1 : Outlook of microfinance in Nepal

S.N.	Particulars	2020 Mid-July	2021 Mid-July	2022 Mid-July
1	Districts coverage	77	77	77
2	Service coverage	77	77	77
4	Total No, of employees	19017	20872	23303
5	Total No. of branches	3946	4621	5062
6	Total No. of unit	310,895	362,982	428,783
7	Total No. of groups	1,039,696	1,183,364	1,351,729
8	Total No. of members	4,686,609	5,191,363	5,859,530
9	Total borrower	2,783,129	2,992,068	3,303,100
10	Total loan outstanding (million)	262,732.25	365,554.02	391,746.60
11	Saving (million)	106,150.20	130,425.41	159,022.78

Sources: NRB Report.

Above table 1 shows outlook of Nepalese microfinance industry. From the above table Nepalese microfinance institutions have covered all over the country through their branch network. They provided their services 77 district to the poor people particularly deprived women's. They are provided employment opportunities around twenty four thousand people. In addition, they provided financial access around 5.8 million families which is greater than mid-July 2021. Similarly, they provided credit facilities to the poor people worth of Rs. 391,746.60 million For small and medium enterprises with solidarity group basis. Moreover, Nepalese MFIs mobilize local resources in productive sector by collecting small deposit.

Review of related literature:

The literature review is a major component in this conceptual framework. The purpose of literature review in research is to situate the proposed research in the context of what is already explored in the field. It should be able to provide the theoretical basis for the current work and helps to narrow down the proposed topic.

Karn (2018), Shows some challenges and opportunities of Nepalese microfinance sector. In his study, he found out some problem of microfinance which needs to be reformed regarding targeting. According to paper there are problems in social awareness in Nepalese microfinance sector. Along with that he suggested a lot of opportunities in microfinance such as: stimulating growth of economy, increasing volume, accessibility and outreach.

Njeru, & B.W, (2012) Analyzed internal and external factors of loan delinquency related problem in Kenya. Both factors significantly impact loan delinquency performance. They found out, there is a positive and significant relationship between loan delinquency and performance of microfinance institutions. They concluded that internal and external environmental factors significantly affect loan delinquency performance of microfinance institutions (MFIs) in Kenya. Njeru, & B.W, further paper recommended that MFIs portfolio management strategies focus more on the internal factors of loan delinquency which they have more control over and seek practical and achievable solution to readdress delinquency problems.

Ahamad, (2015) shows that the quality of loan portfolio is directly concerned with mechanism of credit management through effective credit appraisal of borrower. Study's described the relationship between credit risk management and positive performance of loan.

Kayastha, R. (2013) describes the analytical picture of microfinance in Nepal by explaining the development process, modalities of microfinance institutions (MFIs) and various microfinance regulations. Furthermore, this paper explored the current issues of microfinance emerging in Nepal, and claims that institutional governance is the effective method to overcome most of those obstacles. Institutional governance is probably a new concept for microfinance in Nepal. Moreover, study's recommended that Nepalese microfinance sector needs to have clear vision and policy according to the heterogeneous modalities of microfinance institutions and maintain healthy environment of microfinance regarding poverty alleviation in Nepal.

Objectives of the study:

The general objective of the study is to examine the current challenges and prospects of Nepalese microfinance sector. The specific objectives are:

- To analyze present status of Nepalese microfinance industry.
- To analyze current challenges and opportunities of Nepalese microfinance sector.

Research methodology:

The study is a descriptive review study design. In this study, researcher is highlighting the current challenges and prospects of Nepalese microfinance programs based on researcher working experiences and past literature.

Microfinance programs in Nepal:

Microfinance is termed as the financial services rendered to the deprived groups of the people and small entrepreneurs in savings, credit, remittance, micro insurance, etc. to help them in developing self-employment opportunities and various income generating activities. The main characteristic of the microfinance is group based lending, group savings, small sized loan, small-scale entrepreneurs, diversified utilization, quick repayment, close monitoring and simple terms/conditions on credit and loan facility without collateral.

Nepal has an experience of more than five decades in microfinance starting by SFCL in 1975. Nepal has developed considerable history in providing microfinance services which is evidenced by emergence and growth of a large number of micro Finance institutions (MFIs) and microfinance programs over time (Dhakal, 2012). Microfinance programs in Nepal started in 1956 with the establishment of credit cooperatives in Chitwan district.

It was established to provide agriculture credit to the flood stricken people re-settled in Chitwan coming from the different parts of the country.

The government of Nepal established cooperative bank in 1963 which was converted into Agriculture Development Bank in 1968. The bank launched the Small Farmers Development Program (SFDP) in 1975. The strategy of SFDP was to organize small farmers, tenants and landless laborers into groups and strengthen their receiving mechanism for tapping resources from service delivery agencies.

In Nepal, after the restoration of democracy in 1990, the Government of Nepal moved further forward to strengthen by introducing institutional framework in microfinance sector. During the 1990s, five regional Grameen Bikas Banks has established based on classical model with the sole objective to provide institutional financial services to poor people especially deprived women's. Now, these microfinance banks has been unified named Grameen Bikas Laghubitta Bittiya Sanstha Ltd. Likewise, during the period of 1990s a number of MFIs came in existing market of microfinance. Now a day, Nepal has wide market in microfinance program and FINGOs has also transformed microfinance institutions under central bank regulatory framework. Still, approximately 65 governments owned and private microfinance institutions has been providing microfinance services along with four wholesale lending microfinance institutions (NRB, 2021).

For the view of providing wholesale fund to MFIs, The RMDC Laghubitta Bittiya Sanstha Ltd. (Kathmandu), First Microfinance Laghubitta Bittiya Sanstha Ltd. (Kathmandu), RSDC Laghubitta Bittiya Sanstha Ltd. (Rupandahi) has established as a wholesale lending institutions under regulated BAFIA. Likewise Sana Kisan Laghubitta Bittiya Sanstha Ltd. also another wholesale government owned institutions to provide wholesale fund small farmer Cooperatives (SFCLs) which were formed after transformation of SFDP to SFCLs. (NRB, 2021). Generally, Nepalese MFIs has adopted individual lending and classical model of microfinance which is group based program which as known as Grameen model microfinance.

Findings/Results

Challenges of microfinance program in Nepal

Microfinance is a globally recognized as an effective instrument for poverty alleviation. Nepalese microfinance sector also successes to change social and economic status of deprived women. Members of microfinance are able to purchase their household items such as: foods, cloths, housing, and education for children and small saving for future life. Even though Nepalese microfinance Sector has not free from complain. It has blame of deviation from its mission drift. Some export and practitioners have different perception they urge that microfinance is not profit oriented, it is purely service oriented dedicated with poverty alleviation. Some others have also different perception and mindset, they fully urge and advocate, it should have run just like professionally business institution with profit making for service continuity and future sustainability. Microfinance sector have been facing many more challenging and problematic situation even it has achieved tangible result in many countries including Nepal. From the outside, it seems microfinance has made a great leap forward, but inside there are still many deviations and distortion lurking beneath the surface. In many areas, not only are the well-to-do taking advantage of microfinance services instead of the target group, but also, fake clients. Microfinance members are found to be either engaged in meter interest lending by them or handing over their loan to others money lenders who have been exploiting the poor with exorbitant interest rates. Loan mis-utilization is rampant resulting in increasing loan default and loan defaulters running away from their homes. Middlemen and shylocks are taking undue advantage of the program. Despite the huge flow of credit in the name of the poor, a major population of the underprivileged continues to be left out from the microfinance program. Not only is that, microfinance practitioners who vowed to provide the ultra-poor with collateral-free loans becoming more profit oriented than service oriented. In the rush minimize profits in the short period, loans are being disbursed continuously.

