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## IMPACT OF WORKPLACE CONFLICT ON EMPLOYEES' PERFORMANCE IN COMMERCIAL BANKS OF NEPAL

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### Abstract

*Employee performance among the employees has been found as a fundamental element influencing the workplace conflict of the organisation. The purpose of this study was to examine the Impact of Workplace Conflict on Employees' Performance in Commercial Banks of Nepal. The variables included in the study were the relationship conflict, task conflict, and process conflict were independent variable and employee performance was dependent variable. A survey research design using questionnaire method on 5-point Likert scale was used to collect. The study was conducted with the sample size of 170 and the data were analysed through the use of descriptive statistics, correlation, regression, t-test and multi-collinearity test using SPSS software. The findings of the study have a R square value of 0.626 meaning that 62.6% of the variation in the dependent variable is explained by the independent variables while 37.4% is explained by other variables outside the model and also showed that there is a strong positive correlation between the dependent variable and the set of independent variables. The result showed that there is significant impact of RC, TC, PC on EP.*

**Key words:** Workplace Conflict Employees' Performance, Relationship conflict, Task conflict, Process conflict

### INTRODUCTION

During the past decades, Nepalese banking systems have been a portrayal of low turnover, high loan interest rates, large interest rate distribution, inefficient management, and inadequate funds available for major ventures (NRB, 2013). In addition to promoting greater financial integration, Nepalese financial structures often demonstrate national and urban/rural inequalities. To address these issues, Nepal Rastra Bank (NRB) has implemented the fiscal consolidation policy. One of the most effective restructuring steps in the financial sector so far is merger & acquisition (M&A) between weaker and stronger banks. For the Nepalese banks and financial institutions (BFIs) mergers and acquisitions are a fairly recent phenomenon. Nepal Rastra Bank introduces the Merger By-laws 2068 B.S. based on article 177 of the Company Law 2063(B.S), article 68, and 69 of the BAFIA 2063(B.S).

The steps taken by Nepal Government are moreover has been found resolving the issues of the national economy but on the other hand, it has introduced conflict between the employees of bank merged/consolidated. The diversified workforce, merger of different working approaches, new set of challenges, change in employee's positional hierarchy have breed conflict and influenced the employee performance as well. Many studies are done so far have shown that the dynamics of human resources problems both before and after merger or acquisition are key elements in the conflicts. Ultimately managing conflict of employees leads to success or failure of the strategic move of merger or acquisition.

The conflicts in work place have possibility to flame in organizational level dispute due to not managing it properly in initial stage just immediately after M&A. In the banking industry its possibility cannot be ruled out. To prevent such catastrophic situation in banking organization there is need to conduct a comprehensive analysis of the key possibilities of conflict that severely affect workplace efficiency.

The M&A method also entails a great deal of job-related confusion and can be a intriguing for the workers. Buono and Bowditch (1989), states that a merger causes, and is a source of anxiety for employees. It leads to counter-productive employee behavior. The changes in an organization due to M&A increases employee perception of job insecurity and eventually leads to a drop in an organization's commitment, organization's trust, job satisfaction, and work performance (Ashford, Lee, and Bobko, 1989). Tetenbaum (1999) also suggested that the productivity of an organization declines by 25-50 percent in such situations.

Every organization's performance is multi-faceted and complex. The success of any organization is measured by evaluating the productivity and their successes in tangible areas (e.g. manufacturing efficiency, amount of consumers served, income improvement by percentage), or by assessing their success using a series of

predetermined criteria. Organizational efficiency is measured based on the extent of achieving specified targets, such as financial or productivity results and meeting strategic goals, such as owners' vision, shareholders expectation, and customers' satisfaction (Robins and Barnwell 1994).

The study is about the conflict management in the context of banks employees of commercial bank that endured the consolidation. The main objective is to analyze the role of conflict management in the performance of the bank.

For the study the conflict stages and their redressal mechanism is considered. The conflict behaviors of employees stem due to varied experiences, emotions, and mindsets of opposing individuals. The conflict situation arises mostly due to opposing views of groups or individuals. It is the state of tense-relationship between employees. The third aspect is the outcome of conflict which concerns consequential behavior, behaviors and performance changes, rotten relationships with the peers and subordinates. The conflict between persons isn't simply divergent behavior or action; it is also due to the varied perception, different thinking, disagreements, arguments, emotional problems, and task-related issues. All these aspects are considered in identifying the reason for conflict behavior and the impact of the conflict management on bank performance is assessed.

### **Research Objectives**

The research works are carried out with the following objectives: -

- ✓ To examine the impact of task conflicts on employees' performance in commercial banks of Nepal.
- ✓ To evaluate the effect of relationship conflicts on employees' performance in commercial banks of Nepal.
- ✓ To assess the influence of process conflicts on employees' performance in commercial banks of Nepal.

### **LITERATURE REVIEW**

Hossian (2017) examine the Impact of Organizational Conflict on Employees' Performance in Private Commercial Banks of Bangladesh, and found that employee performance is unfavorably influenced by struggle circumstances, yet it can likewise cause a positive, hierarchically useful discussion. To make an ideal atmosphere and workplace in money related organizations, we have to consider and evaluate employee productivity in conflict circumstances.

Jungst (2016) in his research paper entitled "Work Relationships: The negative relationship between conflict (task and relationship conflict) and success was tested against the negative effects of conflict". Conflicts have been discovered to be negative for employees who have no access to high social networks. The study has also shown that workers are less engaged or engaged with work because they experience an uncomfortable working atmosphere while they are experiencing a conflict of tasks. This disturbs the working scenarios and increases the sense of unease, irritation, nuisance, and overall job unhappiness. The research has also shown that the action of working relations has a more optimistic motivating effect. The study ended with a more optimistic idea of valuing working relationships to improve employee morale and profitability so that they remain less influenced by conflicts.

Ajike et al. (2016) in their research article "Effect of Conflict Management on the Performance of Financial Service Organization in Nigeria: An Empirical Study of Access Bank PLC" examined the impact of conflict management upon the performance of Access Bank in Nigeria. Researchers noted that the term conflict has often been viewed negatively, but the successful management of conflict increases organizational creativity and productivity. Finally, the study concluded with different recommendations, like developing suitable strategies, dealing with issues properly, and managing flexible approaches to conflict management, to resolve disputes before escalating to the unmanaged level.

Awan, and Saeed (2015), in their research paper entitled "Conflict Management and Organizational Performance: A Case Study of Askari Bank Ltd", analyzed the major reasons for conflict and conflict management strategies prevalent in the bank under study. Conclusions showed that the approaches for conflict resolution vary greatly with the age and education of the studied respondents. The views of respondents of men and women on various conflict resolution approach implemented by the management of the bank were not substantially distinguished. Lack of warm relationships between management and employees, differences of perception, behavioral problems, and a lack of effective communication have continued to emerge as key

conflict sources among banking personnel. The multiple unstable effects were subsequently investigated using high mean ratings like Low morality, low productivity, lack of direction, and lack of innovation. Communications divide. The study concluded with a range of recommendations for banking management on free contact, the continuous dialog between management and staff to share ideas, and explain various issues whenever appropriate.

Hasani et al. (2014), in their research paper “Identity of Organizational Conflict framework: Evaluating Model Factors Based on Demographic characteristics in Iran” tested the deviation occurred in the overall level of workplace conflict framework concerning the population variables such as sex, age, tenure ship, and educational level. The results for the overall conflict environment based on gender have shown other population variables like age, qualifications for education, and work experience as important. There were no major variations in the overall context of the dispute. The study also identified factors that cause conflict. A literature analysis of 38 variables included a total of ten large factors. The factors that emerged had thus been named, i.e. Incompatible objectives, different values and beliefs, conflict in ambiguity and role, communication problems, ambiguous rules, conflict of authority, inconsistent evaluation and reward system, job stresses, work dispute and lack of information system. The study concluded with several management recommendations for workplace conflict resolution while employees were involved in various organizational processes.

Agwu (2013), in his research analysis determined the extent of the relationship between conflict management styles and employees’ performance in Julius Berger Plc. Bonny Island. The results showed that the conflict management structure’s relationship to employee performance is significantly positive. It was further noted that Julius Berger management employees prefer a mixture of problem-solving, compromise, and collaborative conflict management strategies. The findings also revealed that Julius Berger’s sources of conflict concern primarily relate to problems of value and belief, autocratic managers’ style, and unacceptable terms such as poor working hours and the lack of fringes.

Tandon, and Sharma (2012), in their research article “Conflict Management in Public Sector Undertaking; A Case Study of prevailing Interpersonal Conflict at JKSRTC in J&K” explored particularly the level of interpersonal conflict level in Jammu & Kashmir State Roadways Corporation. The results of the trial revealed that JKSRTC employees work at a high level of interpersonal conflict. The study, at last, identified the various ways of preventing and resolving conflict scenarios among the conflicting parties, such as brainstorming in the respective organization, training sessions to identify new and explorative conflict management approaches, effective and open communications between conflicting parties, a regular performance assessment system and more realistic measures.

Probst (2009) found the elements of performance are: a) Input b) Output c) Efficiency d) Service Quality e) Outcomes. The presentation markers ought to likewise be conveyed by illustrative data. Performance indicators must be quantifiable, quantifiable, applicable, reasonable, and convenient. At the clench hand reaction, the indicator may appear to be neither quantifiable nor quantifiable; a target investigation of the program’s parts will usually survey some viewpoint that is quantifiable, quantifiable, and important.

On the other side, De Bono (1985) expressed that contention takes numerous structures in associations. There will in general be contrasts among the management and managers and those individuals and groups working under them. There are disagreements regarding how revenues to be partitioned, how the work ought to be done, and to what extent and hard individuals should work. There are jurisdictional differences among people, offices, and associations, and executives. There are subtler types of contention including competitions, jealousies, character conflicts, job definitions, and battles for force and favor. There is likewise struggle among people and their contending needs and requests — to which workers react in various manners in the association.

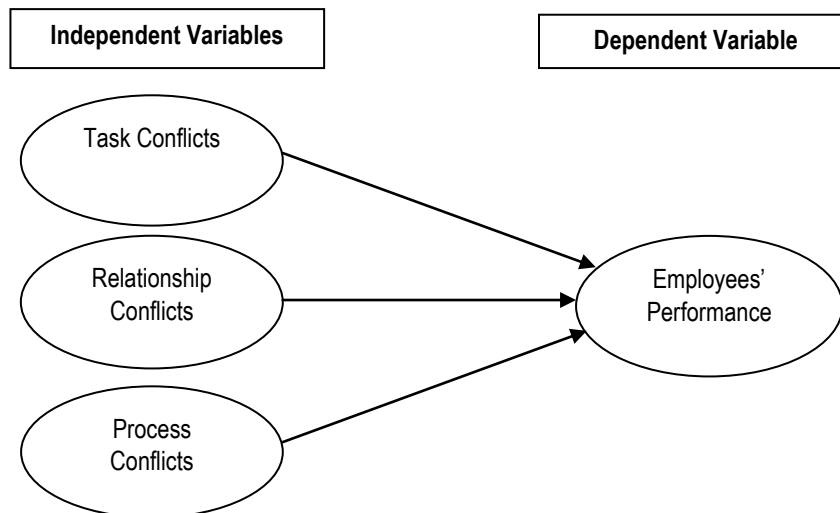
Argyris (1957) expressed in his investigation that contention is experienced in two general structures; individual conflict and task conflict. Struggle in the financial business can influence workers’ presentation and banks’ gainfulness.

### **The Conceptual Model**

Some studies have attempted to investigate the relationship between conflicts and performance in an organization. Soft factors of employees, such as communication and trust, have already featured in the banking industries. However, the effects of soft factors (e.g. the impact of conflicts and dependency on employee performance) have not been investigated. In this study, organizational conflict is specified as process conflict, relationship conflict, and task conflict in the model. The IPO (input, process, output) framework, which has been

widely used in team performance studies (Mathieu et al., 2008), is adopted to develop the conceptual model of this study. The interdependent variables are task characteristics of bank's employees, relationship characteristics, process characteristics between employees' job characteristics, while the dependent variable is employee performance in context to absenteeism, turnover, and OCB. According to Jehn and Mannix (2001); Jehn and Bendersky, (2003) and Chen et al. (2014), task conflict, relationship conflict, and process conflicts are intermediate variables.

**Figure:1**



### Proposed Hypotheses

In the present study following hypotheses are framed to be tested:

- H1: There is a significant relationship between task conflicts and employees' performance.
- H2: There is a significant affiliation between relationship conflicts and employees' performance.
- H3: There is a significant relationship between process conflicts and employees' performance.

### RESEARCH METHODOLOGY

This study is based on a causal-comparative research design. The information is gathered from sampled employees of the selected M&A commercial banks from the years 2017 to 2022 AD. A Multistage Sampling method is used in selecting the respondents. It is multistage as in the first phase all commercial banks are selected and then on the basis of M&A banks; in the defined period between is selected. This method gives every employee of the sampled commercial banks an equal chance of being selected as part of sample elements.

#### Sampling

For a sampling of the research, the commercial banks which are merged or acquired from 2017 to 2022 AD are selected. 10 branches from every selected bank are randomly selected in which 20 respondents from each branch are asked for the questionnaire. A total of 180 questionnaires were completely filled and returned. The respondents are based on the existing structure of the organization i.e officers and managers.

#### Data Collection tools

Primary data are collected using Questionnaire. Questionnaire (measurement tools) are prepared to know the organizational conflict in commercial banks of Nepal. The questionnaire is designed as per the variables featured in the model. The questionnaire is on the Likert Scale.

Secondary data included published and unpublished articles, conference papers, books, and bulletins, etc.

#### Data Analysis Tools and Presentation

To analyze the problem of the research, statistical techniques Mean, Standard Deviation, Correlation and Regression, are used to examine the variables characteristics through statistical software SPSS Version 21.

## DATA PRESENTATION AND ANALYSIS

	Mean	S.D	Correlations			
			RC	TC	PC	EP
RC	2.4643	0.6841	1			
TC	2.9158	0.6688	.619**	1		
PC	3.3482	0.496	.140**	.488**	1	
EP	3.7277	0.5976	-.199**	-0.06	.372**	1

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

From the above table the mean value of all variables is average representing that there is average amount of role conflict, task conflict and process conflict present among the employees working in commercial banks of Nepal. The highest mean value is for process conflict i.e., 3.3482, showing that employees are more affected by process conflict in the organisation.

The results from the table shows that correlation between role conflict and employee performance is negative and significant. Hence, it is inferred that role conflict reduces the level of employee performance. The variables task conflict and employee performance are insignificantly related and do not have a strong correlation, therefore task conflict is not related with employee performance. Also, the relationship between process conflict and employee performance is average and positively significant. Therefore, process conflict have positive relation with employee performance in commercial banks of Nepal.

## Hypothesis Results

Hypothesis	Regression Weights	B	T	p-value	Result
H1	RC→EP	-.193	-2.961	.003	Negatively significant
H2	TC→EP	-.113	-2.005	.046	Negatively significant
H3	PC→EP	.570	8.216	.000	Positively significant
R <sup>2</sup>	.626				
F(3, 332)	30.470				

Note: \*p<0.05. RC: Role Conflict, TC=Task Conflict, PC=Process Conflict, EP=Employees Conflict

The dependent variable (Employees Performance) was regressed on predicting variables of role conflict, relationship conflict, and process conflict. The independent variables significantly predict Employees performance,  $F(3,332)=30.470$ ,  $p<0.001$ , which indicates that the three factors under study have a significant impact on employees performance. Moreover, the  $R^2=.626$  depicts that model explains 62.6% of the variance in employee's performance.

Additionally, coefficients were further assessed to the ascertain the influence of each factor on the criterion variables (employees' performance). Hypothesis one (H1: There is a significant relationship between task conflicts and employees' performance). The result revealed that there is a statistically significant negative relationship between role conflict and employee's performance. ( $B=-.193$ ,  $t=-2.961$ ,  $p < 0.05$ ). Hence, H1 is accepted. H2: evaluates whether there is relationship between task conflict and employee's performance. The result show that there is statistically significant negative relationship between task conflict and employee's performance. ( $B=-.113$ ,  $t=-2.961$ ,  $p>.001$ ), consequently, H2 is accepted. H3 evaluates whether there is positive relationship between process conflict and employee's performance. The result show that there is significant positive relationship between process conflict and employee's performance ( $B=.570$ ,  $t = 8.216$ ,  $P<.0001$ ). Hence H3 is accepted.

## CONCLUSION

In conclusion, the findings of the study suggest that task conflicts, relationship conflicts, and process conflicts have a significant impact on employees' performance in Nepalese commercial banks. The research highlights the importance of understanding and managing these types of conflicts within the organizational context.

Firstly, task conflicts, which arise due to disagreements about work goals, procedures, or resources, were found to have a negative impact on employees' performance. Such conflicts can lead to decreased collaboration, coordination difficulties, and reduced productivity among team members. Therefore, it is crucial for organizations to foster a culture that promotes effective communication, problem-solving, and mutual understanding to minimize the adverse effects of task conflicts.

Secondly, relationship conflicts, which involve personal disagreements, tension, or animosity between individuals, were found to have a detrimental impact on employees' performance. These conflicts can lead to decreased motivation, increased stress levels, and a breakdown in teamwork. To mitigate relationship conflicts, organizations should focus on fostering positive work relationships, promoting open and respectful communication, and providing conflict resolution training to employees.

Lastly, process conflicts, which arise from differences in opinions regarding task-related decision-making, were also found to have a negative influence on employees' performance. These conflicts can lead to delays, inefficiencies, and confusion within the work processes, ultimately hindering employees' ability to perform at their best. Organizations should emphasize clear communication channels, well-defined decision-making processes, and encourage employee involvement in decision-making to minimize the impact of process conflicts.

Overall, the study highlights the significance of managing and resolving conflicts within Nepalese commercial banks to enhance employees' performance. By implementing effective conflict management strategies, organizations can create a positive work environment that fosters collaboration, teamwork, and productivity. Additionally, ongoing training programs and workshops can equip employees with the necessary skills to identify and address conflicts constructively, leading to improved overall organizational performance.

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## IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY OF DABUR NEPAL PRIVATE LIMITED

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### Abstract

*These studies investigate the Impact of capital structure and the Profitability of Dabur Nepal Private Limited. Data analysis was complete using descriptive statistics, Pearson correlation, regression analysis, and t-test. The secondary data used to analyze one (1) sample size, out of ten which, has been found to be covering the period 2013-2022 of private multinational manufacturing companies in Nepal. The capital structure represents the variables of the Debt - Equity Ratio (DER), Debt to Capital Ratio (DCR), Debt to Total Assets Ratio (DTAR), Equity to Total Assets Ratio (ETAR), Short-term Liability to Total Assets ratio (SLTA) and the profitability including Return on Assets (ROA). The findings of the study have a R square value of 0.537, meaning that 53.7% of the variation in the dependent variable is explained by the independent variables while 46.3% is explained by other variables outside the model and also showed that there is a lower positive correlation between the dependent variable and the set of independent variables. The result showed that there is an insignificant impact of DER, DCR, DTA, ETA, and SLTA on ROE of Dabur Nepal Pvt. Ltd.*

**Key words:** Capital structure, Debt, Equity, Total Assets, Short term liability

### INTRODUCTION

As a consequence of the liberalization and globalization of economic policies around the world, investment opportunities and financing alternatives have increased, as has reliance on capital markets. A new business requires capital, and expansion necessitates additional capital. The necessary funds may come from a diversity of sources and take many different forms. Debt or equity may be used to finance a company's assets. The optimal choice is a mix of debt and equity. The connection between capital structure (cs), the combination of debt and equity financing, and stock prices is one of the most perplexing issues financial managers face.

The capital structure of a company is the mix of debt and equity capital used to finance its assets. The process of generating funds for the acquisition of assets, ongoing operations, or anticipated expansion is known as financing. Debt or equity may be used to finance a company's assets. Therefore, capital structure is the sum of net worth, preferred stock, and long-term debts. In addition to these capital sources, companies may also issue hybrid securities like income bonds. These hybrid securities have characteristics of both equity and debt. The capital structure decision is crucial because it impacts investors' return on investment. Therefore, it is the responsibility of the company's management to establish a capital structure that safeguards the interests of its investors.

The capital structure decision of a manufacturing company is the most crucial decision made by the company's management in order to maximize profits and minimize capital costs, thereby maximizing stockholder wealth. There are fundamentally two primary funding sources. External financing consists of debt, while internal financing is comprised of equity. The majority of companies have a capital structure comprised of both equity and debt. Capital structure was defined by Modigliani and Miller (1963) as the combination of debt and equity that a company uses to operate. They also demonstrated the relationship between firm performance and capital structure. Following Modigliani and Miller, Jensen and Meckling (1976) discussed the relationship between capital structure and firm performance. In addition, numerous studies have demonstrated the impact of capital structure on firm performance in both developed and developing countries. Tailab (2014) conducted energy research in the United States. Tifow and Sayilir (2015) conducted research on Turkish manufacturing firms and small and medium-sized enterprises (SME) in the United Kingdom's manufacturing sector. Since 2013, the preponderance of research on capital structure has centred on developing countries. Ogebe et al. (2013) conducted research regarding the effectiveness of Nigerian businesses. Mwangi, et al. (2014) conducted research on the performance of Kenyan non-financial listed companies. Kajanathan and Nimalthasan (2013) conducted research on Sri Lankan manufacturing firms. Zeitun and Tian (2014) conducted research on Jordanian non-financial listed firms, while Akeem et al. (2014) investigated the performance of Nigerian manufacturing firms. Despite this, numerous researchers are endeavouring to establish

a more robust relationship between capital structure and firm performance. Therefore, this study will aid all financial specialists in comprehending the impact of capital formation on the profitability of a company. In addition, this research will aid the company manager and other stakeholders in understanding the influence of capital structure and the sensitivity of debt and equity on the operations of the company. It will serve as a guide for the financial manager to create a more efficient capital structure in order to reduce capital costs, increase firm profitability, and ultimately maximise shareholder wealth. In addition, this study can assist investors in determining the optimal capital structure by enhancing their comprehension of the impact of capital structure choice on return.

The critical issues of this research work are:

- How does the impact of capital structure on the profitability of Dabur Nepal Pvt. Ltd?
- What is the relationship between capital structure and profitability of Dabur Nepal Pvt. Ltd?

The specific objective of this research work is:

- To analyze the impact of capital structure on the profitability of Dabur Nepal Pvt. Ltd.
- To evaluate the relationship between capital structure and profitability of Dabur Nepal Pvt. Ltd

### **REVIEW OF LITERATURE**

The Effect of Capital Structure on the Profitability Performance of ICT Firms, Kim, Jung, and Kim, 2023. Companies in the information and communication technology (ICT) face the difficulty of maximizing firm value (FV) with limited resources and enhancing shareholder interests while pursuing constant innovation to remain competitive. However, capital structures have a significant impact on FV, and the literature remains divided regarding the optimal capital structure for specific markets and nations. In this study, data envelopment analysis is used to evaluate the FV of ICT companies based on their profitability and effectiveness. The Tobit regression and Kruskal-Wallis one-way ANOVA are also employed to determine the effects of leverage, liquidity, and company size, which are significant capital structure elements influencing FV. The investigation discloses three noteworthy findings. In the ICT sector, small and medium-sized enterprises are typically more profitable and efficient than businesses of other sizes. Second, the current ratio has no effect on the profitability efficacy of small and medium-sized ICT manufacturing companies. Thirdly, the debt-equity ratio has a positive effect on the profitability effectiveness of only mid-sized service businesses. The findings have policy and practise implications for FV, an IT and telecommunications company.

Habibniya, et al. (2022) conducted research on the impact of capital structure on profitability. Debt financing is typically associated with financial risk when used as a source of funding, but it is also viewed as a source of higher profitability in the context of typical business operations. Finding the optimal debt-equity ratio has never been simple. The ratio of total liabilities to total assets was disproportionately high in the US telecom industry sample under consideration. It is therefore inclined to investigate how capital structure (CapSt) affects the profitability of businesses. Using annual data from the telecom industry in the United States from 2012 to 2020, pooled panel regression, univariate analysis, correlation, and descriptive statistics models were applied to unbalanced cross-sectional data (panel data) consisting of 421 firm-year observations for 72 firms. The impact of CapSt (Total Liabilities to Total Assets (TLsTAs) and Total Equity to Total Assets (TETAs)) on the profitability (Return on Assets (ROA) and Return on Equity (ROE) of companies in the United States' telecommunications industry was analyzed. The results indicate that both the ratio of TLsTAs to TETAs and TETAs have a significant impact on ROA. TLsTAs and TETAs have no effect on ROE, however.

Amoa-Gyarteng and Dhliwayo, in their research titled The Impact of Capital Structure on the Profitability of Emerging Small and Medium-Sized Enterprises in Ghana, published their findings in 2022. The significance of small and medium-sized businesses cannot be overstated, but the overwhelming majority fail in their early stages. Small enterprises that are profitable have a greater chance of surviving. This study investigates the capital structure and profitability of Ghana's developing small and medium-sized enterprises. The sample for this study comprises of

1106 SMEs operating for less than five years and registered with the Ghana Enterprises Agency. Using regression analysis, the functions that relate return on assets (ROA) and return on equity (ROE) to capital structure measures such as the debt ratio, equity ratio, and debt to equity ratio are estimated. The results indicate that the equity and debt-to-equity ratios have strong positive correlations with both profitability measures. Alternatively, a negative correlation was discovered between the debt ratio and profitability. The study suggests that emerging small and medium-sized enterprises (SMEs) should rely on internal equity for profitability and use debt only in conjunction with equity.

Co, Uong, and Nguyen (2020) conducted research on The effect of capital structure on a firm's profitability: a case study of the Vietnamese rubber industry. This study aims to analyse and quantify the relationship between capital structure and the profitability of businesses in emergent markets. The research cohort consists of 18 rubber companies listed on the Vietnam Stock Exchange between 2015 and 2019. The study data were gathered and then entered into Excel to determine the criteria of the research model. The study selected a data processing model and evaluated the applicability of the regression analysis model using Stata 16 software. The return on equity (ROE) of listed rubber companies in Vietnam has a positive correlation with the debt-to-asset ratio but a negative correlation with the long-term debt-to-asset ratio, according to the findings of this study. In addition, the results indicate that firm size and revenue growth have a positive impact on profitability, while liquidity and the ratio of tangible fixed assets to total assets have no effect. These results are consistent with the vast preponderance of previously published studies. In contrast to many prior studies, our research demonstrates that the long-term debt-to-assets ratio has a negative effect on profitability, whereas the debt-to-assets ratio has a positive effect on profitability. This is consistent with the characteristics of long-term debt usage in emerging markets.

Endri et al. (2021) conducted research on the relationship between capital structure and profitability: evidence from Indonesian mining enterprises. This research examines the connection between firm performance and capital structure. The investigation was conducted using panel data for a sample of 42 Indonesian mining companies listed between 2014 and 2018 on the Indonesian Stock Exchange. As dependent variables, the study employs three performance measures: return on equity (ROE), return on assets (ROA), and earnings per share (EPS). Five measures of capital structure are the ratio of debt to assets (DAR), the ratio of debt to equity (DER), the ratio of long-term debt to total capital (LDTC), the ratio of long-term debt to total equity (LDTE), and growth as an independent variable. LDTE has a significant positive correlation with ROE, but none with ROA or EPS. DER has no correlation with ROA and EPS, but a negative impact on ROE. ROA has a significant negative correlation with LDTC, while ROE and EPS do not. There are positive correlations that are statistically significant between growth, ROA, ROE, and EPS.

Fekadu (2020) Conducted research on Impacts of capital structure on the profitability of construction companies in Ethiopia, Capital structure decisions are essential for all company endeavours because they have a significant impact on the value and expense of businesses. The majority of previous studies in Ethiopia focused on identifying and evaluating problems in the finance and other sectors rather than the construction industry. The primary purpose of this research is to examine how the capital structure of Ethiopian construction firms affects their profitability. This study acquired secondary time series data from a sample of 30 grade one construction firms in Ethiopia between 2011 and 2015 in order to test the hypotheses. Using multiple regression models with random effects, the relationship between capital structures and their underlying causes was analysed. There is a significant positive relationship between the return on equity (ROE) and return on assets (ROA) of the sampled construction companies, as measured by debt to equity and long-term debt to total assets, respectively. Nonetheless, there is a considerable negative relationship between the ROE and ROA of the tested Ethiopian construction firms and the capital structure, as measured by the debt-to-assets ratio. Since this is the author's original work, it is guaranteed that it has never been done or published in a journal before.