The Nepalese government opened microfinance banks, institutions and cooperative in order to alleviate poverty in the country. Microfinance banks have been operating in the rural areas of Nepal, providing microcredit, saving services, informal education, first aid health services training and skill development. High dropout rate, increasing operational expenses, cash management, over-indebtedness among clients and MFIs lack of access to Nepal's national identity card database etc. are some institutional challenges of Nepalese microfinance sector. Likewise the trend of multiple memberships has been increasing. Based on the approach mentioned in above section, the challenges of Nepalese microfinance program are as discussed:

i. **Overcrowd in certain geographical region:**
Nepalese microfinance sectors are overcrowded in certain geographical regions where there is easy access to road, transportation, communication, market, education, and electricity whereas some regions are deprived from formal financial institutions due to basic infrastructure problem.

ii. **Multiple banking:**
Multiple banking is one of the serious challenges in microfinance sector. Multiple banking arises due to easy access to formal financial institutions. It is related with over financing of loans to clients of microfinance by two or more than two microfinance financial institutions without analysis of any past records, paying capacity, and financial parameters. They borrowed loan from one institution and repay loan to another institution through rolling basis that arises loans default risk in upcoming future.

iii. **Deterioration in group liability:**
Group liability is going to deteriorate day by day due to inappropriate and ineffective approaches of pre-group training (PGT) and group recognition test (GRT). Group liability is the most important part in Grameen classical system (GCS) microfinance program. In Grameen model microfinance, minimum of five to ten people formulate a solidarity group of same age group, and same economic status, which usually works in the same market from the same community for mutual benefits. They make demand for loan in the same group meeting and appraise loan. They also check whether loan is utilized in productive sector or not and convince people to repay their loan installment on time. So, group liability plays significant and vital role for maintaining credit discipline. But nowadays, MFIs give less priority to importance of solidarity group formation, management and liability.

iv. **Unhealthy competition:**
Unhealthy competition among microfinance institutions is another challenge in microfinance sector. For profit making objective there is high competition between the microfinance institutions on keeping members or borrowers of microfinance who are already affiliated with one or more than one MFIs.

v. **Mission drift:**
Microfinance is the provision of small scale financial services such as credit, deposit, remittance, money transfer, insurance and other basic financial services to the poor or low income people. So, it is the provision of financial services to low income clients or solidarity group lending who are deprived from formal financial services. In this way, the primary objective of microfinance institutions is poverty reduction through greater and depth outreach in deprived areas. But nowadays, microfinance institutions (MFIs) have mission drift by focusing on profit maximization rather than their original mission.

vi. **High rate of member dropout:**
The dropout rate of microfinance member is increasing day by day due to migration from rural to semi urban to urban areas in search of new business opportunities. Another reason of member dropout is inadequate product and services of microfinance institutions offered to their clients.

vii. **High rate of employee turnover:**
The employee turnover rate is also another challenge of microfinance institutions. Due to presence of high number of microfinance institutions, employees of microfinance jump from one MFI to another MFI to fulfill their high ambition for even a minimum change in financial benefits and status.

viii. **Increasing trend in loan overdue:**
The overdue amount of microfinance and cooperative microfinance institutions is increasing day by day due to inappropriate client education, loan analysis, loan supervision, and client visits. Past two decades, the microfinance institutions had achieved 100 percent loan recovery rate which is success history of microfinance. Nowadays, non-performing loan (NPL) of whole microfinance industry level is 2-5 percent which is very challenging situation not only for particular MFI but also for the whole industry too.

ix. **Poor efficiency of employee:**
The efficiency of field level staff of microfinance is very poor in the areas of client selection, loan appraisal, business development, coaching, delivering skills of organizational rules and regulation which deteriorates loan portfolio quality and increases non- performing loan.

x. **High interest rate:**
Nepalese microfinance institutions have been suffering from high interest rate and irregular interest rate fluctuation of borrowing amount from the commercial banks (CBs) and wholesale lending microfinance institutions such as : RMDC Laghubitta Bittiya Sanstha Ltd. (Kathmandu), First Microfinance Laghubitta Bittiya

Sanstha Ltd. (Kathmandu), and RSDC Laghubitta Bittiya Sanstha Ltd. (Rupandahi) that's directly affecting the profitability, viability, and sustainability of newly licensed MFIs from Nepal Rastra Bank.

xi. **Less focus on client's protection:**
Nepalese microfinance institutions give less priority on client's protection. There are globally recognized seven principles of client protection in microfinance. It is also known as responsible financing. So they need to consider appropriate product design and delivery, prevention of over-indebtedness, transparency, responsible pricing, fair and respectful treatment of client's, privacy of client data, and mechanisms for complaint resolution.

xii. **Less focus on entrepreneurship development:**
Nepalese microfinance institution (MFIs) gives low priority in entrepreneurial skills and knowledge development of their clients. If clients of microfinance are more skillful then they can take bigger size of loan and mobilize it's effectively with high productive sector which makes insure more income and pay loan installments on timely. So, entrepreneurial skills and knowledge have multiple effects on microfinance program and member of microfinance

xiii. **Lack of fund:**
Nepalese microfinance institutions (MFIs) have been suffering from inadequate fund for investment to poor people. The BAFIA 2017 has a provision that MFIs can accept public deposit with the approval of the Nepal Rastra bank. Public deposit may permanent sources to maintain the fund crisis. Nepalese MFIs can collect deposit only from their group of members which is very small amounts and not sufficient for long term investment.

xiv. **Governance in operation:**
Nepalese microfinance institutions need to follow institutional and operational governance systems guidance by regulatory authority which is very important for institutional development and effective service delivery and sustainability as well. If MFIs will improve their operational and corporate governance systems there is no doubt, definitely they will be achieve financial as well as social mission**.**

xv. **Effects of COVID- 19 on microfinance:**
The COVID- 19 pandemic has affected microfinance and their activities greatly. Its effect has been spreading exponentially on human life, health and whole economy. The microfinance institutions are highly affected by this pandemic resulting in decreasing trend in loan portfolio quality, increases in loan overdue, recession in loan investment, decreases in interest income, decreases in profit, decreasing in quality of center meeting and loan monitoring. Microfinance programs (MFP) are highly affected and millions of clients are facing poor financial condition due to this pandemic. Due to this pandemic, microfinance clients are directly affected in which they are losing many business as well as economic opportunity. COVID-19 has escalated the over-indebtedness risk clients significantly. It will create very problematic.