Akinleye and Akomolafe (2019) conducted research on the relationship between manufacturing firms listed on the Nigerian Stock Exchange and their capital structure and profitability. This study investigates the capital structure

and profitability of publicly traded Nigerian manufacturing companies. The study analysed the impact of debt financing (short-term debt and long-term debt) and equity financing (share capital and share premium) on profit after taxes. Using panel data estimators including the aggregated OLS estimator, the fixed effect estimator, the random effect estimator, the Hausman test, and the Pesaran test of cross sectional dependence, secondary data were collected from annual reports of sampled enterprises over a decade (2008-2017). An estimated coefficient of 0.578289 ( $p=0.0001 < 0.05$ ) indicates that long-term debt has a significant positive impact on profit after taxation. In contrast, the estimated coefficient for the positive impact of short-term debt on net income after taxes is 0.114985 ( $p=0.5890 > 0.05$ ). The estimated effect of share capital on after-tax profit is 0.784525 ( $p=0.0000 < 0.05$ ), while the effect of share premium is -0.000395 ( $p=0.9924 > 0.05$ ). The study concludes that short-term debt has a negative impact on the profitability of manufacturing firms in the country, whereas long-term debt financing enhances the rate of profitability. Clear term disaggregated debt finance subsets have a significant impact on the profitability of the sampled companies in this study. In contrast, dividing equity finance into share capital and share premiums reveals that share capital has a substantial positive effect on profit after tax, while share premium has a negligible negative effect on profit after tax.

Akhter (2018) Conducted research on Impact of Capital Structure on Profitability: An Empirical Analysis of Listed Companies in India, Using a sample of 35 Indian pharmaceutical firms listed on the Bombay Stock Exchange (BSE) between 2012 and 2016, this study empirically investigates and analyses the effect of capital structure decisions on the profitability of the firm. Using regression analysis, the strength and nature of the association are determined. LDA (long-term debt to assets), SDA (short-term debt to total assets), and DA (total debt to total assets) ratios were the capital structure variables of the study, while Return on Equity (ROE) was used to measure profitability. In addition, the control variables Firm Size (SIZE) and Sales Growth (GROW) are utilised. SDA and DA have a positive impact on ROE, whereas LDA has a negligible to nonexistent impact.

Kalyani and Mathur (2017) conducted research on the Impact of Capital Structure on Profitability: with specific reference to companies in the Indian Oil and Natural Gas Industry. Given that a company's capacity to develop and survive is contingent on sustained increases in profitability, a discussion of the relationship between capital structure and profitability is essential. This study seeks to ascertain how capital structure affects a company's overall profitability. On Oil and Natural Gas Industry firms in India, the influence of independent variables including Sales of a firm, Total Assets of a firm, Debt Service Capacity, Dividend Pay-Outs, Degree of Financial Leverage, and Degree of Operating Leverage was selected for analysis. Return on Assets (ROA) and Net Profit Ratio are used to evaluate the financial performance of a company, which is represented by the dependent variables. This study employs the financial information of seven companies listed on the NSE and BSE between 2005 and 2015, drawn from a sample of seven companies. This investigation uses the non-random sampling technique of Judgement Sampling to select samples. The correlation and regression analyses were employed to estimate the profitability functions as measured by Return on Assets, Net Profit Ratio, and capital structure. When the dependent variables are ROA and log assets, financial leverage, log sales, operating leverage, and asset growth are significant determinants of profitability. There is a significant correlation between log sales, operating leverage, and asset growth and the net profit ratio of designated Oil and Natural Gas firms in India.

Revathy and Santhi (2016) conducted research on the effect of capital structure on the profitability of Indian manufacturing firms. This study examines the relationship between Indian manufacturing firms' capital structure and their profitability. It also seeks to validate the hypothesised relationship between the degree to which various capital structure variables affect business revenues and the profitability of those revenues. This study was conducted after classifying the selected manufacturing firms into three groups based on two characteristics (stages and time period). First, manufacturing companies are divided into three phases based on their stages of development: pioneering, expansion, and consolidation. The second objective of this study is to demonstrate the connection between capital structure variables and the profitability of Indian manufacturing firms by separating them into pre- and post-merger groups. A sample of seventy enterprises was chosen using multistage sampling techniques. According to the study,

there is a significant one-to-one correlation between capital structure variables and profitability, and increasing the debt-to-equity ratio has a negative effect on the profitability of Bombay Stock Exchange-listed manufacturing companies in India.

Ali et al. (2016) conducted research on the influence of capital structure on profitability: a comparative analysis of Pakistan's cement and automobile industries. This study seeks to establish a relationship between profitability and capital structure. Several variables, including short- and long-term debts to assets ratios, funded capital ratios, funded debt ratios, current debt ratios, funded asset ratios, sales growth, and return on assets, can be used to determine the relationship between capital structure and profitability. As a sample, 28 firms from the Pakistan Stock Exchange's Cement & Automobile industry were selected at random. Seven years of secondary data were collected using audited consolidated financial statements and then analysed using correlation and regression statistical techniques. The Housman test was used to select models. The findings demonstrate both positive and negative relationships between variables in the cement and automobile industries. The research contributes to the body of financial knowledge, especially in the context of developing nations like Pakistan.

Yapa, (2015). Carried out research on the topic of Capital structure and profitability: An empirical analysis of UK SME's. From 1998 to 2008, this study investigates the relationship between capital structure and profitability for nonfinancial SMEs in the United Kingdom. The results of Two Stage Least Squares (2SLS) indicate a significant negative correlation between capital structure and profitability. In SMEs in the United Kingdom, company scale appears to be a more important factor in determining profitability. Consistently, a positive correlation has been established between magnitude and profitability. According to the study's findings, the capital structure of a company has a significant effect on the profitability of small and medium-sized enterprises (SMEs) in the United Kingdom. Specifically, the ratio of long-term debt to total assets correlates negatively with profitability, indicating that small and medium-sized businesses are hesitant to deploy additional equity due to a loss of control.

**RESEARCH METHODOLOGY**

**Research design**

A descriptive and causal-comparative research design has been used for the research work.

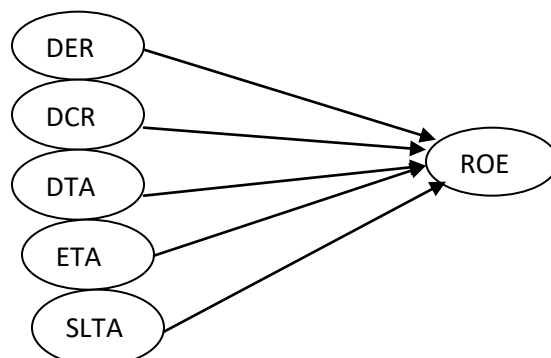
**Population and Sample size**

One multinational manufacturing company is taken out of 20 multinational companies as a sample for the study. Independent variables and dependent variables are taken from the websites of Dabur Nepal Pvt. Ltd.

**Data Collection Tools and Process**

Secondary data are collected from the annual report of websites of Dabur Nepal Ltd. The data are taken for ten years from fiscal year 2012-013 to 2021-022. Various statistical tools like Descriptive Statistics, Correlation Analysis, Regression analysis, t-test, are applied using software application SPSS.

**Conceptual frame work, Figure: 1**



**Hypothesis formulation**

- H1: There is a significant impact of DER on the profitability of Dabur Nepal Pvt. Ltd.
- H2: There is a significant impact of DCR on the profitability of Dabur Nepal Pvt. Ltd.
- H3: There is a significant impact of DTA on the profitability of Dabur Nepal Pvt. Ltd.
- H4: There is a significant impact of ETA on the profitability of Dabur Nepal Pvt. Ltd.
- H5: There is a significant impact of SLTA on the profitability of Dabur Nepal Pvt. Ltd.

**Multiple Regression model**

$$ROE^{it} = \alpha_0 + \beta_1 DER^{it} + \beta_2 DCR^{it} + \beta_3 DTA^{it} + \beta_4 ETA^{it} + \beta_5 SLTA^{it} + \epsilon^{it}$$

Where,

$\alpha_0$  = constant

$\beta_1, \beta_2, \beta_3, \dots, \beta_5$  = slope of independent variables

$\epsilon$  = error term

ROE = Return On Equity

DER = Debt Equity Ratio

DCR = Debt to Capital Ratio

DTA = Debt to Total Assets

SLTA = Short-term Liability to Total assets

**DATA ANALYSIS AND EMPIRICAL RESULTS**

**Descriptive statistics and Correlation**

The descriptive statistics and correlation for the dependent variable, ROE and the independent variables DER, DCR, DTA, ETA, and SLTA is described in Table no 1. Mean, standard deviations and Correlation are used as he descriptive statistics and Correlation.

Table 1

Descriptive statistic and Correlations								
	Mean	S.D.	ROE	DER	DCR	DTA	ETA	SLTA
ROE	0.153	0.0542	1					
DER	1.0941	0.4268	.429	1				
DCR	0.5039	0.102	.445	.992**	1			
DTA	0.505	0.1037	.446	.994**	1.000**	1		
ETA	0.4967	0.1008	-.445	-.992**	-1.000**	-.999**	1	
SLTA	0.5	0.1063	.443	.995**	1.000**	1.000**	-.999**	1

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

Table 1 shows the relationship between the capital structure and profitability of Dabur Nepal Pvt. Ltd.. The average value of ROE is 0.153 with a standard deviation of 0.0542. The average value of DER is 1.0941, with standard deviation of 0.4268. The average value of DCR is 0.5039 with standard deviation of 0.102. The average value of DTA is 0.505 with a standard deviation of 0.1037. The average value of ETA is 0.4967 with a standard deviation of 0.1008. The average value of SLTA is 0.5 with a standard deviation of 0.1063.

It is found that there is an insignificant and low degree positive correlation between DER and ROE (r=0.429) and risk can be diversified away. The relationship between DCR has been found to be a low degree a positive correlation, and insignificant for ROE (r= 0.445) and risk can be minimized through changes in a proposition. DTA are has a lower degree of positive correlation and insignificant correlation (r=0.446) risk can be diversified away. ETA is associated with low negative and insignificantly (r= -0.445). The relationship between SLTA has been found to be low degree positive correlation and insignificant of ROE (r= 0.443), and risk can be minimized through changes in a proposition.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887 <sup>a</sup>	.537	-.373	.06347

a. Predictors: (Constant), SLTA, DER, ETA, DTA

The value of  $F=5.388$  is significant at a 5 percent level of significance. Hence a significant model has emerged from the regression analysis. The study reveals that the independent variables, DER, DCR, DTA, FTA, and SLTA, have insignificant influence on ROE. The value for R-squared is high in the case of extrinsic variables ( $R^2 = 0.537$ ). It means 53.7% of total variation in the dependent variable is due to independent variables, and 46.3% is due to other factors of Dabur Nepal Limited.

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.910	7.603		-.120	.909
DER	-.099	.582	-.783	-.171	.871
DCR	2.125	5.26	27.132	1.197	2.97
DTA	6.305	14.428	12.075	.437	.680
ETA	.776	7.452	1.445	.104	.921
SLTA	-4.795	14.421	-9.409	-.333	.753

Dependent variable is ROE

All five explanatory variables (DER, DCR, DTA, ETA, and SLTA) are found to be insignificant at a level of significance less than or equal to 5%. As shown in the table of regression results, the relationship between ROE and DER is negative and insignificant at the 5% significance level. The outcome is consistent with the agency cost theory, which states that a large quantity of free cash flow reduces a firm's profitability because managers may use it for their own purposes and suggests debt finance as a disciplinary tool. Prior empirical investigations, such as Graf (2010) and Saleem & Rahman (2011), have taken a similar approach. The results indicated that DTR, DER, DTA, ETA, and SLTA have a negligible effect on Dabur Nepal Pvt. Ltd.'s ROE.

## DISCUSSION

Based on the key findings of this investigation, the following recommendations were made to the relevant parties: There is a significant positive relationship between capital structure and profitability in Nepalese private multinational manufacturing firms, so they must seek for the optimal capital structure for their respective businesses. The static trade-off theory predicts a positive correlation between profitability and capital structure, given that high-performing firms are anticipated to incur lower bankruptcy costs. Nonetheless, the query "what proportion is optimal?" exists. According to Brigham and Gapenskiz (1996), a company's administrators should be able to recognise when the optimal capital structure has been attained and strive to maintain it. However, when searching for the optimal capital structure to reduce capital costs, financial managers must consider the risk of bankruptcy cost that may result from an excessive reliance on debt financing. After achieving an optimal capital structure, Nepalese private multinational manufacturing firms should seek out variables with negligible positive effects on their profitability. The results indicated that DTR, DER, DTA, ETA, and SLTA have a negligible effect on Dabur Nepal Pvt. Ltd.

**CONCLUSION**

The present research work is performed to study the impact of capital structure on the profitability of Dabur Nepal Private Limited. The above discussions show the results that there is a positive relationship between the capital structure and the profitability of Dabur Nepal private limited. It is suggested that managers of the firm should develop an optimal capital structure in order to achieve a higher level of profitability and performance by proper use of the above variables from the above study. The results indicated that DTR, DER, DTA, ETA, and SLTA have a negligible effect on Dabur Nepal Pvt. Ltd.'s ROE.

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**EFFECT OF POPULATION GROWTH IN ECONOMIC GROWTH IN NEPAL****Laxman Bahadur Kunwar**

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**Abstract**

*The study examined the relationship between the population growth and economic development issues in Nepal using time series data spanning from 1971 to 2021. The study adopted an ex-post facto research design and, obtained secondary data from the publication of the National Population and Housing Census 2021, National Report, Nepal. The data were analyzed using ordinary least square estimation technique. Descriptive and Analytical statistics tools are used to analyze the data. The findings of the study revealed that growth of the economically active population in agriculture, industry and service sectors significantly affect the Human Development Index measured by total GDP in Nepal. The research concludes that economically active population growth in these sectors have a positive impact in Nepal.*

**Keywords:** Population growth, Economic Development, Economically active population.

**INTRODUCTION**

Development is the process of improving the quality of existence for people. An important indicator of development is the rise in people's standard of living, while the others are the rise in people's self-esteem and the freedom to choose products and services (Todaro, 1997). Real per capita income is influenced positively by the growth rate of real GDP or GNP and negatively by population growth. Thus, economic development is dependent on economic growth. A nation's growth can be distributed among its citizens to reduce destitution and foster a more equitable society.

Population and economic development may have a positive or negative relationship. National or domestic output is the foundation for economic growth. Production is impossible without labour force, and labour force is the largest component of the population. In this way, population becomes the foundation of production and, consequently, economic growth. As economic development is measured by per capita income, population growth that increases the size of the national population decreases per capita production or per capita income. In this way, population negatively impacts economic development. Participation in production activities contributes to economic growth among economically active populations.