Lack of reliable credit information:

Major issues of multiple lending and duplication of clients is inadequate credit bureau. So, credit bureau can help MFIs to address the issue of multiple borrowing and duplication. It reduces cost of operation and ensures efficiency and increases the organizational productivity.

Opportunities/Prospects:

Microfinance is a globally recognized as an effective and powerful instrument for poverty reduction and economic development. It has positive impact on whole economy in micro level. Some important opportunities of Nepalese microfinance sector are as discussed below:

i. **Women's empowerment**
Microfinance program is targeted with the poor people. MFIs provide financial services without fixed collateral with solidarity group guarantee. Before enrolment of microfinance program, they organized in-depth pre-group training (PGT) and group recognition test (GRT) which is part of financial literacy. Microfinance empowers women's economically and socially through access to financial services. Microfinance leads to social and economic change in the borrowers after participation in the programs. The most important part is that, they are able to generate income, participate political and social development, interact each other's and very good financial as well, as excellent loan track records. Women have been shown to spend more of their income on their household; therefore when women are helped to increase their income, the welfare of the whole family is improved. Women are more likely than men to spend their profits on household and family needs. Therefore, if women are empowered, it is likely the whole family is also automatically empowered.

So, microfinance program has the potential to have powerful impact on women's empowerment.

ii. **Poverty reduction**

Poverty is very serious problem of developing countries like Nepal. After involvement in the MFIs program increase in regular income, increase in saving, investment and increase in food sufficiency, cloths, heath, health awareness and education to their children. Microfinance is only that program which can reduce poverty through effective financial services to the poor by attached them in income generating activities with simplest methods. MFIs provide diversified financial services to the poor as per their needs and capacity. Microfinance generates income, build tangible and intangible assets and improve status of women's. So, microfinance has the potential to have powerful impact on poverty reduction.

iii. **Resource mobilization**

Microfinance institutions (MFIS) provide loan in productive sector to needy people those who are excluded from formal financial services. They need funds for further investment in rural and semi-rural areas. They borrow loan from commercial banks (CBs) as deprived sector lending (DSL) from domestic sources which are availability of domestic financial market. There is an opportunity to resource mobilization in financial markets for MFIs.

iv. **Developed professional management**

Microfinance institutions are professional institutions, they have sufficient intuitional capacity and professional human resources, so that they are able to provide to cost-effective microfinance services. They have adopted best practices of human resources development, good governance and rationality in microfinance to gain intuitional sustainability. The sustainability can be achieved only through team work, positive attitude with institutions, transparency, accountability, leadership quality and professionalism.

v. **Financial access**

Microfinance institutions are main vehicle of financial access to poor and deprived women's. They are an effective channel of financial services to ensure cost effective financial access in rural areas.

vi. **Favorable legal environment**

There is conducive and favorable environment for the development of microfinance industry in Nepal. The government of Nepal has been issued National microfinance policy in 2007 for financial infrastructure of microfinance. Likewise, the Nepal Rastra Bank, the central bank of Nepal also create favorable environment in the promotion, development and awareness of its importance's for poverty alleviation.

vii. **Employment opportunities**

Microfinance program has covered throughout the nation with approximately 3800 branches with approximately 4.7 million of clients. MFIs have created numbers of employment opportunities in the labor markets. They are not only generating income of small holders but also create employment opportunities for social balance and peace building in the nation.

viii. **Entrepreneurship development**

Microfinance institutions plays significant role in the areas of entrepreneurship development. They gradually developed bigger loan management as well as entrepreneurial orientation of borrowers through financial literacy program and in-house program. Therefore, the scope and potentiality of MFIs is increasing day by day.

ix. **High opportunity to agricultural finance**

Nepal is an agricultural country and near about 60 percent of Nepalese people are engaged in the agricultural sector. In the other hand, near about 67 percent people have got employment opportunities in agricultural sector. Agricultural loan is also major portfolio of Nepalese MFIs. Therefore Nepalese MFIs has great opportunities to invest its fund in agricultural sector. There is huge viable market in MFIs to invest its resources in agricultural sector.

x. **Gender and development**

There is very strong correlation between gender empowerment measure and gender related development indices and Human Development Index. Gender equality is a critical component of any development strategy. Microfinance has come to play a major role in different development strategies because of its direct relationship to both poverty alleviation and women. Gender equality is essential to sound development practice and at the heart of economic and social progress. So, microfinance is an important instrument for gender and development.

xi. Efficiency and sustainability of microfinance institutions (MFIs)

The efficiency and sustainability of microfinance ensures the sustainable delivery of microfinance services. Arguments have been made for and against targeting women on the grounds of efficiency and sustainability. Proponents of targeting women on the grounds of sustainability cite women's repayment records and cooperativeness. Generally, women's repayment rate is higher than men. Low portfolio risk and low overdue and loan loss rates have directly effect on the efficiency and sustainability of the MFIs.

Conclusion and discussion

Microfinance has proved to be an important tool for poverty alleviation and catalyst for social change. According to outreach and data, there is no doubt that microfinance is one of the important rural oriented programs which has significant role for poverty reduction in Nepal. After the enrolment of MFIs people's economic and social status has changed distinctly. Members of microfinance are able to purchase their household items such as: foods, cloths, housing, and education for children and small saving for future livelihood. Their living standard has also increased. Therefore microfinance service is a widely accepted strategy for poverty reduction developing countries like Pakistan, Bangladesh, Srilanka and Nepal. There is positive impact in the life of clients of microfinance. However, the development of microfinance has also created several obstacles and issues that this paper has been shown briefly. Nepalese microfinance has been facing numbers of problem ahead. Unhealthy competition, over-indebtedness, high rate of employee turnover, less focuses on client's protection/responsible finance, poor efficiency of employee, increasing trend in loan overdue, overcrowded in certain geographical areas, member's dropout, mission drift, excluding marginalized group and less awareness about strength of microfinance program. Besides this, there are lots of opportunities in Nepalese microfinance sector in upcoming future. Microfinance need to move beyond the traditional microcredit methodologies and innovative through digitization to extend financial services more effectively to the rural people due to COVID - 19 crises.

Implication:

Microfinance sector has succeeded to gain great achievement in poverty reduction, social change and particularly developing countries like Nepal. It is poor oriented program which focuses on targeted people specially marginalized people those who are land less, capital less and deprived from governmental financial and social facilities and services. Clients of microfinance have maintained full financial discipline, MFIs maintained excellent repayment rate that is near about 98 percent. However, many more challenges are there in the way. This indicates that, the quality of microfinance is decreasing day by day due to financial illiteracy of members and profit centric orientation of MFIs. Over-indebtedness is another problem of Nepalese microfinance sector. Likewise, microfinance sector has gained its popularity with profitable sector like business in the sense of investor. Practically, microfinance is non-profit making business which is purely service oriented. Therefore, the government of Nepal, regulatory institution and economist must maintain professionalism for service continuity to the poor people and future sustainability. MFIs should be deeply rooted in microfinance culture and ethics focusing to the poor. Besides, there are more opportunities too which can play significant role as catalyst for economic and social change. Furthermore, the findings of this study is useful and applicable in BFIs, microfinance expert, economist, regulator, and decision makers.