Development is the center of all economic activities. During the last quarter of 20<sup>th</sup> century, development has emerged with a human dimension. Development is meaningless if it is not translated into real lives of the people. The relationship between population and economic development has been a subject of debate and research since long. The features of population dynamics and its linkage with socio-economic factors tremendously contribute to effective planning and issues relevant to population and development (Afzal, 2011).

During the pandemic, the government's top priority is protecting the lives of all people and making the necessary arrangements for a humanitarian livelihood. Due to the prolonged lockdown, Nepal's economic growth rate remained significantly negative at 2.12 percent for the first time in the last two decades, surpassing the economic losses caused by the devastating earthquake in fiscal year 2014/15. The GDP is projected to increase by 3.94 percent at the base price and 4.01 percent at the producer price in 2020/21. Due to the second wave of Covid-19, achieving the projected economic development has become increasingly difficult. Agriculture, industry, and the service sector are projected to contribute 20, 2, and 60, 2 percent, respectively, to the expansion of the gross domestic product (at constant prices) in fiscal year 2020/21. The contribution of the agriculture sector was 30,7 percent in the previous fiscal year, while the contributions of the industry and service sectors were negative by 27,4 percent and 103,2 percent, respectively (MOF, 2021).

In fiscal year 2020/21, it is anticipated that the GDP per capita at current prices will increase by 7.5% to \$1,191 (Rs. 140,819). In fiscal year 2019/20, the GDP per capita was \$1126 (Rs. 130,957). In the past decade, the average annual development rate of per capita GDP was 9.2%. The GDP per capita at constant prices (fiscal year 2010/11) is

projected to increase by 2.6% to Rs. 78,646 in fiscal year 2020/21. During fiscal year 2019/20, this income decreased by 3.9% to Rs. 76,636. The average per capita GDP growth rate at constant prices over the past decade was 3.0%. After adjusting for the change in base year, the per capita gross national income (at current prices) was \$1,139 in fiscal year 2019/20. It is projected to increase by 5.0 percent to \$1,196 in fiscal year 2020/21. In fiscal year 2020/21, the disposable income per capita has reached \$1,486, a record high. During fiscal year 2019/20, this income was \$1,422 (MOF, 2021).

### LITERATURE REVIEW

Malthus (1778) introduced the theory of the correlation between population growth and economic growth. Malthus hypothesized that the population expands at a geometric rate; however, based on the principle of diminishing return on fixed factor land, the food supply could be increased at an approximately arithmetic rate.

Todaro, (1997). Modern economists have dubbed the subsistence level of living the low level equilibrium population trap or Malthusian population trap. If income grows faster than population, per capita income rises, and vice versa. However, due to diminishing returns on land, income cannot grow faster than population indefinitely. Thus, subsistence level was planned for. Additionally, the theory implies that a higher per capita income results in a larger population, and vice versa. According to neo-Malthusian theory, a poor nation's per capita income will never raise above subsistence level unless preventative measures such as birth control are implemented. In the absence of these checks, Malthusian positive checks take effect.

Barro & Martin, (2004). According to the per capita paradigm, output per head of labour force is a function of capital per head of labour force. Per capita capital is a clearer indicator of per capita output. Higher capital per capita will result in higher per capita output, and vice versa. Savings rate, population growth rate, capital depreciation, and technological advancement are fundamental determinants of steady-state equilibrium growth. The model's basic conclusion is that a higher saving rate will result in a higher per capita income, a higher population growth will result in a lower per capita income, a higher depreciation rate will result in a lower per capita income, and a positive technological advancement will result in an increase in per capita income.

Ogunleye et al. (2018). analyzed the impact of population expansion on Nigeria's economic growth between 1981 and 2015. Using OLS regression, the researchers determined that population growth has a positive and significant effect on Nigeria's economic growth, while fertility has a negative and significant effect on Nigeria's economic growth. The exchange rate and crude mortality rate have no impact on Nigeria's economic growth.

Muhammad Haseeb et al. (2019) Indonesians examined the Environmental Analysis of the Effect of Population Growth Rate on Supply Chain Performance and Economic Growth. They discovered that inflation affects SCP. Population expansion increases decrease the SCP. In addition, the investment growth rate and population growth rate influence SCP, which contributes to Indonesia's economic growth. Therefore, the Indonesian government must improve the supply chain in order to promote economic growth.

Hawkes & Ugur (2012) Human capital has many advantages for individuals, society, and the economy as a whole, according to those who have developed the concept. In other words, education in terms of personal health, reducing crime rates, and environmental preservation is the most significant factor in determining economic growth and development.

Pokharel et al. (2021) studied the Spatio-temporal evolution of cities and regional economic development in Nepal: Does transport infrastructure matter? They found that the core expectation derived from the NEG that transport improvements facilitate urbanization and that higher urbanization leads to higher regional GDP per capita. Two independent effects were identified in qualification of these overall patterns-the impact of market potential on city primacy and the impact of highly localized, immobile resources on GDP.

### RESEARCH METHODOLOGY

The research design adopted for this study is the ex-post facto research design. The relevant data were obtained from secondary sources. These data include components of National Population and Human Census 2021, National Report, and the Population Monograph of Nepal, 2013 and 2021. The study covered spanning when Nepal had its last general population and Housing census in 1971 - 2021. Descriptive and Analytical econometric tools were applied as the method of data analysis to give empirical content to the stated objectives.

### Model Specification

In this study, the linear regression model is fitted taking total GDP as function of population in the agricultural, industry and service sector:

$$\text{Total GDP} = f(\text{Agri}, \text{Ind}, \text{Ser}) \quad (1)$$

The following mathematical model is developed to analyze the relationship between population growth in different sectors and total GDP in Nepal taking economically active population in the sectors of agricultural, industry and service as the independent variables and against the dependent variables used as proxy for total GDP of Nepal.

This study employed the model specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu \quad (2)$$

Where Y represents Total GDP;  $\beta_0$ , the constant term;  $X_1$ , economically active population in agricultural sector;  $X_2$ ,  $X_3$ , the economically active population in the service sector;  $\beta_i$ , the coefficient of the independent variables  $X_i$  ( $i=1,2,3$ );  $\mu$ , the error term. Here,  $\mu$  is the error term or other variable that could have provided additional explanation for the explained variables but is not included in the model and is presumed to have a normal distribution with constant variance and zero mean.

On the basis of econometric computation, the parameter values were estimated using the least squares method and the SPSS software. In order to ascertain the relevant hypothesis, statistical significance was assessed for estimates based on the relevant statistics of regression output. The explanatory power of the model is then determined as a measure of fit.

### Analysis and Presentation of Data

This investigation employed a combination of co-integration and error correction modelling via regression. The selection of these econometric techniques is predicated on their capacity to establish stationarity and test for causality between variables. Using the SPSS statistical software, the data was analysed.

### Evaluation of multilinearity

Time series diagnostic tests were conducted to ensure that the model satisfied the assumptions of the traditional linear regression model. The data were subjected to diagnostic tests, including normality of the disturbance term and misspecification of the functional form, stationarity, serial correlation, and multicollinearity. The purpose of these tests is to determine if the data are normally distributed, stationary, and have no mutual correlation among the independent variables, so that they can be used in regressions without concern of producing spurious results.

Multicollinearity indicates that the independent variables are precisely correlated (Table 1). If the model's explanatory variables are precisely linearly correlated, the model's parameters become indeterminate. In any practical setting, the correlation between explanatory variables will be non-zero; however, this will generally be in accordance with expectations, in the sense that a small degree of association between explanatory variables will almost always occur, but will not result in a significant loss of precision. However, there is a problem when the explanatory variables are extremely correlated with one another.

A scatterplot matrix is a grid of scatterplots that shows the relationships between each pair of variables (Total GDP, Agricultural, Industry, and Service) in the model. The plot in Figure 1 helps visualize the bivariate relationships and potential correlations between variables.

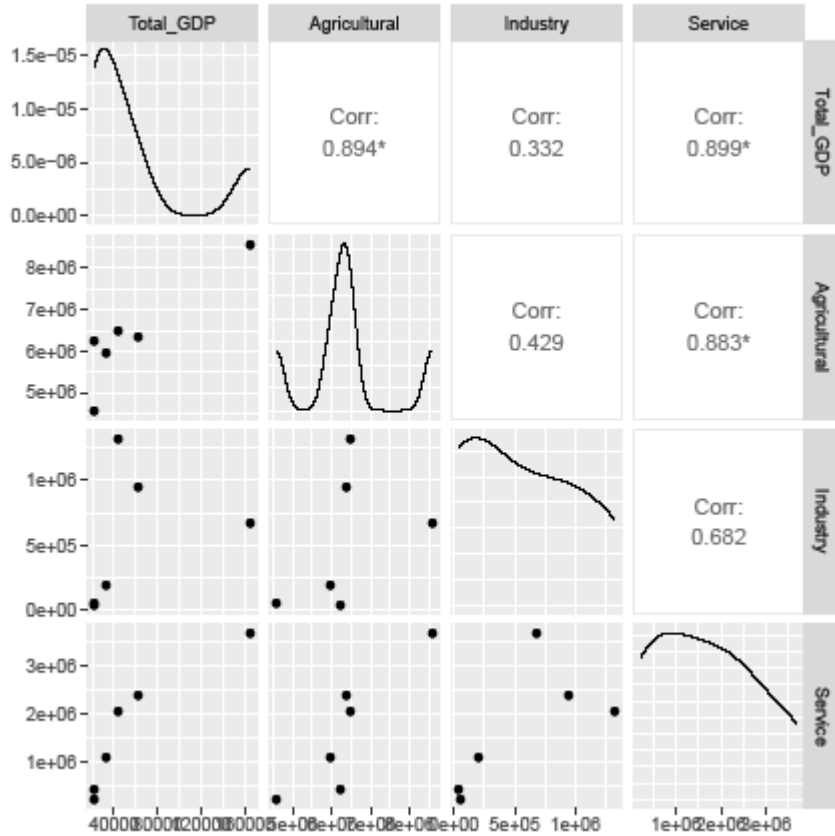


Figure 1: ScatterPlot representing the correlation between the variables.

Table 1 under diagnostic test shows multicollinearity test between independent variables. The results show the low correlation between independent variables, meaning that the independent variables are poorly correlated with each other. Therefore, there is no multicollinearity problem among the independent variables. So it appropriate to use the independent variables simultaneously in order to run the regression model since there is no multicollinearity problem (Gujarati, 2003).

**RESULTS, DISCUSSION AND FINDINGS**

**Descriptive Statistics**

Normality is also not necessary to obtain many of the results used in multivariate regression analysis as it is possible to relax this assumption and still retain most of the statistical results obtained.

From the correlation matrix in Table 1, we can confirm that there is no pair-wise correlation coefficient that is over 0.80 between independent variables except between EAP in agricultural and EAP in service sectors. Hence, the independent variables cannot be said to be collinear. Therefore, it can be concluded that there is no multicollinearity among the regressors.

**Descriptive Statistics and Correlations**

	Mean	S.D.	GDP	Agri	Ind	Ser
GDP	57862.533	54354.581	1			
Agri	6372102.7	1289931.3	.894*	1		
Ind	540269.17	528152.76	.332	.429	1	
Ser	1646041.7	1314075.6	.899*	.883*	.682	1

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

**Table 1:** Descriptive Statistics and correlation coefficient between variables.

**Source:** Author’s compilation from Population Monograph of Nepal, 2021.

**Parameters Estimation Results**

The values of the parameters of the model (1) are estimated by least square method using the SPSS software. The obtained results are tabulated on the table 2. Hence, the model equation gets the form:

$$Y = -9895.071 + 0.002 X_1 - 0.052 X_2 + 0.050 X_3 + \mu \tag{3}$$

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-9895.071	77323.876		-.128	.910
1 Agri	.002	.015	.054	.149	.895
Ind	-.052	.024	-.509	-2.195	.159
Ser	.050	.018	1.199	2.688	.115

a. Dependent Variable: GDP

**Table 2:** Estimated values of parameter of the model using least square method using the data of Nepal from 2071 to 2021.

The R- squared of 0.978 and indicates that the model is a good fit, and the independent variables explain 97.8 % of changes in Total GDP. The results from the Error Correction Model and also the regression model showed that, EAP in agricultural, industry and service have positive significant relationship with economic growth represented by total GDP Table 1 and Graph 1. This illustrates that there exists both long run and short run positive relationship between population growth rate in these sectors and GDP. This implies that population growth has a positive relationship with economic growth in Nepal.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.978 <sup>a</sup>	.957	.893	17789.53806

a. Predictors: (Constant), Ser, Ind, Agri

**Table 3:** Model summary of variation due to independent variables.

**Source:** Author’s compilation from Population Monograph of Nepal, 2021

**CONCLUSION**

From the findings it can be concluded that population growth in agricultural, Industry and Service sectors have significant effect on total GDP in Nepal. Also, we conclude that development of economically active populations in these sectors have a positive relationship with economic development in Nepal. The motivation for this research was primarily premised on the paucity of theoretical literature on population growth and GDP in Nepal. In trying to accomplish this objective, descriptive, correction and modeling through regression is adopted for the data analysis

and statistical tests confirmed the results. The results of Johansen's co-integration test imply a long-run stable relationship between economically active population in agricultural, industry and service sectors and total GDP in Nepal. The research closes the knowledge vacuum induced by inconclusive evidence on the population growth and economic growth which most often have resulted in situations where results of researches done in developed economies are generalized to Nepal.

Nepalese government should ensure that Nepal's rising population are channeled into areas of the economy where they may more fully, effectively and efficiently utilized in bringing about high rates of economic development for the country. And also, the Nepal government should increase access to more social amenities, more infrastructural development and good security of live and properties since it negatively affectson economically active population and therefore will negatively affect Nepal's efforts to achieve increased economic growth. Moreover, efforts at providing easy of doing agricultural incentive and services should be doubled and intensified to meet the increasing requirements of the increasing population of these sectors as increased population contributes to economic growth. Finally, sufficient infrastructure including health and education should be provided by the Nepalese government for an expanding economically active population, as the population increases and makes a valued contribution to high GDP in Nepal.

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**CORPORATE GOVERNANCE AND ITS EFFECTS ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NEPAL**

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**Abstract**

*This current study aims to explore the impact of corporate governance on the financial performance of commercial banks in Nepal. Although there were many researches made on the topic "Impact of Corporate Governance on Financial Performance," However there is only a handful of research found in respect of commercial banks in Nepal. This study tried to fill the gap by studying exclusively in the banking industry of Nepal. The financial performance is measured through Return on assets (ROA) as the dependent variable, and corporate government variables are measured through the percentage of foreign directors in the board, board size, board independence, and board diligence as independent variables. Panel data analysis was used for the study covering the period from 2016/017 to 2020/021 using both descriptive statistic, correlation, multiple regression and t-test to examine the governance practices and their effect in the financial performance of commercial banks in Nepal. The empirical results demonstrated that board diligence (DB) has a positive significant impact on ROA. The result also indicates that there is an insignificant impact of other variables (FD, BI, BS) on ROA of commercial banks in Nepal.*

**Key words:** Corporate governance, board side, board independence, foreign director, board diligence, financial performance, ROA

**INTRODUCTION**

Corporate governance refers to the process of making decisions and implementing those decisions into action in large corporations. Credibility, openness, and accountability are the three important aspects of corporate governance. The early debates arose in light of the elevation of agency issues come forward due to the separation of "ownership and control," -it was established in the case of *Salomon v Salomon* (*Salomon v A Salomon &Co Ltd.* [1896] UKHL 1, 1897). The central bank of Nepal released corporate governance guidelines in 2002. Until now, the corporate governance benchmark has been the regulatory standard of Nepal Rastra Bank. There are two notable banking crises in Nepal. One is the financial crisis of Nepal Bangladesh Bank in Nov 2006 (The Himalayan News Service, Nov 12, 2006) and "the Vibor Bikas Bank crisis in 2011 (Sapkota, Manish, 2011)". The central bank had rescued VBB from the crisis.

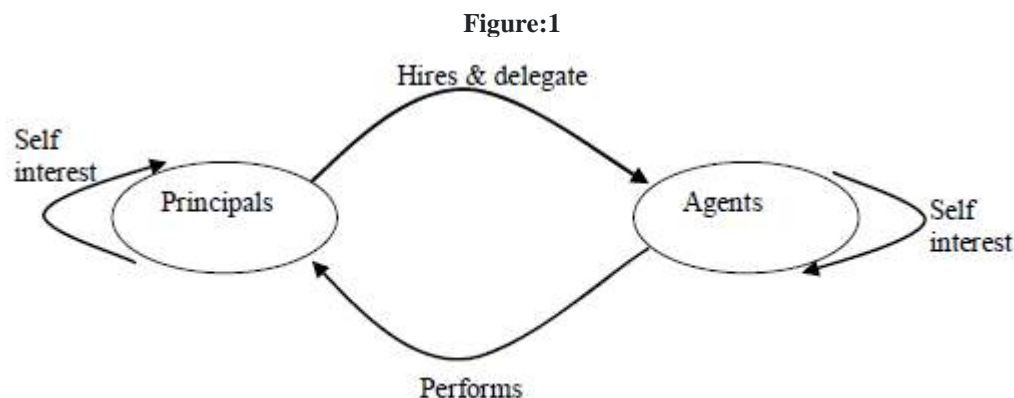
It is a fact that Nepal Rastra Bank has issued several directives and regulations aimed at improving corporate-governance. Despite the fact, there is still a gap between the policy and its implementation in the Nepalese banking industry. The Nepalese real estate crisis also highlight show important is the corporate-governance in the banking industry in Nepal (NRB, 2011).

**LITERATURE REVIEW**

Both theoretical and empirical literatures are reviewed for the study

**Theoretical Review**

The theory discusses the agency problems. The agency problem is a conflict of interest that arises in between the agents and principals in an organization. The theory mainly discusses that a company's owners appoint managers (the agents) to perform the job. The owners expect that the managers would behave and make decisions keeping in view the interests of the owners (the principals). But in practice, generally, the managers are not truly interested in making decisions that are only in the interests of the principals. The agents look for self-interest and also keep opportunistic behavior on many occasions. This theory explains that agents can be guided and could be made responsible by using reward and punishment systems of management.



**Source:** Theories of Corporate Governance: Agency, Stewardship etc. <https://www.papertyari.com>. 19 Aug 2018

### Empirical Literature

In their study titled "Corporate Governance and banks' productivity: evidence from the banking industry in Bangladesh," Md. Harun Ur Rashid et al. (2020) discovered a positive correlation between corporate governance variables and the financial performance of commercial banks in Bangladesh. Additionally, he found that effective corporate governance helps to strike a balance between the needs of agents (the managers) and owners (the shareholders). Ultimately, it has a positive impact on efficiency. In addition, he discovered that board sizes should be kept as small as feasible because a large board size requires more resources and can reduce the efficiency of banks. Additionally, he discovered that independent directors and board size have no bearing on the efficiency of commercial institutions.

Rudi Zulfikar et al. (2020) discovered in their study titled "Corporate Governance Compliance in Banking Industry: the role of the board" that board size, a high proportion of independent directors, and more frequent board meetings all have a positive impact on improving corporate governance compliances and, consequently, the financial performance of commercial banks in Indonesia. Himal Bhattarai, Dr. Shinu Abhi, and Dr. U.M.Premalatha (2017) discovered in their study titled "Effect of Corporate Governance on the Financial Performance of Banks in Nepal" that bank size and independent directors are highly correlated to the financial performance of commercial banks. Progress Shungu et al. (2014) concluded in their study titled "Impact of Corporate Governance on the Performance of Commercial Banks in Zimbabwe" that board composition and board diversity positively influence banks' financial performance. Similarly, the audit committee and board size have detrimental effects on performance. Ashenafi Beyene Fanta et al. (2013) discovered in their study titled "Corporate Governance and Impact on Bank Performance" that excellent corporate governance always results in improved financial performance for banks. According to the study, board size harms the financial performance of institutions.

### Problem statement

Regarding economics and government, the 21st century has witnessed more change and volatility than any other era. As competition increases daily, work practices, and principles are steadily evolving, and there have been instances of unethical conduct in an effort to beat the competition. Organizations are globalizing and competition is intensifying. There were also significant drawbacks, such as bank failures, unscrupulous practices, and inefficient organizations. Corporate governance has emerged as a solution to numerous redundancies in financial institutions. The following issues must be addressed in the field of corporate governance.

- The 2007-2008 global financial crisis and the 2007-2009 real estate crisis in Nepal have increased the need for corporate governance in commercial institutions in Nepal.
- In Nepal, very few studies have been conducted in commercial banks' corporate governance.
- The purpose of this research is to determine the present state of corporate governance in Nepalese commercial banks.
- The research will also attempt to establish a connection between corporate governance and the financial performance of commercial institutions in Nepal.

### Objectives of study

In light of the problem statement, it is essential to determine whether corporate-governance variables affect the financial performance of Nepalese commercial banks. It is also essential to provide stakeholders with a credible recommendation regarding the impact of corporate governance practices on the enhancement of the financial performance of commercial banks in Nepal.

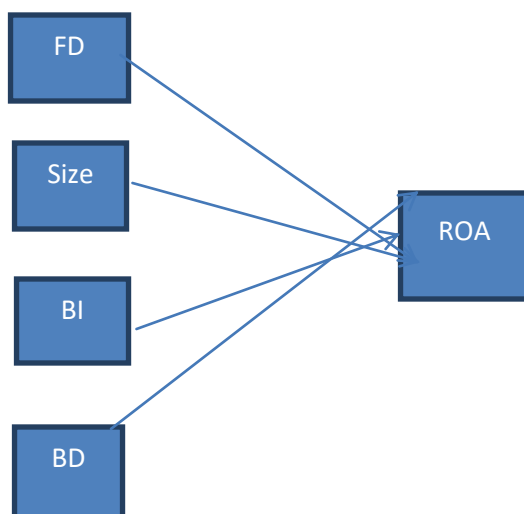
The Central bank's action has strengthened the financial capability and the need for a strong governance system in order to improve performance and protect shareholder interests. Corporate governance is crucial for a developing economy in a Low-Income Country (LIC) such as Nepal. The objectives are detailed below.

- Evaluate the influence of board size, board independence, board diligence, and foreign directors on the ROA of commercial banks in Nepal.
- Examine the relationship between board size, board independence, board diligence, and foreign directors and ROA in Nepalese commercial banks.

### Conceptual model

This study has based on Dynamic Panel Data taken from the year 2016-017 to 2020-21 for 5 years. Data have been taken from Annual reports of all the 8 Class “A” commercial Banks of Nepal that are published on Web sites of the concerned commercial banks. Corporate-governance variables are used as used independent variables. ROA has been taken as Dependent variable. Statistical Software Application SPSS has been used to find out correlations among the variables and find the impact of independent variables upon the dependent’s variables.

Figure: 2



### Hypothesis formulation

Based on research objectives, the following research hypotheses have been formulated.

- H1:** There is a statistically significant impact of board size on ROA of commercial banks of Nepal.  
**H2:** There is a statistically significant effect of board independence on the ROA of commercial banks of Nepal.  
**H3:** There is a statistically significant influence of board diligence on the ROA of commercial banks of Nepal.  
**H4:** There is a statistically significant impact of foreign directors on ROA of commercial banks of Nepal.

## RESEARCH METHODOLOGY

### Research design

A Descriptive and causal-comparative research design has been used for the research work.

### Population and Sample Size

Eight commercial banks are taken out of 25 commercial banks as a sample for the study. Independent variables and dependent variables are taken from the websites of the concerned commercial banks of Nepal.

### Data Collection Tools and Process

Secondary data are collected from the annual report of the websites of concerned commercial banks. The data are taken for five years from the fiscal year 2016-017 to 2020-021. The total number of observations is 40 (8 commercial banks for five years, observations for each). Various statistical tools like Descriptive Statistics, Correlation Analysis, Regression analysis, t-test, are applied using the software application SPSS.

**Regression model**

$$ROA^{it} = \alpha_0 + \beta_1 BS^{it} + \beta_2 BD^{it} + \beta_3 BI^{it} + \beta_4 FD^{it} + \epsilon^{it}$$

Whereas,

$\alpha_0$  = constant

$\beta_1, \beta_2, \beta_3, \dots, \beta_4$  = slope of independent variables

$\epsilon$  = error term

BS = Board Size

BI = Board Independence

BD = Board Diligence

FD = Foreign Director

ROA = Return on Assets

**DATA ANALYSIS AND EMPIRICAL RESULTS**

**Descriptive statistics**

The descriptive statistics for dependent variable, ROA, and independent variables FD, Size, BI, and BD is described in Table no 1. Mean and standard deviations are used as the descriptive statistics. N represents the no of observations.

**Table: 1**

Descriptive statistic and Correlations							
	Mean	S.D.	ROA	FD	Size	BI	BD
ROA	1.662	0.466	1				
FD	0.4	0.496	-.331*	1			
Size	25.59	0.336	-.172	.309	1		
BI	12.8	6.448	-.020	.176	.203	1	
BD	16.03	5.894	.308	-.091	.367*	-.038	1

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

The relationship between corporate governance and the profitability of commercial banks in Nepal is illustrated in Table 1. ROA has a mean value of 1.662% and a standard deviation of 0.466%. FD has a mean value of 0.40 and a standard deviation of 0.496%. The mean size value is 25.59, and the standard deviation is 0.336. BI has a mean value of 12.80 and a standard deviation of 6.448. BD has a mean value of 16.03 and a standard deviation of 5.894.

**Regression Evaluation**

Al-Matari et al.,2012;Al-Sahafi et al.,2015; Farhan et al.,2017;Naushad & Malik,2015) examined the relationship between corporate governance and firm performance using a technique of multiple regression utilized by numerous researchers. According to Hutcheson and Sofroniou (1999), OLS is an appropriate statistical technique when the regression model contains continuous and dummy variables- testing the relationship between corporate governance variables and then financial performance of commercial banks in Nepal using OLS regression.

**Table: 2**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.488 <sup>a</sup>	.238	.151	.42942

Predictors: (Constant), BD, BI, FD, Size

## Regression results – Dependent variable – ROA

Table: 3  
Coefficients

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.387	6.034		1.721	.094
FD	-.217	.151	-.231	-1.441	.158
Size	-.360	.241	-.260	-1.494	.144
BI	.006	.011	.088	.577	.568
BD	.030	.013	.385	2.351	.025

The results of the financial performance of commercial banks in Nepal using ROA as the dependent variable are presented in Table 2. The table indicates that board diligence (BD) was statistically significant concerning ROA at the 5% level. The result shows that an increase in the number of board meetings (BD) could promote more diverse ideas regularly, resulting in an increase in ROA due to improved decisions.

**CONCLUSION**

This study investigated the connection between corporate governance variables (Foreign Director, Board Size, Board Independence, and Board Diligence) and the financial performance of commercial banks in Nepal. Few studies have been conducted in corporate governance, especially in the financial industry, which prompted this study. This study contributes to the literature on the significance of corporate governance in Nepal's financial sector. The study's findings do not corroborate all proposed hypotheses. The government, the capital market authority, commercial banks, and other financial institutions may benefit from this study. This study could also serve as a source of inspiration for economic sectors, such as financial services, insurance, and so on. Using ROA as the dependent variable, the financial performance of commercial banks in Nepal was determined. The table indicates that board diligence (BD) was statistically significant with respect to ROA at the 5% level. The result shows that an increase in the number of board meetings (BD) could promote more diverse ideas on a regular basis, resulting in an increase in ROA due to improved decisions.

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## A STUDY OF FACTORS AFFECTING WORK FULFILMENT AMONG ACADEMICIANS IN BIRGUNJ CITY OF NEPAL

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### Abstract

*Work fulfilment among the teachers has been found as a fundamental element influencing the performance of the organisation. The purpose of this study was to study the factors affecting work fulfilment among academicians in Birgunj city of Nepal. The variables included in the study are independent variables of Promotion & recognition, Peers, Salary & Incentives, Scholars and Physical setting with work fulfilment as a dependent variable. A descriptive and causal comparative research design using questionnaire method on 5-point Likert scale was used to collect and analyse the data. The study was conducted with the sample size of 150 academicians in Birgunj city of Nepal. The data were analysed through the use of descriptive statistics, correlation, multiple regression analysis and t-test using SPSS software. The findings of the study show that all the independent factors are important in determining the extent of work fulfilment among academicians working in Birgunj city of Nepal. Some factors like salary & incentives and physical settings are not found to have the significant influence on work fulfilment level of academicians.*

**Key words:** Work fulfillment, Salary and incentives, Peers, Academicians, Scholars,

### INTRODUCTION

The position of academicians in society is of enormous significance." Academicians aid in the development of excellent citizens by passing on intellectual traditions, knowledge, and skills from the current generation to the next. Students are responsible for the country's future, and academics are the ones who help them develop into the future executives, businesspersons, leaders, and citizens of the country". (Radhakrishnan,1969). Academicians are therefore one of the key elements of the educational system. But if academics are ineffective or without the necessary abilities or expertise, the entire educational system would become ineffective. Effective instructors use each and every instructional tool to its fullest potential in order to raise student achievement. After completing their education, pupils are given the skills necessary to live in society by an academician, who also helps to develop their character. The entire system will become ineffectual and mostly squandered if the academicians are uncaring or unsuited to their roles. Although modern methods and a robust infrastructure can help instructors, they cannot take the place of quality instruction. The scholars in various fields, including human resource management, organizational behaviour, or personnel management, continue to find work fulfilment to be a crucial topic. Multiple investigations have demonstrated that just with the assistance of motivated and content teaching instructors at the higher educational level can all available material resources be utilised to improve the quality of instruction.