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Effect of Credit Performance and Interest Spread on Profitability of Commercial Banks in Nepal

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ABSTRACT

This study examine the effect of credit performance and interest spread on the profitability of commercial banks in Nepal using panel least squares regression model. The balance panel data of sixteen commercial banks for the year 2013–2021, with 128 observations were used for empirical analysis.The study used non-performing loan ratio (NPLR), credit to deposit ratio (CDR), interest rate spread (IRS), capital adequacy ratio (CAR), customer deposit growth rate (CDGR), and bank size as explanatory variables, and return on asset (ROA) as the dependent variable. The data were collected from the annual report of sample banks, banking and financial statistics, and the bank supervision report published by the Central Bank of Nepal. The study employed a descriptive and causal comparative research design, using Eviews-12 data analysis and modeling software for diagnosis of model, model fit, and analysis. Descriptive statistics, Pearson's correlation analysis, and multiple regression models were also used. The random effect model was chosen as the fitted model after model diagnosis. The regression model showed that NPLR had a negative and statistically significant impact on ROA, whereas IRS had a positive and statistically significant impact on ROA. However, CDR had a positive but statistically insignificant impact on ROA. Result further showed that capital adequacy ratio, customer deposit growth rate, and bank size had a significant impact on ROA. It can be concluded that the strong credit performance and interest rate spread contribute to increase in bank profitability.

Keywords: Return on Asset, Non-performing Loan, Credit to Deposit ratio, Interest Rate Spread, Capital Adequacy, Customer Deposit Growth, and Bank Size.

Introduction

The banking and financial industry is a significant and expanding industry worldwide. It serves as the foundation of a country's economy, enabling long-term financial growth through effective monetary intermediation. A robust financial system creates investment opportunities by financing productive businesses, gathering savings, efficiently allocating resources, and promoting trade in goods and services. Therefore, financial institutions play a vital role in accelerating a nation's growth. Commercial banks are the main players in the Nepalese financial system and hold 54.5 percent of the total assets (NRB, 2022). Commercial banks have fulfilled their role as intermediaries by mobilizing deposits and providing loans and advances, and this has impacted their performance (John, 2014).

Credit performance has measured as the quality of assets that a bank puts in its portfolio of loans and advances. Quality of assets means a bank's assets portfolio with the minimum possibility of losses. Largely, bank provides loans on the behalf of mortgage and its views as security against default. The banking industry has consistently faced credit risk as its foremost risk factor (Han, 2015). The default of borrowers due to credit risk can lead to an economic downturn for banks, negatively impacting the overall economy as witnessed in the 2008 world economic crisis. History shows that many BFIs in Nepal have already been liquidated due to large non-performing loans (Malla, 2017). According to a recent IMF report, the monetary authority of the country was found to have inadequate regulatory and supervisory practices, leading to an inaccurate assessment of the asset quality of banks and an insufficient identification of existing risks. So, the credit management mechanism of the bank should be strong to mitigate possible adverse effects on performance, liquidity crunch, and failure of the bank that might arise from an ineffective credit disbursement process. Besides, some commercial banks are rushing to attract depositors by offering high interest rates on deposit accounts, while others are offering lower interest rates for loans and advances than other competitors in Nepal. As a result, competition between the banks is too high. The competition level in the loan market was found to be higher than deposit market competition. So, banks need to pay special attention to loan management. Besides, the competition level in the loan market was

found to be higher than deposit market competition. So, banks need to pay special attention to loan management (Gautam, 2021).

Interest represents the cost for the borrower and the income for the lender. Specifically, the bank pays interest to depositors and collects interest from borrowers. The interest margin constitutes a significant source of revenue for banks and represents a substantial portion of their profits. Generally, the bank's interest rate spread denotes the difference between the interest rate charged on loans and the interest rate paid on deposits. Generally, a higher interest rate spread results in greater profits, and conversely, a lower interest rate spread leads to lower profits (Karki, 2020). Consequently, banks strive to allocate funds to areas that provide higher interest rates while maintaining a low default risk, in order to maximize profits and shareholder wealth (Musah et al., 2018). On the other hand, the bank a low-interest does not charge rate to the borrower as it has to pay interest to the depositor and maintain other costs.

The relationship between credit performance, interest spread, and bank profitability is complex and multifaceted. Bank credit performance and interest rate spreads affect not only the bank's profitability but also the country's overall economy. In the review of the literature, there has been unanimity in the findings. Therefore, more research is needed to be done to determine whether credit performance and interest spread have an impact on the profitability of commercial banks.

Theoretical and Empirical Review

Theoretical Review

The Loan Pricing Theory suggests that the price of a loan is determined by the cost, margin, and risk premium. This interest rate is typically higher than the base rate set by the bank. Banks that consistently set high lending rates may only attract risk-seeking borrowers or create an adverse selection problem where only risk-averse borrowers are interested in taking out a loan. This can limit loan portfolio diversification and increase credit risk. Conversely, a lower interest rate on a risky loan can increase the default rate and lead to credit risk due to inadequate credit evaluation and moral hazard behaviors. Therefore, optimizing credit performance through loan pricing becomes an essential task for loan officers (Kwashie et al., 2022).

The loanable fund theory states that the interest rate, which is the cost of credit, is determined by the demand and supply of loanable funds. The credit performance of a bank, measured by non-performing loans and loan loss provisions, affects the supply of loanable funds. Banks with high levels of non-performing loans and loan loss provisions may have a reduced ability to lend, leading to a reduced supply of loanable funds. This, in turn, may result in higher interest rates and lower profitability for the bank. To increase profitability, banks can charge higher interest rates on lending when the demand for loans is higher than the supply (Musah et al., 2018).

The trade-off theory suggests that credit performance, which is measured by the level of non-performing loans, is linked to a bank's asset risk. Higher levels of non-performing loans indicate a greater risk of default and potential asset loss. In order to compensate for this higher risk, banks may need to charge higher interest rates on loans, which could result in lower profitability. However, banks with higher interest spreads may earn greater returns on their assets and therefore have higher profitability. Overall, a higher risk is associated with higher profitability, and vice versa (Hersugondo et al., 2021).

Empirical Review

Siddique et al. (2021) studied the issue of high non-performing loans in South Asian commercial banks, which contributed to 60% of world growth. The study used data collected from 19 commercial banks in Pakistan and India and employed a generalized method of moment (GMM) for estimation. The study found that capital adequacy ratio (CAR) and average lending rate (ALR) were significantly positively related to financial performance, while non-performing loans (NPLs), cost-efficiency ratio (CER) and liquidity ratio (LR) were significantly negatively related to the financial performance of Asian commercial banks. In conclusion, the study suggests that credit risk management and bank-specific factors play a crucial role in the financial performance of commercial banks in South Asia.