To make academics more pleased and motivated so they can contribute to excellent teaching, all educational institutions have concentrated on offering a healthy, calm, and congenial working environment combined with financial rewards. Since teaching is a career that demands dedication and diligence, instructors should put more than just their physical presence into providing students with an excellent education. (Gappa, Austin & Trice, 2007).

Over the past two decades, the pattern of student enrolment has changed, expanding both geographically and socially, which has created a demand for fresh teaching strategies and approaches for these new students. The nature of teacher-student relationships has altered as a result of contemporary technology. All interested parties, including students, their family members, authorities, management, and trustees, are seeking effective and high-quality instruction for their money (Schuster & Finkelstein, 2006).

According to the literature, a good teacher is one who effectively manages and organizes lectures and communicates with pupils. Good instructors are knowledgeable and empathetic toward their charges. Excellent instructors are those that are interested in learning new techniques, replace conventional techniques with modern ones that are more successful and meet the needs of the students, and are passionate about learning in their profession. Excellent lecturers constantly make an effort to relate the theory to real-world situations or practical examples. Students' interests, levels of knowledge, and levels of learning should all be taken into consideration when providing instruction. In order to deliver high-quality instruction, it is necessary to enhance both the pedagogical abilities of the teachers and the learning environment inside the institutions. The goal of the learning environment should be effective learning while also addressing the individual requirements of the

pupils. Giving pupils, instructors, and minority students access to monetary, educational, community, and counselling assistance can enhance learning outcomes. Effective instruction should be outcome-based. By raising both students' and teachers' levels of satisfaction, learning outcomes can be enhanced. Through cooperative learning efforts, engaged pupils as well as educators will have stronger intellectual exchanges, which can aid in knowledge construction. (Jacobs & Winslow, 2004).

The most important element of the education industry is academicians who are happy, creative, and productive. Researchers have carried out several research and brought attention to the topic of faculty members' efficacy and responsibility in the current knowledge-based economy. Given the increased focus on academic achievement and wellbeing, it is now more important than ever to assess the link between work happiness and teacher productivity. Investigators have discovered a link among educator happiness and productivity. Educators that are happy in their jobs tend to be highly active and creative in their approaches to management, research, and instructing. Thus, through improving teachers' job happiness, the research culture may be advanced (Gappa et al., 2007). In order to foster effective teaching in a college context, instructors must have a solid knowledge of work satisfaction.

The purpose of this paper is to study the factors of work fulfilment among academicians of Birgunj city in Nepal.

Instead of administrative or policy issues, faculty members' stated sentiments regarding events in the classroom (such as relationships with students, the teaching process, and student behaviour in school) were largely connected to their level of work fulfilment and stress (Smilansky, 1984). An employee's emotional reaction to their working conditions is called fulfilment with work. In terms of various characteristics of one's position (work, compensation, advancement, colleagues, and the work in general), work fulfilment is described as one's overall opinion of their current position.

Work fulfilment is the extent to which an employee feels favourably or pleasantly regarding their job and its surroundings. (De Nobile, 2003).

Work fulfilment and the variables that contribute to this have been the subject of many studies, but they have not yet been thoroughly explored, while there still exists a lack of consensus when it comes to research conducted in the higher education sector, at various times, and in different work environments. One of the main problems facing campuses of universities and plus two colleges in Nepal today is how to handle personnel of college-level who are dissatisfied with their place of employment. As a result, some colleges' performance is being adversely affected.

As a result, it has become a crucial area of study for those looking to improve institute performance. Furthermore, it has often been observed that teachers who are happy with their employment do not perform effectively in the classroom. The current study will guide us to comprehend the many job-related aspects that may be highlighted to raise instructors' work fulfilment levels.

#### **Research questions:**

- What is the relationship of work fulfilment factors with work fulfilment of academicians?
- How does the factors of work fulfilment impact the level of work fulfilment among academicians?

#### **Objectives of the Study:**

- To find out the relationship between factors of work fulfilment and extent of work fulfilment of academicians in Birgunj city of Nepal
- To determine the impact of factors of work fulfilment on work fulfilment level of academicians in Birgunj City of Nepal.

#### **REVIEW OF LITERATURE**

##### Herzberg's Theory

Herzberg, (1966) Herzberg states there are two categories of elements that boost motivation. They serve as both hygiene and motivators. Motivators are linked to positive sentiments experienced by employees and are often connected to job content, whereas negative sensations connected to employment surroundings are linked to hygiene aspects. Responsibility, accomplishment, recognition, the possibility of personal growth and improvement, as well as the job itself, are intrinsic motivator aspects that are part of the task itself. Personal life,

interpersonal interactions, working environment, wages, management, job security, status, and corporate policy are all aspects of hygiene.

Herzberg et al., (1959) approach explains, that the categories of elements can be divided into motivators and hygienic factors. While hygiene factors like interpersonal relationships, pay/compensation, and working conditions must be met by the organization to prevent job dissatisfaction among employees, motivators like the chance for growth and development, recognition, and achievement are used to increase job satisfaction among employees. Motivators are regarded as intrinsic factors, whilst hygiene-related variables are seen as external. While elements related to cleanliness have an impact on work unhappiness, motivators have the opposite effect. When motivators are strong, contentment will rise, and when workplace cleanliness is sound, job discontent will decline. However, eliminating hygiene-related variables does not ensure job happiness. Similar to this, a decrease in motivators won't always result in work discontent. Essentially, in order to meet employees' demands for self-actualization, job happiness depends on both the intrinsic and extrinsic qualities of the employment. It is called Herzberg's Motivator-Hygiene Theory as a result. One of the most significant theories of motivation is the Herzberg motivation theory, which places a strong emphasis on the organizational hygiene aspects and motivators that influence employee motivation and work satisfaction.

According to the motivational-hygiene model, motivation of workers is achieved when they are given seemingly challenging but enjoyable work that offers them the chance to record some successes, grow, and demonstrate responsibility and advancement in the company (Dartey-Baah & Amoako, 2011). The common consensus is that variables like motivation and work environment contribute to employees' job happiness. When businesses succeed in achieving job fulfilment, employees gain an elevated degree of confidence that influences them to remain longer, become deeply involved in the company, suggest ways to improve the goods or services the company offers, and put forth extra effort to satisfy customers and stakeholders (Loiseau, 2011; Afsana Afrin, & Tarannum, 2015). In this situation, the connection between employee engagement and retention is explained by Herzberg's motivation-hygiene theory.

Srivastava's (2002) investigation on the connection between job happiness and workplace adjustment in the public sector, adjusted employees report higher levels of work fulfilment.

Studies by Hackman and Oldham (1976), Rathavoot & Stephen (2003), and Deci (2008) claim that some aspects of a work are referred to as satisfiers or motivators because they lead to job satisfaction. Motivational factors are those features of a job that inspire individuals to work hard and bring about happiness in others, whereas hygienic factors are those aspects of a workplace that, if poorly handled, may bring about discontent. In the research by Hackman & Oldham (1976), hygiene variables primarily relate to an organization's working environment, including things like working conditions, organizational regulations, interpersonal issues, and more.

The process of motivating employees in a company is intricate and multidimensional. Today, academics' motivation is a big problem because of their strategic position in creating the organizations' future human capital assets. As the ones who really transform raw human product into completed, marketable product to be further consumed by industry and hence by the economy, higher education faculty are considered by academics to have the primary responsibility for influencing the future of students. Poor performance or low morale can have an impact on the sharing of information, with students ultimately suffering as a result, hence keeping academicians motivated becomes essential (Devesh Kapur, 2007).

The term "motivation" is derived from the Latin term *movere*, which means "to move" (Baron, Henley, McGibbon & McCarthy, 2002). Over the years that this flexible idea has been studied, a number of definitions of the motivation construct have been proposed. Several diverse techniques, including reinforcement theories, process theories, and content- or a need-based theories, may be used to analyse employee motivation. These include the Theory X and Y, Two Factor Theory, Theory of Needs, ERG, Goal Setting, Job Design, Equity, and Expectancy Theories. With relation to the variables affecting motivation In order to address the issue of employee motivation, several researchers have conducted various employee surveys as well as developed various theories of motivation that explain the elements impacting motivation.

In one of the earliest studies, "appreciation of work done" was placed first by industrial workers, while "discipline" was ranked last (Hersey and Blanchard, 1969). Kovach (1987), comparable research was carried out on 1,000 industrial workers. It began with "interesting work" and finished with "sympathetic help with personal problems." In addition to surveys, several studies have examined the motivational variables. Wiley (1997) study was designed to explore the factors that motivate employees in job; it used similar subcategories as those used by Kovach. The assumption in Kovach study was that the motivational potency of the factors might vary

according to gender, age, income level, job type and organizational level. Wiley used occupational category (clerical, Plant/service, Sales, Professional, Technical, Managerial) as one of the subgroups and studied that the occupational category has an influence on motivation.

Choy et al. (1993), added the work fulfilment variables are like pay, the work environment, supervisor behaviour, peer relationships, job security. Previous studies have shown that bad working conditions, low pay, poor relationships with peers or supervisors, and a lack of resources all have a detrimental influence on teachers' fulfilment with their jobs. Additionally, these factors contribute to teachers' inclination for lower organizational commitment and increased turnover. When academics believe their working conditions are poor, they quit their profession. Schneider (2003), dim illumination, broken windows, and dark rooms contribute to instructors' dissatisfaction with their professions.

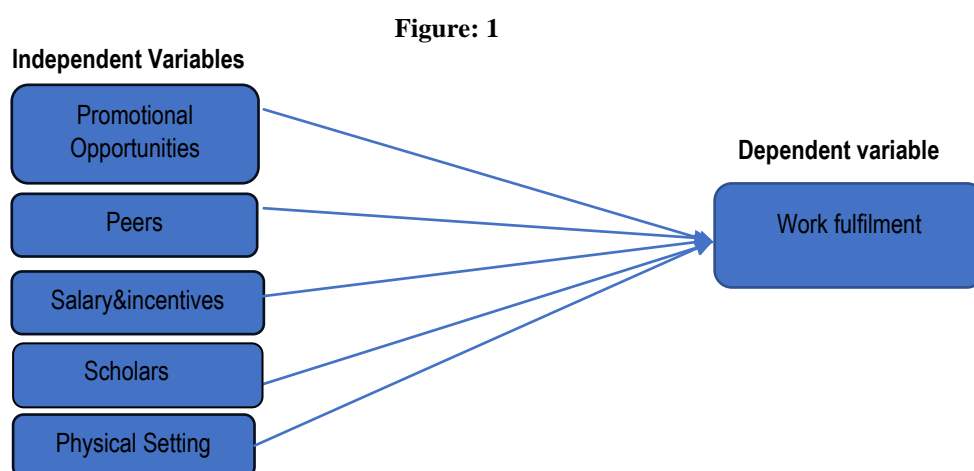
Hill (1986) describes associated with drive and job satisfaction between academicians, academics are extrinsically driven by organizations through things like pay, administrative work, and perks, but intrinsic work like research and teaching is what gives them the most professional pleasure. He made this suggestion using Herzberg's two-factor theory. Lacy and Sheehan (1997), studied academics from eight different countries' work environments, university cultures, morale, feeling of community, and relationships with coworkers were found to be significant determinants of job satisfaction. The Chicago School of Professional Psychology (2012), provides motivating employees to be more productive leads to a greater willingness on their part to put in more effort in order to achieve success. A solid compensation strategy with potential for incentives and salary increases is thought to increase employee job satisfaction and organizational retention rates. Additionally, research by Leung, Leung T., Siu, and Spector (2000) reveals that academicians' work happiness is predicted by recognition, organizational practices, and financial inadequacies. In a study by Pearson & Seiler (1983), academics in the USA receive satisfaction from teaching and research-related activities, but support and compensation-related activities result in discontent.

Flora F. Tien and Robert T. Blackburn (1996) investigated the connection between faculty research productivity, research motivation, and rank system. The results shed light on the connections between production and promotion. The study came to the conclusion that motivation for productive research is neither entirely intrinsic nor entirely external.

The impact of administrative policies and incentives/rewards on teachers' motivation was examined by Kumar, Ravi (2013) in his research study on teachers at engineering colleges in Krishna District, Andhra Pradesh. He found that while administrative policies lower teachers' motivation levels, incentives increase it. Researchers Mushtaq A. Sajid and Imrab, Shaheen (2013) did a study to identify the elements that increase the faculty members' enthusiasm levels among university academics. The findings of the analysis of the two factors—classroom atmosphere and workload stress—showed that the former stimulates students more than the latter.

### A conceptual framework

The conceptual framework for WF is presented here consists of four independent variables, 1=Promotional opportunities, 2= Peers, 3= Salary & Incentives, 4= Scholars, 5=Physical Settings. Dependent variable is academician's work fulfilment. Based upon the literature review for these factors this study formulates following hypothesis and analysis of these factors.



- H1: Promotional opportunities influence work fulfilment among academicians of Birgunj City in Nepal  
 H2: Nature of peers positively influence work fulfilment among academicians of Birgunj City in Nepal.  
 H3: Characteristics of students influence work fulfilment among academicians of Birgunj City in Nepal.  
 H4: There is a positive influence of good physical settings on work fulfilment of academicians working in Birgunj city in Nepal.  
 H5: Salary and incentive system positively affects academician's work fulfilment in Birgunj city of Nepal

## RESEARCH METHODOLOGY

### Research design

This study is descriptive and analytical research design. This study is based on primary data obtained through self-administered questionnaire to teachers working in public and private campus/colleges in Madhesh Pradesh of Nepal.