Bandara et al. (2021) conducted a study to measure the effect of credit risk on the profitability of the banking sector in Sri Lanka from 2010 to 2017. The study used descriptive and inferential statistics to analyze the data, and employed the Fixed Effect Model and the Random Effect Model to estimate the relationship between variables. The study found that credit risk is an important determinant of bank profitability. Specifically, non-performing loans have a negative and significant impact on ROA, while LDR is not an important variable for profitability. The study recommends that banks should focus on managing their credit risk and maintaining a

sufficient capital adequacy ratio to improve their profitability.

Chhetri (2021) conducted a study to examine the relationship between credit risk and financial performance of commercial banks in Nepal, using panel data from 17 banks over the period of 2015 to 2020. The study utilized descriptive statistics, panel regression model and correlation matrix to analyze the data. The study concluded that non-performing loans have a significant negative impact on ROA, while capital adequacy ratio and bank size have insignificant negative impacts on ROA. The loan-to-deposit ratio has a positive but not significant relationship with the ROA. The study states that bank must manage their credit risk to boost financial performance.

Khan and Sattar (2014) studied the impact of changes in interest rates and bank profitability in the context of Pakistan. The study is based on secondary data from four commercial banks for the fiscal year 2008 to 2012. The study concluded that there is a strong and positive relationship between interest rates and the profitability of the banks which means if the change in the value of interest rates is, the value of commercial banks will also change. The researcher suggested that the bank should charge low-interest rates and pay good interest to depositors.

Hakuduwal (2021) examined the bank-specific factors' effect on the financial performance of Nepalese commercial banks. The panel data from 2012 to 2018 was taken for the study and 16 commercial banks were taken as samples. The purposive sampling method was employed to select the sample banks. Regression, F-test and t-test were used for analysis based on pooled least square method. This study revealed that the total assets and total loan and advance have a positive significant impact on profitability. Likewise, total equity has no significant impact and the total deposit has a negative significant impact on the profitability of commercial banks in Nepal. The study highlights that the banks should utilize their assets, loans, deposits properly and equity for sound profitability of the bank.

Musah et al. (2018) measured the interest rate spread by applying net interest income and net interest margin and profitability of the bank using ROA and ROE. This study used panel data of 24 sample banks for the ten-year periods and was based on secondary data taken from the annual report of the bank. They found that there is a positive and statistically significant association between interest rate spread and bank profitability in the context of Ghana. The findings could be interpreted in the context of Loanable Fund Theory to suggest that bank can charge a higher interest rate on lending if demand for loans exceeds the supply to increase profitability.

Yuan et al. (2022) conducted a study on the impact of bank-specific variables on the profitability of private south Asian commercial banks. The study used panel data from 2010 to 2021 of 40 banks, 20 from India and 20 from Bangladesh, which were randomly sampled. The results showed that bank size and debt-to-assets ratio have a positive and significant impact on return on assets (ROA), while deposit-to-assets ratio and loan-to-deposit ratio have a negative and significant impact on bank profitability. The study concludes that bank managers should focus on managing these bank-specific variables in order to improve bank profitability.

III. Methodology

Descriptive and causal comparative research designs were employed in this study. Descriptive research design was used to explain the descriptive characteristics of variables applied in the study. Likewise, to examine the effect of explanatory variables on dependent variable causal comparative research design were used. The research employed stratified sampling to select a subset of banks. Data for the year 2013 to 2021 were employed for empirical analysis. The data, consisting of time series and cross-sectional data were obtained from the annual reports of the sample banks and the NRB website. Utilizing pooled data regression from 16 commercial banks was used for finding empirical results.

The Model

The econometric model used in the study for estimating the effect of independent variables on dependent variable is given as:

$Y =$

Where, Y is the dependent variable, $\beta 0$ = Constant, β = Coefficient of explanatory variables, Xit = Vector of explanatory variables, and εit = Error term

By adopting the above model, the effect of credit performance and interest spread on profitability has been estimated by the following regression equation:

Where,

= Constant Term

= Coefficient of Variable that represents the degree of changes on ROA as the independent variable

changes by one unit.
= Return on assets of bank in year t
= Non-performing loan ratio of bank in year t
= Credit to deposit ratio of bank in year t
= Interest rate spread of bank in year t
= Capital adequacy ratio of bank in year t
= Natural logarithm of total assets of bank in year t
= Customer Deposit growth rate of bank in year t
= Error term

Dependent Variable

Return on Asset (ROA)

The return on assets (ROA) is a simple way to measure a bank's profitability. This metric indicates the bank's ability to generate profits through its asset management function (Kohlscheen et al., 2018), and is often used as a dependent variable in studies examining bank performance. ROA is a commonly used financial ratio for evaluating banks, calculated by dividing net profit after tax by total assets.

Independent Variables

Non-performing Loan Ratio (NPLR)

Non-performing loans (NPLs) refer to the ratio of total non-performing loans to the gross loan portfolio. The non-performing loan ratio (NPLR) serves as an indicator of a bank's credit risk management and the quality of its loans and advances (Bhattarai, 2017). Studies have found that NPLR has a negative and statistically significant impact on ROA (Hamza, 2017), which means that an increase in NPLs will result in a decrease in profitability and vice versa. NPLR is calculated by dividing the total non-performing loans by the total loans.
H1 = Non-performing loan ratio (NPLR) has a significant negative effect on bank's profitability.

Credit to Deposit Ratio (CDR)

The credit to deposit ratio is a crucial metric for assessing a bank's liquidity position. It measures the proportion of a bank's total loans and advances to its total collected deposits. A higher CDR indicates that the bank has effectively mobilized its collected funds, while a lower CDR suggests that the bank may have more liquidity but cannot lend out its funds, which could ultimately reduce profits. However, having a higher CDR may not always be beneficial from a liquidity standpoint (Chhetri, 2021). It is calculated by dividing total loans and advances by total deposits.
H2 = Credit to deposit ratio (CDR) has a significant positive effect on bank's profitability.

Interest Rate Spread (IRS)

The interest rate spread refers to the difference between the interest charged by a bank on loans to its borrowers and the interest paid to its depositors. Interest gap is considered as the major income sources of the bank. Many previous studies found that there is a positive and statistically significant association between interest rate spread and bank profitability (Musah et al., 2018; Karki, 2020). This implies that when the interest rate spread of a bank increases or decreases, its profitability will also increase or decrease in the same direction.
H3 = Interest rate spread (IRS) has a significant positive effect on bank's profitability.

Capital Adequacy Ratio (CAR)

The capital adequacy ratio (CAR) is a crucial measure of a bank's financial strength and regulatory compliance. It refers to the amount of capital that banking and financial institutions must hold to meet regulatory requirements. A higher capital adequacy ratio (CAR) indicates that a bank has sufficient capital to absorb potential losses from loans and protect against defaults due to a lack of funds. This ratio is calculated by dividing the total capital by the total risk-weighted assets, expressing the amount of a bank's capital as a percentage of its exposure to risk (Chhetri, 2021).
H4 = Capital adequacy ratio (CAR) has a significant positive effect on bank's profitability.

Customer Deposit Growth Rate (CDGR)

Customer deposits refer to the funds deposited by households and businesses in banks for the purpose of safety, liquidity, and protection against inflation. The growth of customer deposits is calculated by dividing the change in deposits (current year's deposits minus the previous year's deposits) by the previous year's deposits. A positive growth rate indicates an increase in deposits compared to the previous year, while a negative growth rate

indicates a decrease in deposits. This metric is measured by dividing the current year's deposit collection minus the previous year's deposit collection by the previous year's deposit collection.

H5 = Customer deposit growth rate (CDGR) has a significant positive effect on bank's profitability.

Bank Size

Bank size is a widely used metric for evaluating the potential economies or diseconomies of scale in the banking sector. This variable is employed to account for differences in product costs and risk diversification according to the size of financial institutions. It is also used to control for the possibility of larger banks diversifying their products and loans. In financial literature, the natural logarithm of a bank's total assets is often used as a proxy for bank size (Chhetri, 2021). Research suggests that bank size has a significant positive impact on the profitability of commercial banks in Nepal (Hakuduwal, 2021).

H6 = Bank size (TA) has a significant positive effect on bank's profitability.

IV. Results and Finding

The necessary data were gathered from the annual reports and the NRB's key financial indicators report of the sample banks. In this section, collected data are presented and analyzed using different mathematical and financial tools and techniques. The results of this study can be useful for policymakers and commercial banks in making informed decisions regarding credit performance and interest spread to improve their profitability.

Descriptive Statistics

In the data analysis process, descriptive statistics play a crucial role in providing an overview of the data being studied. This section aims to summarize and describe the characteristics of the variables under consideration, including Return on Assets (ROA), Non-Performing Loan Ratio (NPLR), Credit-Deposit Ratio (CDR), Interest Rate Spread (IRS), Capital Adequacy Ratio (CAR), Deposit Growth Rate (DGR), and Total Assets (TA). Descriptive statistics provide a foundation for more advanced inferential statistical analyses. Table 1 displays the descriptive statistics of these variables, which are essential for interpreting the results of the study.

Table 1
Descriptive statistics of ROA, NPLR, CDR, IRS, CAR, DGR and TA

Variables	ROA	NPLR	CDR	IRS	CAR	DGR	TA
Mean	1.67	1.57	82.65	4.26	13.92	19.56	105968.1
STD.	0.53	1.63	10.22	0.88	2.61	16.88	53861.74
Max.	3.61	8.99	117.38	7.17	23.68	103.58	291066.2
Min.	0.42	0.01	48.92	2.49	5.26	-44.55	20811.9
Obs.	128	128	128	128	128	128	128

Note: Annual report of sample banks and NRB, results are drawn from EVIEWS-12.

As per Table 1, ROA is used as dependent variable to measure the profitability of the bank has a mean on of 1.67%, a maximum of 3.61% and a minimum of 0.42%. It means average Return on Assets (ROA) of commercial banks of Nepal lies between 0.42% and 3.61. Non-performing loan ratio (NPLR) has a mean on of 1.57%, a maximum of 8.99% and a minimum of 0.01 percent which means the NPLR of Nepalese Commercial Banks lies between 0.01% and 8.99%. Similarly, credit to deposit ratio (CDR) has a mean on of 82.65%, a maximum of 117.38% and a minimum of 48.92% which helps to evaluate liquidity of bank. It indicates that the CDR of Nepalese Commercial Banks lies between 48.92% and 117.38%. Similarly, interest rate spread (IRS) has a weighted mean on of 4.26%, a maximum of 7.17% and a minimum of 2.49% which shows between 2.49% and 7.17% IRS lies of commercial bank of Nepal. It indicates cost of financial intermediation for bank.

Furthermore, capital adequacy ratio (CAR) has mean 13.92%, a maximum of 23.68% and a minimum of 5.26% which indicates between 5.26% and 23.68% CAR lies of commercial bank of Nepal. At the same time, customer deposit growth (CDGR) has mean 19.56%, a maximum of 103.58% and a minimum of negative 44.55% which indicates between negative 44.55% and 103.58% CAR lies of commercial bank of Nepal. Likewise, total assets (TA) have mean Rs. 105968.1 in millions, a maximum of Rs. 291066.2 in millions and a minimum of Rs. 20811.9 in millions which indicates between Rs. 291066.2 and Rs. 20811.9 in millions CAR lies of commercial bank of Nepal.

Inferential Statistics

Correlation Analysis

Correlation analysis is a statistical tool to measure the strength of linear association between two or more than two variables. The value of correlation coefficient always lies between -1 to +1. Correlation coefficient +1 means there is strongly positively association between the variables while correlation coefficient -1 means there is strongly negatively association between the variables. Similarly, correlation coefficient 0 means there is no association between the variables.

Table 2

Pearson Correlation Analysis of ROA, NPLR, CDR, IRS, CAR, CDGR, and lnTA

Variables	ROA	NPLR	CDR	IRS	CAR	CDGR	lnTA
ROA	1						
NPLR	0.1084	1					
CDR	-0.0773	0.2855**	1				
IRS	0.4607**	0.4633**	-0.0354	1			
CAR	0.2601**	0.1591	0.1075	0.2575**	1		
CDGR	-0.1824*	-0.0906	0.0353	-0.0597	-0.0554	1	
LNTA	0.0976	0.0831	0.1405	0.0973	0.2846**	-0.161	1

Note: Results are drawn from EVIEWS-12

*. Correlation is significant at the 0.05 level (2-tailed).

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

The Table 2 shows that there is a significantly positive correlation between non-performing loan ratio (NPLR) and ROA i.e. r = 0.1081 which means the higher the non-performing loan ratio (NPLR), the higher the ROA and vice-versa. Similarly, credit to deposit ratio (CDR) is negatively correlated with ROA i.e. r = -0.0773 which denotes higher the CDR would be lower the ROA and vice-versa. Likewise, there is significantly positive correlation between interest rate spread (IRS) and bank profitability measured by ROA i.e. r = 0.4607 which indicates higher the IRS would be higher the profitability of the bank. CAR is positively correlated with ROA at 1% level of significance. Similarly, CDGR is negatively correlated with ROA but at 5% level of significance with ROA. Likewise, TA is positively correlated with ROA.

Regression Analysis

Regression analysis is a mathematical tool that uses to estimate or predict the cause-effect relationship between the two or more variables. There are three estimation models for the panel regression model, i.e., polled ordinary least square (POLS), random effect model (REM), and fixed effect model (FEM). To determine the appropriate model for data analysis, a model diagnostic test statistic was used. The Hasman Test, Breaush Pagan LM Test, and Chow Test are employed to select an appropriate model.

Table 3

Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.1372	6	0.2282

Note: Results are drawn from EVIEWS-12

H0: Random effect model is appropriate than fixed effect model, select RE ($p > 0.05$).

H1: Fixed effect model is appropriate than random effect model, select FE ($p < 0.05$).