### Sampling and Data Collection

Data was collected through simple random sampling with a sample size of 150 teachers from the population of teachers working in public and private colleges of Madhesh Pradesh in Nepal. The study is based upon the primary data collected through structured questionnaires.

All scales used in this study have been validated in previous studies. However, while all items (Peers, Salary & Incentives, Promotional Opportunities, Scholars, Physical settings and Work fulfilment) were adopted from previous measures, they were modified to suit the context of this study. All measures have been measured on a five-point Likert-type scale from 1 = strongly disagree to 5 = strongly agree (Likert, 1932).

### Data Analysis

The study uses descriptive statistics, correlation analysis, multiple regression analysis and independent samples t-test to examine the relationship between work fulfilment factors and the motivation of the academicians.

### Results and Analysis

This section deals with the detailed analysis of data collected with the help of self-developed questionnaire; the data were analysed using SPSS. The results are presented and discussed in the following sections.

### Level of Work Motivation

Table no.1: Mean scores, Standard deviations and Correlations of the sample along all motivation variables

	Mean	S.D.	Correlations					
			WF	SI	PR	PO	SCH	PS
WF	3.595	0.5884	1					
SI	2.91	0.8333	.493**	1				
PR	3.802	0.721	.558**	.511**	1			
PO	3.569	0.7823	.569**	.241*	.461**	1		
SCH	3.648	0.6601	.814**	.462**	.505**	.385**	1	
PS	3.632	0.8149	.467**	.446**	.433**	.005	.508**	1

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

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

The above table shows the extent of work fulfilment among academicians working in Birgunj city of Nepal. As per the mean scores, it is found that academicians in Birgunj are moderately satisfied with their work in respect of all the independent factors of work fulfilment studied. In particular, the findings depict that educators of Birgunj city in Nepal are relatively less satisfied with salary and incentive packages which they receive from their organization.

It is found that there is significant and positive linear relationship between salary & incentives and work fulfilment ( $r=0.493$ ), hence we can infer that salary & incentives are positively associated with work motivation.

The relationship between peers and work fulfilment as been found to be positive linear and significant ( $r=0.558$ ), hence nature of peers and work fulfilment are also having positive relation. The scholars' characteristics and work fulfilment are having strong positive linear and significant correlation ( $r=0.814$ ). So, we conclude that the relationship between both these variables is positive. The physical settings and work fulfilment are associated positively and significantly ( $r=0.467$ ). Therefore, the relationship between these variables is positive. Hence, all the work fulfilment factors inferred from motivation theories are significant and positively correlated with the work fulfilment of academicians in Birgunj city of Nepal.

#### Influence of Work fulfilment factors on motivation level of academicians

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 <sup>a</sup>	.763	.751	.29367

a. Predictors: (Constant), PS, PO, SI, SCH, PR

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.297	.195		1.526	.130
	SI	.057	.042	.081	1.352	.179
	PR	.020	.054	.025	.376	.708
	PO	.236	.045	.314	5.298	.000
	SCH	.517	.058	.580	8.990	.000
	PS	.090	.045	.124	1.974	.051

a. Dependent Variable: WF

The value of  $F=65.499$  which is significant at 1 percent level of significance, hence a significant model has emerged from the regression analysis. The study reveals that the independent variables, promotional opportunities, scholars, have significant influence on work fulfilment of academicians but, salary & incentives, physical setting have insignificant influence on job satisfaction of teachers. (table 4). The value for R-squared is high in the case of extrinsic variables ( $R^2=0.76.3$ ). It means 76.3% of total variation in the dependent variable is due to independent variables and 23.7% is due to other factors. It signifies that the above factors influence work fulfilment among academicians in Birgunj city.

The beta value of PO is positive and significantly influence WF. It signifies promotional opportunities increases work fulfilment among academicians. Therefore, we accept H1: Promotional opportunities influence work fulfilment among academicians of Birgunj City in Nepal. Higher chances for growth to academicians will bring more work fulfilment among them.

The t-test statistic shows that, characteristics of peers do not have significant influence on work fulfilment level of academicians. Therefore, we fail to accept H2: The nature peers increase work fulfilment of academicians in Birgunj city of Nepal. Thus, the findings say that relations of academicians with peers do not determine higher level of work fulfilment among academicians.

The results of t-test reveal that, nature of students significantly influence work fulfilment level of teachers. Hence, we accept H3: Characteristics of students influence work fulfilment of academicians working in Birgunj city of Nepal. Hence, we infer that if students are interactive, self-motivated, potential and have respect for faculties it will increase work fulfilment level of academicians.

It is revealed from the findings that the influence of physical settings on work fulfilment is insignificant. Thus, we reject H4: There is a positive influence of good physical environment on work fulfilment of academicians in Birgunj city of Nepal. Results derived from sample population are not having the same effect on larger population sizes of Birgunj city in Nepal. Hence it is inferred that the good physical settings are not the determining factor to increase work fulfilment among academicians.

The results of t-tests also reveal that there is insignificant influence of Salary & incentives on work fulfilment of teachers. Hence, we reject H5: Fair salary & incentive system positively influence work fulfilment of academicians in Birgunj city of Nepal. Therefore, the salary & incentive system is not determining work fulfilment among academicians.

## DISCUSSION

The primary objectives of this study were to investigate the relationship between work fulfilment and factors that affect it, namely work fulfilment factors (Herzberg, 1966). The findings of the study signify all factors taken to study work fulfilment determines amount of work fulfilment of academicians in Birgunj. The work fulfilment variables are like pay, the work environment, supervisor behaviour, peer relationships, job security (Choy et al.,1993).

In the current research work the variables presented by Herzberg and several other work motivation theorists are presented and investigated to understand their impact on work fulfilment level of academicians in Birgunj city. It was found few variables like salary and incentives, relationship with peers and physical settings are not increasing work fulfilment among academicians. Academics in the USA receive satisfaction from teaching and research-related activities, but support and compensation-related activities result in discontent (Pearson & Seiler,1983).

Academicians operating in Birgunj are motivated mostly through the growth and promotional opportunities and quality of scholars they are teaching. It concludes that intrinsic factors for work fulfilment becomes more important to motivate academicians to perform better. Motivation of workers is achieved when they are given seemingly challenging but enjoyable work that offers them the chance to record some successes, grow, and demonstrate responsibility and advancement in the company (Dartey-Baah& Amoako, 2011).

Extrinsic factors also termed as hygiene factors are responsible for preventing job discontent. Hence, their presence is also required for intrinsic factors i.e., motivators to work and perform better in the organisation. The hygiene factors studied in the current study responsible for increasing work fulfilment are scholar characteristics and their learning intention together with class room environment are important indicators to increase the level of work fulfilment among academicians. Shaheen (2013) did a study to identify the elements that increase the faculty members' enthusiasm levels among university academics. The findings of the analysis of the two factors—classroom atmosphere and workload stress—showed that the former stimulates students more than the latter.

Therefore, in order to increase the performance level of academicians it becomes crucial to increase work fulfilment among them by providing effective career progress opportunities also non-discriminatory and performance-based rewards together with status recognition in the organisation and autonomy and authority to take job related decisions for improved classroom learning environment etc. If the academicians are satisfied it gives more chances to organisation to achieve long-term success. Poor performance or low morale can have an impact on the sharing of information, with students ultimately suffering as a result, hence keeping academicians motivated becomes essential (Devesh Kapur, 2007).

This study was limited itself to teachers who are working in Birgunj City of Nepal. Thus, there is a need to conduct a study on work fulfilment among academicians in other regions of Nepal as well. The sample for the study should be increased to involve more educators in order to get rich data from different contexts and cultures.

## CONCLUSION

The current research studies the work fulfilment of academicians of Birgunj City in Nepal. Primary aim of this study is to explore the relationship between work fulfilment and factors of work fulfilment among academicians working in Birgunj City of Nepal. The results of the study showed all the studied variables of work fulfilment influence the work fulfilment among academicians of Birgunj in Nepal. It was further revealed that factors like salary and incentives, peers, and physical working settings may not affect the work fulfilment level of academicians, in contrary the factors of relationship with students and promotional opportunities are found to be important for work fulfilment of academicians. Hence, we conclude that all factors taken from Herzberg's two factor theory can be understood as determinants for increasing work fulfilment among academicians working in Birgunj city of Nepal.

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## E-BANKING'S EFFECTS ON FINANCIAL PERFORMANCE OF NEPALESE SELECTED COMMERCIAL BANKS

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### Abstract

*The overview of e-banking has revolutionized and redefined the ways of banks operating. Internet banking, mobile banking, ATM, Card Services, electronic funds transfer, account-to-account transfer, online bill payments, online statements etc. are now consider as the main contribution for the banks success among their core competencies. However, the banking industry has faced challenge to keep pace with technological developments and innovative products to suit its needs to generate more profits. This paper shows the data of five commercial banks from fiscal year 2016/17 to 2020/21. The objective of the study is to identify whether e-banking services has significantly improved the profitability performance of commercial banks in Nepal with regards to the returns on assets (ROA) and returns on equity (ROE) or not. The descriptive as well as inferential statistical tools has been used by using SPSS version 25 software. This result shows that the independent variables; Mobile Banking, Internet Banking, ATM, Debit Card has insignificant impact on profitability of Nepalese commercial banks in terms of ROA. However, Credit Card has negative but significant impact on profitability. On the other hand, all the variables has found to insignificant impact on the profitability of ROE of the commercial banks. Besides this, various macroeconomic factors such as monetary policy, fiscal policy, IT policy, electric Transaction act, political factors etc. are also the cause of profit growth of commercial banks in Nepal.*

**Keywords:** E-banking tools, profitability, firms' performance, commercial banks, Nepal

### INTRODUCTION

E-Banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic and interactive communication channels. It includes systems that enable financial institutions, customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the internet (FFIEC, 2003). For the last decade, the rapid advancement in information and communication technology has significantly influenced the banking industry in Nepal. Banks and financial organizations have improved their services as a financial intermediary through adopting various IT services. Technology now has become a tool that facilitates bank's organizational structures, business strategies, customer services and related functions.

The Internet allows banks to reach a whole new market- and a well off one too, because there are no geographic boundaries with the Internet. The Internet provides the bank with an almost paper less system. With more better and faster options a bank can able to create better customer relations and satisfaction. E-banking gives customer the control over nearly every aspect of managing the bank accounts. Besides that Customers can, Buy and Sell Securities, Check Stock Market Information, Check Currency Rates, Check Balances, See which checks are cleared, Transfer Money, View Transaction History. E-banking services has so many benefits not only to the bank itself, but also to the society as a whole; Lower operational costs of banks; Automated process; Accelerated credit decision; Expanded financing reach; Increased transparency; Expand reached through self-service; Lower transaction cost; Make some corporate services economically feasible for society; Make anytime access to accounts and loan information possible.

Many researchers have studied and completed their research in the title of e-banking practices. Out of them, few were only studied the impact of e-banking on banks performance in Nepal. Moreover, their findings have not been exposed as needed in consistency. This study therefore seeks to show the electronic banking affect on the financial performance of banks. The study also aims to find out whether the bank is making profits or losses and whether its customers are being satisfied by the services of that or not. This research tries to fulfill the gap by analyzing, identifying and estimating the effect of e-banking on the financial performance in terms of return on assets (ROA) and return on equity (ROE) of commercial banks in Nepal. To reach the results of above queries following hypotheses has been developed.

H<sub>1</sub>: E-banking services have significant positive effect on Return on Assets (ROA) of commercial banks in Nepal.

H<sub>2</sub>: E-banking services have significant positive effect on Return on Equity (ROE) of commercial banks in Nepal.

## REVIEW OF LITERATURE

### Evolution of E-Banking in Nepal

With the established of Nepal Bank Ltd. in 1937, the first bank to start banking in Nepal, it took nearly 53 years for the introduction of credit card by the Nabil Bank Ltd. in early 1990s. As for the development of e-banking in Nepal, Himalayan Bank Ltd. stood in a front row with the introduction of Automated Teller Machine (1995) and Tele-banking. After the establishment of first bank, Banking sector as well as bank customers have to wait nearly about 65 years for internet banking, and the Kumari Bank Ltd. was the first to start the internet banking in Nepal in 2002 (Khatri & Dhungel, 2013). After ten years of introduction of internet banking, it was not popular in Nepal. Although the major cities like Kathmandu, Pokhara, Biratnagar have good internet facilities and majority of the bank provides the internet banking in urban cities however customers were not utilized. Study shows that there were about 200,000 internet users in Nepal, out of which 50% user were inside Kathmandu valley. However, only about 3000 (1.5%) internet user was using the internet banking regularly. One of the study have found that in terms of e-banking, ATM services is adapted by most of the banks in Nepal, while mobile banking getting the popularity but internet (computer-based) banking was still not available. (Banstola, 2008).

### Tools of E-Banking

Followings are the most common used tools of electronic banking which are taken as independent variables in this study:

#### Mobile Banking

Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smart phone or tablet (Shah & Clarke, 2009). Unlike the related internet banking it uses software, usually called an app, provided by the financial institution for the purpose. Mobile banking is usually available on a 24-hour basis. Some financial institutions have restrictions on which accounts may be accessed through mobile banking, as well as a limit on the amount that can be transacted. Mobile banking is dependent on the availability of an internet or data connection to the mobile device.

#### Internet banking

Wireless Application Protocol (WAP) technologies are available for services delivery, their use is still limited in the provision of financial services. Issues related to these technologies are also very similar to those of the Internet (Shah & Clarke, 2009). Web-based banking is an assistance presented by banks that permits account holders to get their record information by means of the web or the internet. Web-based banking or Internet banking is otherwise called "Web banking" or "Online banking. Internet banking through customary banks empowers clients to play out every standard exchange, for example, bill payments, balance requests, stop-payment requests, and balance inquiries. Some banks even proposition online credit card and loan applications. Account data can be acquired day or night, and should be possible from any place.

#### ATM

An automated teller machine is an electronic telecommunications device that enables customers of financial institutions to perform financial transactions, such as cash withdrawals, deposits, funds transfers, balance inquiries or account information inquiries, at any time and without the need for direct interaction with bank staff. The ATM is an innovative service delivery mode that offers diversified financial services like cash withdrawal, funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests and other financial enquiries (Khan, 2010). Using an ATM, customers can access their bank deposit or credit accounts in order to make a variety of financial transactions, most notably cash withdrawals and balance checking, as well as transferring credit to and from mobile phones. ATMs can also be used to withdraw cash in a foreign country. If the currency being withdrawn from the ATM is different from that in which the bank account is denominated, the money will be converted at the financial institution's exchange rate. Customers are typically identified by inserting a plastic ATM card (or some other acceptable payment card) into the ATM, with authentication being by the customer entering a personal identification number (PIN), which must match the PIN stored in the chip on the card (if the card is so equipped), or in the issuing financial institution's database.