The above Table 3 shows the p-value of Hauman Test which is more than 0.05 i.e. 0.7303 which means null hypothesis i.e. random effect model is accepted. After that, Breaush Pagan LM Test is applied to decide whether random effect or polled ordinary least square model is appropriate. Null hypothesis suggests for POLS model and alternative hypothesis suggests for random effect model.

Table 4

Breusch Pagan LM Test for Model I

	Cross-section	Time	Both
Breusch-Pagan	40.2406	13.5713	53.8119
	0.0000	0.0002	0.00000

Note: Results are drawn from EVIEWS-12

H0: POLS is better than random effect model, select POLS (p> 0.05).
H1: Random effect model is better than POLS, select RE (p <0.05)
The above Table No.4 shows that the p-value of test is less than 0.05 i.e. 0.00 which means null hypothesis is rejected and suggests to go with random effect model.

Table 5
Regression results of NPLR, CDR, IRS, CAR, DGR and TA on ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPLR	-0.0875	0.0357	-2.4522	0.0156
CDR	0.0037	0.0056	0.6604	0.5102
IRS	0.2458	0.0540	4.5547	0.0000
CAR	0.0421	0.0170	2.4734	0.0148
CDGR	-0.0042	0.0021	-1.9797	0.0500
LNTA	-0.1964	0.0845	-2.3242	0.0218
C	2.1938	0.9159	2.3952	0.0181
	Weighted Statistics			
R-squared	0.2286			
Adjusted R-squared	0.1903		Durbin-Watson stat.	1.9064
F-statistic	5.9760			
Prob(F-statistic)	0.0000			
	Unweighted Statistics			
R-squared	0.2045		Durbin-Watson stat.	1.1909

Note: Results are drawn from EVIEWS-12

The above Table No.5 represents the regression results of NPLR, CDR, IRS, CAR, CDGR and TA impact on ROA. The value of multiple determination of adjusted R square is 0.1903 which indicates the 19% change in ROA is explained by the NPLR, CDR, IRS, CAR, CDGR and TA. However, the remaining 81% changes in ROA is not explained by independent variables that means remaining 81% is explained by other variables, these are not included under the study. The independent variables NPLR, IRS, CAR, CDGR and TA have statistically significant on dependent variables ROA whereas CDR has statistically insignificant at 5% level of significance. Similarly, NPLR, CDGR and lnTA have negative effect on ROA whereas CDR, IRS, and CDR have positive effect on ROA. Durbin-Watson stat. 1.9064 indicates that there is no autocorrelation. On the other hand, the p-value of F-statistic is 0.0000 which is less than 5%. It indicates that the overall model is fitted.

The resulting regression equation was:

ROA = 2.19 + (-0.088) NPLR + (0.004) CDR + 0.246 IRS + 0.042 CAR + (-0.004) CDGR + (-0.196) lnTA

As per the above equation, it shows that holding non-performing loan ratio (NPLR), credit to deposit ratio (CDR), interest rate spread (IRS), capital adequacy ratio (CAR), customer deposit growth rate (CDGR), and total assets (TA) as a constant zero, the return on assets (ROA) of commercial banks would be at 2.19. The regression coefficient of NPLR, CDR, IRS, CAR, CDGR and TA are -0.088, 0.004, 0.246, 0.042, -0.004, and -0.196, respectively which means one unit increases or decreases in the independent variable results in increases or decreases in the dependent variable regarding to the coefficient. Similarly, one unit increments in IRS lead 0.246 increments in ROA and one unit increments in CAR lead 0.042 increments in ROA and vice-versa. However, one unit increments in NPLR lead 0.088 unit decrements in ROA, one unit increments in CDR lead 0.004 unit decrements in ROA, one unit increments in CDGR lead 0.004 unit decrements in ROA and one unit increments in TA lead 0.196 decrement in ROA and vice-versa.

Discussion

This study reveals that NPLR has positively correlated with profitability and similar findings exists in previous research Pokharel and Pokharel (2020) which indicates banks are taking more risk by lending to borrowers.

Similarly, there is significant relationship between interest rate spread (IRS), capital adequacy ratio (CAR), customer deposit growth rate (CDGR) and profitability of the banks. However, CDR has negatively correlated with profitability of bank and the similar findings are drawn by Shrestha and Niraula (2021), Bhattarai (2019), and Ramchandani and Jethwani (2017) which indicates high credit to deposit ratio lead to decrease in profitability. Similarly, IRS has positively correlated with profitability of bank and the similar findings are drawn by Shrestha and Niraula (2021) and Musah, et al. (2018) which indicates an increase in IRS lead to increase in bank's profit. Overall, the findings of this research provide valuable insights into the factors that contribute to the profitability of commercial banks in Nepal.

Similarly, NPLR has negative and statistically significant impact on ROA whereas IRS has positive and statistically significant impact on ROA. The negative and statistically significant result of NPLR and similar findings were drawn by Hamza (2017) suggests that banks need to maintain strong credit risk and loans and advances process for the purpose of keeping NPL as lower as possible which will enable to maintain high credit performance for profitability (ROA) of commercial banks. Similarly, the positive and statistically significant result of IRS on ROA and it has coincided with the previous study (Karki, 2020) suggests the bank should maintain the lending and deposit rates in optimum level to attract both depositors and borrowers. However, CDR has positive and statistically insignificant impact on ROA and Goet (2022) also found a similar result. The insignificant result of CDR indicates that credit to deposit ratio (CDR) could not be regarded as the influential variable for bank profitability. Likewise, capital adequacy ratio, customer deposit growth and banks size have also significant effect on profitability.

Conclusion and Implications

Credit performance and interest spread have significant effect on commercial bank profitability in Nepal. Hence it can be concluded that strong credit performance and a wide interest spread can boost profitability, but banks must strike a balance between maintaining a healthy interest spread and providing affordable loans. Effective management of credit performance and interest spread is crucial for maximizing profitability. The study suggests that commercial banks, regulatory authorities, investors, and other stakeholders should develop suitable policies and take steps to ensure high-quality loans and appropriate interest rates. The study's findings can be used as a reference for future research and comparisons.

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Issues on Role of Gender, Age and Qualification of faculties on Job Performance.

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ABSTRACT

The purpose of this study is to examine the association of gender, age and qualification of faculties with their perceived organizational justice and job performance. For this study faculties of 7 QAA certified colleges were taken through judgmental sampling. Sample size was 396 faculties determined by using slovins formula. Descriptive and cross-sectional research design was used. This study found there is no association of gender, age and qualification of faculties with job performance in Nepalese QAA Colleges. The strongest implication of this study is that fairness is an important motivator of job performance at work place.

Key words: Job performance, Task performance, Contextual performance.

Introduction

In the present globally competitive educational environment teaching faculty plays a crucial role in ensuring the success of educational institutions. For educational institutions, the effective performance of teaching faculty would directly and significantly affect student's perception of the level of teaching quality offered, the way of teaching and counseling to the students would provide a favorable impression on teaching, Justice provides psychological empowerment and creates a positive perception in faculties towards leader of organization. Justice over the employee may change the job performance and thus explore the image of an organization.

Moreover, past research has noted that when people are asked to report what constitutes unfair treatment, their responses have focused on interpersonal rather than structural factors (Greenberg, 1993). Bies and Moag (1986), and Tyler (1986) argue that the quality of the interpersonal treatment one receives constitutes another source of perceived fairness, one that is not immediately recognized by the prevailing emphasis on the structural aspects of outcome distributions and procedures. The key to understanding group effectiveness is found in the on-going interaction process which takes place between individuals while they are working on a task. Thus, research is needed to explore how organizational justice relates to employees' attitude and behavior and their job performance. Research is also required to examine the antecedents of organizational justice perceptions in the Nepalese organizations. Therefore there are links between organizational justice and job performance. This study reveals that employees' perceptions of justice influence the job performance. Thus, this study has not only added value by exploring the direct and combined effects of justice dimensions on employee job performance, but also has advanced our understanding by studying these concepts in our Nepalese culture.

Research questions:

a. Does gender moderates job performance in Nepalese QAA College?
b. Does age moderates job performance in Nepalese QAA College?
c. Does qualification moderates job performance in Nepalese QAA College?

Objectives of the study:

a. To examine the association between gender of faculties and job performance.
b. To identify the association between age of faculties and job performance.
c. To examine the association between qualification of faculties and job performance.

Hypothesis:

H01: There is no significant association between gender and job performance.
H02: There is no significant association between age and job performance.
H03: There is no significant association between qualification and job performance.

Operational Definitions of Terms

Several concept definitions are applied in the study. The concepts have been applied to maintain the uniformity

and flows of the research. The definitions are as:

Job Performance: Job performance represents employees' adherence to and completion of formal job duties. It refers to the traditional performance of behaviors that is expected of him/her ata certain position. Job performance consists of two forms of job performance namely task performance and contextual performance, (Katz 1964, wiliams etal. 1991).

Task Performance Justice: It refers to job- specific be job-specific behaviors including core job responsibilities that are directly related to the organization's purpose, (Nasurdin and Khuan, 2007).

Contextual performance: It describes a set of interpersonal and volitional behaviors that support the social and motivational context in which organizational work in accomplished, (Aryee et al. (2004), Wang et.al. (2010).

Job Performance

Equity theory provided specific hypotheses regarding the impact of perceived distributive injustice on performance (Adams, 1965; Austin & Walster, 1974) such that when an employee perceives distributive injustice, the employee can alter his or her quality or quantity of work to restore justice. With few exceptions, procedural justice models did not follow with concrete predictions regarding the relationship between procedural justice and performance, but rather focused on the influence of procedural justice on attitudes and quality of work life (Lind & Tyler, 1988). In fact, it was claimed that procedural justice concerns are salient when the goal is group harmony, whereas distributive justice concerns are salient when productivity and efficiency are the focus of attention (Barrett-Howard & Tyler, 1986; Lind & Tyler, 1988). Procedural justice, then, may affect performance through its effects on attitudes. For example, when procedural injustice influences attitudes toward the organization and its authorities, attitudes negatively affect performance (e.g., Brockner & Wiesenfeld, 1996; Greenberg, 1987).

Task performance

Task performance refers to job- specific behaviors including core job responsibilities that are directly related to the organizations purpose. According to Motowidlo and van scoter (1994), task performance comprises two types of behaviors. The first directly relates to transformation process of raw material in to goods and services as product of the organization. The second one comprises of activities that service and maintains the technical core.

Contextual performance

Contextual performance, describes a set of interpersonal and volitional behaviors that support the social and motivational context in which organizational work is accomplished (Aryee, Chen, & Budhwar, 2004). Contextual performance has been further suggested to have two facets: interpersonal facilitation and job dedication. Interpersonal facilitation describes interpersonally oriented behaviors that contribute to the accomplishment of the organizational purpose. These include encouraging cooperation, consideration of others, and building and mending relationship. Contextual performance also captures many of the helping and cooperating elements of organizational citizenship behavior (Organ, 1988). When employees voluntarily help coworkers who are getting behind, act in ways that maintain good working relationships, or put in extra effort to complete assignment on time, they are engaging in contextual performance. Contextual performance behavior do not support the technical core itself as much as they support the broader organizational, social and psychological environment in which the technical core must function (Mottwidlo,2000).

Research Gaps

There is lack of studies in Nepalese context on the moderating role of gender, age and qualifications of the faculties of Nepalese QAA Colleges in job performance.

Research Design

A research design is the arrangement of all conditions that affect a research (cooper, Schindler, & Sharma, 2012). A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The research design of this study is descriptive and cross sectional.

Study Area

The faculties of Nepalese QAA Colleges.

Sampling Method

Judgmental sampling was applied in selecting the sample respondents. Due attention was given in selection of respondents who could understand the purpose of the study, understand questions and ways of responding the questions, judiciously.

Population and Sample Size

The target population for this study was Nepalese QAA Colleges. This study select only faculties of 7 colleges out of Nepalese QAA Colleges. In this study sample size was determined at an affordable cost in terms of time, finance and human resources (Mugenda & Muganda, 2003). Sample size is calculated by using Slovins (Guliford 1973) formula:

n= 1.96*1.96*.5*.5/.05*.05

n= 385, at 5% margin of error (level of significance).

Sample size was 396 which is slightly greater than 385.

Rating Scales

A Likert scale was adopted in this study. It was needed to measure respondent's opinion. The Likert rating scale allows a numerical value to be given to an opinion. All items of latent variables was measured on a five point Likert –scale (ranging from strongly disagree 1 to strongly agree 5). A five point scale was considered appropriate for this research work to reduce confusion and help respondents to maintain consistency on their ratings.

Relationship between demographic variables and job performance hypotheses are checked through ANOVA test, the summary result is:

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	5.763	26	.222	1.045	.406
	Within Groups	78.265	369	.212		
	Total	84.028	395			
marital status	Between Groups	5.468	26	.210	.993	.477
	Within Groups	78.169	369	.212		
	Total	83.636	395			
Age	Between Groups	27.677	26	1.064	1.192	.239
	Within Groups	329.434	369	.893		
	Total	357.111	395			
Education	Between Groups	8.270	26	.318	1.219	.215
	Within Groups	96.303	369	.261		
	Total	104.573	395			

The table shows that there is no significant difference in perception of faculties based on demographic characteristic (p values are: 0.406, 0.477, 0.239, and 0.215)

Major findings of the study

There is no significant association between gender of faculties and Job performance in Nepalese QAA Colleges (p value>0.000).

There is no significant association between age of faculties and Job performance in Nepalese QAA Colleges (p value>0.000).

There is no significant association between qualification of faculties and Job performance in Nepalese QAA Colleges (p value>0.000).

Summary of the study

There is no significant association between gender of faculties and Job performance in Nepalese QAA Colleges (p value>0.000), There is no significant association between age of faculties and Job performance in Nepalese QAA Colleges (p value>0.000), There is no significant association between qualification of faculties and Job performance in Nepalese QAA Colleges (p value>0.000),

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