#### Debit Card

To increase convenience for consumers, banks formed networks and allowed their customers to use ATMs owned by any bank in the network. A network logo was added to the card for consumers to easily identify the

ATMs that were in the network. To extend the value of their ATM cards, networks encouraged merchants to install PIN-pads at their cash registers so consumers could make purchases with ATM cards. Over time, ATM cards came to be known as “debit cards.” (Parker, et. al., 2011). A debit card (also known as a bank card, plastic card or check card) is a payment card that can be used in place of cash to make purchases. It is similar to a credit card, but unlike a credit card, the money for the purchase must be in the cardholder's bank account at the time of a purchase and is immediately transferred directly from that account to the merchant's account to pay for the purchase. Some debit cards carry a stored value with which a payment is made (prepaid card), but most relay a message to the cardholder's bank to withdraw funds from the cardholder's designated bank account. In some cases, the payment card number is assigned exclusively for use on the Internet and there is no physical card. This is referred to as a virtual card.

### **Credit Card**

A credit card can be defined as a card (usually plastic) that financial institution issue to their customers so that they can access credit facilities. The card holder can make payment on credit at some point of sale. Credit cards contain information about the holder's identity and their credit account at bank. They are designed so that this information can be read in ATMs and by electronic card readers in shops. The information can also be used online. Credit cards incur some interest which starts a month after the payment was made. Most banking institutions issue these cards to facilitate an increase in revenue and customer loyalty. Credit cards offer the convenience of cashless transactions and also allow for purchases over the telephone and, increasingly, via the internet. Credit cards also offer consumers the flexibility of deferring payment to a future date, and thus can allow consumers to smooth spending over temporary liquidity shortfalls (Bertaut & Haliassos, 2006).

### **Measurement tools of profitability:**

#### **i) Return on assets**

Return on asset (ROA) is an investment return of sorts. It gives the information about the amount of money returned from every rupee invested in the business. ROA demonstrates the capacity of business to produce profits utilizing its assets. In some sectors, ROA is greater than others because the amount of capital invested in assets varies. The company's operational efficiency is affected by the use of resources, which is seen in the net profit margin. Success and failure are not necessarily tied to high and low profit margins. A business may have low margins yet still be successful if it is creating a high return on its investments and assets. The two factors used to calculate a company's total operational efficiency are combined. Asset turnover calculates how well an organization utilizes its assets, while net profit margin evaluates how profitable the company's sales are (Panigrahi & Vachhani, 2021).

#### **ii) Return on equity (ROE)**

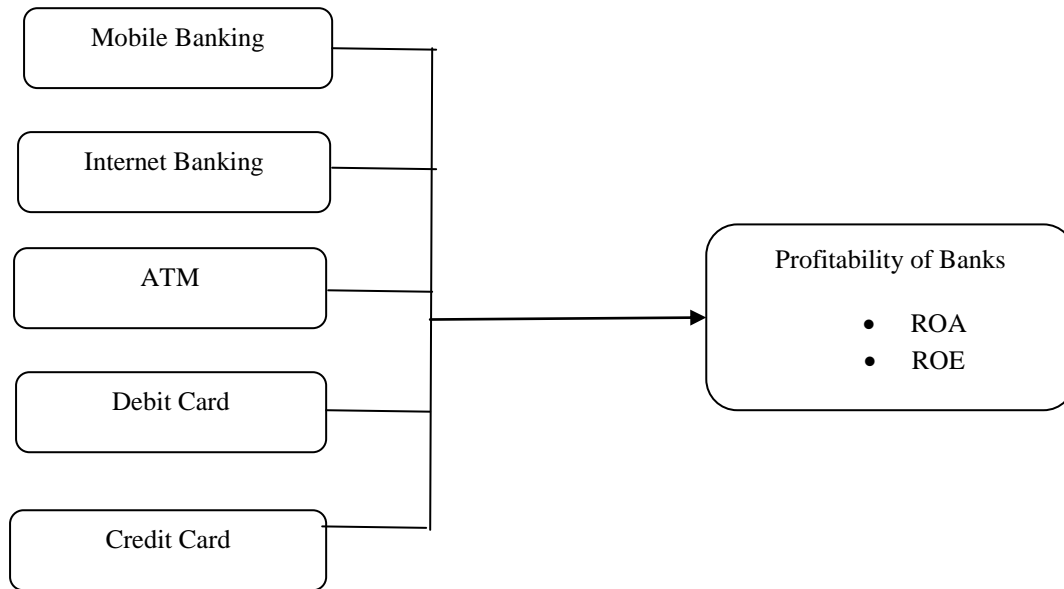
ROE indicates how much profit may be made for every rupee invested in a business. In every sector, this is a crucial ratio, and for certain firms, it's more important than ROA. Calculation of Return on Equity (ROE) will be into three components: operating efficiency, asset efficiency, and leverage. Net Profit Margin is a metric of operational efficiency that indicates how much net income is made per rupee of revenue generated by a business. The Total Asset Turnover Ratio (TATR) is a financial indicator of asset efficiency that indicates the amount of money generated per rupee invested in assets. Finally, the Equity Multiplier is in charge of financial leverage calculation. An organization's output rises as these factors rise. Net Profit Margin and Total Asset Turnover are also subject to give-and-take within different industries. The last component, financial leverage, deals with the company's financial dealings. More the company's debt, higher the chance of default. More the debt lowers the return on equity. Increased interest expenses lead to lower net income. This causes the company's net profit margin to decrease (Panigrahi & Vachhani, 2021).

### **Empirical Review**

Rauf & Fu (2014) measured the impact of e-banking on the performance of Pakistani commercial banks where the performance was measured in terms of Return on Assets, Return on equity and interest margin. Their empirical investigation revealed that e-banking has significant positive impact on profit margin, ROA and ROE. They conclude that banks can consider e-banking as a cost saving effective strategy to compete with the domestic and foreign banks given a well-managed monitoring and control over the risks involved in. Likewise, Dinh et al. (2015) studied about the impact of internet banking to performance of bank in Vietnam. The research results show that Internet banking has the positive impact of non-interest incomes and thereby increasing the profitability of commercial banks but this effect takes a time lag after 3 years and has a relatively small degree. Moreover, the research reveals the real situation of Internet banking in Vietnam. While in developing countries, the adoption of digital channel such as Internet banking reduces operating expenses, increases non-interest income, and consequently increases banks' profitability. Moreover, Maharjan (2021) concluded that the majority of current-banking users are between the age of 31 to 40, gender wise the female are the dominant users, occupationally salaried and students are the majority users and educational level diploma and above

diploma holders are the majority users and the banks do not keep full record of their customer profile in standardized way for easy reference. Their study shows the relationship between demographic characteristics and customer satisfaction in e-banking than ordinary banking. Specifically, the study inferred that ATM, internet banking services, mobile banking services, credit card services, debit card services and electronic fund transfer services were insignificant with customer satisfaction. From the above literatures, the conceptual frame work has been workout.

**Figure 1:**



Source: Developed by a researcher from various related studies, including Dinh et al (2015).

**RESEARCH METHODOLOGY**

This research has been employed descriptive research design. Structured questionnaires survey were used to collect the primary information. There were all together 26 commercial banks operated in Nepal (till 2079 ashad end). Out of them 5 commercial banks were selected randomly. There were unlimited no of customers of that commercial banks using the e-banking services. Out of them, 406 respondents were taken as a study using a purposive sampling technique. The researcher made sure that the sampled respondents were the users and adopters of e-banking services, so that non-users and non-adopters respondents were eliminated from the sample frame. Primary and secondary data was collected in order to find out the real and fact-full result of this research. All possible and useful data available was collected. Required financial and operational information of the sample banks was collected based on their annual reports and their websites. The survey was created online and link sent to the respondents. Descriptive as well as Inferential statistics tools were used to find out the fact of effect of e-banking on banks financial performance. The collected data were processed and analyzed by using SPSS version 25 software. Following econometric model has applied to test the hypotheses:

Model 1

It has used to test the relationship between independent variables and ROA:

$$ROA = a + b_1 MB + b_2 IB + b_3 ATM + b_4 DC + b_5 CC + \dots + e_i \text{ Eqn. 1}$$

Model 2

It has used to test the relationship between independent variable and ROE:

$$ROE = a + b_1 MB + b_2 IB + b_3 ATM + b_4 DC + b_5 CC + \dots + e_i \text{ Eqn.2}$$

Where,

- a = Constant
- b1-b5 = Intercept of independent variables
- MB = Mobile Banking
- IB = Internet Banking
- ATM = Automated Teller Machine
- DC = Dabit Cards
- CC = Credit cards
- e<sub>i</sub> = error term

### Demographic Variables

Demographic variables are the gender, age groups, marital status, profession, and education status. Which is taken from different professionals, community and different area.

## RESULT AND DISCUSSIONS

**Table 1**  
**Demographic characteristics of the Respondents (n=406)**

Gender	Frequency	Percent
Male	214	53.0
Female	192	47.0
<b>Age Group</b>		
Below 20	25	6.0
20 to 29	108	27.0
30 to 39	129	32.0
40 to 50	114	28.0
50 or above	30	7.0
<b>Education Status</b>		
Less than higher secondary	41	10.0
Higher secondary	128	32.0
Bachelors/Masters degree	224	55.0
Above masters degree	13	3.0
<b>Profession</b>		
Students	57	14
Employees	146	36
Teacher	76	19
Businessman	91	22
Others	36	9

Source: Field Survey 2022

Table 1 show that, the majority of the respondents were male (53%). Likewise, the majority of the respondents are between 30-39 years age group which is 32 percent of the respondents and 7.0 percent lies above 50 age groups. Similarly, the level of education status 55.0 percent respondent were having bachelor and master degree, and the majority of the respondents 36 percent were employees profession.

**Table 2**  
**Descriptive statistics (Positions of e-banking service and profitability indicators of sample banks)**

	Year	Mobile Banking	Internet Banking	ATM	Debit Card	Credit Card	ROA	ROE
ADBL	2016/17	154884	1516	41	25165	0	2.15	11.77
	2017/18	194151	2541	60	54115	0	2.71	14.07
	2018/19	253306	5071	71	63517	0	2.77	15.19
	2019/20	274522	6212	83	92992	0	1.86	11.70
	2020/21	439136	7882	97	121684	0	1.59	11.67
EBL	2016/17	254784	3519	65	45156	1175	1.72	16.04
	2017/18	294352	4546	78	64122	2760	1.97	16.00
	2018/19	353407	6098	91	83519	3742	1.94	17.33
	2019/20	364512	8521	116	101993	5485	1.42	13.50
	2020/21	499239	10864	143	141694	8674	0.89	8.56
CZBIL	2016/17	74509	1543	59	66020	1070	1.80	11.52
	2017/18	98757	5745	70	78454	1758	1.72	11.22
	2018/19	153311	10209	78	92376	2848	1.74	11.71
	2019/20	236678	12482	99	129352	3458	1.19	8.93
	2020/21	357020	26760	123	195557	4684	1.29	9.55
SBL	2016/17	11245	18554	93	153287	7123	1.51	14.89
	2017/18	152124	34312	117	196684	9824	1.47	15.34
	2018/19	237833	45888	172	271113	17207	1.49	15.71
	2019/20	318648	53177	202	344375	23813	1.26	13.81
	2020/21	468139	60899	208	430613	27215	1.25	15.68
N I	2016/17	125500	33600	74	129000	1015	1.64	16.84

2017/18	629000	74000	220	401000	4536	1.97	12.09
2018/19	858809	96455	464	657096	7623	1.56	22.73
2019/20	1143831	115894	464	832729	11579	1.32	19.26
2020/21	1426508	133022	471	1129742	15422	1.09	17.09

Source: Annual Reports

Above table 2 shows the position of e-banking facility (Mobile banking, Internet banking, ATM, Debit card and Credit card) user of ADBL, EBL, CZBIL, SBL & NICA Banks. The sample banks E-banking users are growing up by the year come. Similarly, ROA and ROE shows the position of profitability of banks. The results shows all the sample banks achievement in expanding e-banking services have helped to manage assets effectively to realize return and its importance in attracting more customers in this computerized world. A positive ROA and ROE ratio usually indicates an upward profit trend as well.

**Table 3**  
**Pearson's Correlation Matrix for the Dependent and Independent Variables**

	Mobile Banking	Internet Banking	ATM	Debit Card	Credit Card	ROA	ROE
Mobile Banking	1						
Internet Banking	0.863	1					
ATM	0.916	0.954	1				
Debit Card	0.920	0.975	0.962	1			
Credit Card	0.375	0.597	0.526	0.570	1		
ROA	-0.368	-0.424	-0.433	-0.445	-0.578	1	
ROE	0.442	0.564	0.589	0.522	0.274	0.084	1

Correlation Analysis shows from the table 3 that, Mobile Banking is negatively related with firms ROA ( $r=-0.368$ ) but positively related with firms ROE ( $r=0.442$ ). Similarly, Internet Baking is also negatively related with ROA ( $r=-0.424$ ) and positively related with ROE ( $r=0.564$ ). ATM, Debit Card and Credit Card are also negatively related with ROA (since  $r=-0.433$ ,  $r=-0.445$  and  $r=0.578$  respectively) but positively related with ROE (since  $r=0.589$ ,  $r=0.522$  and  $r=0.274$  respectively).

### Regression analysis

Regression analysis model was applied for determining the relationship between the dependent variables of the bank's profitability (ROA and ROE) and independent variables such as mobile banking, internet banking, ATM, debit card and credit card.

**Table 4**  
**Regression results of ROA on Mobile banking, Internet banking, ATM, Debit Card and Credit Card**

	Coefficients	Standard Error	t Stat	P-value
Intercept	1.98286	0.16855	11.76380	0.00000
Mobile Banking	-0.00000	0.00000	-0.02794	0.97800
Internet Banking	0.00000	0.00001	0.79629	0.43569
ATM	-0.00133	0.00265	-0.50407	0.62000
Debit Card	-0.00000	0.00000	-0.42657	0.67448
Credit Card	-0.00003	0.00001	-2.19892	0.04046
R = 0.620	R <sup>2</sup> = 0.384	F = 2.368	Sig = 0.0786	

From table 4, the R-squared statistics of the model shows 38.40%. The result indicates that the changes in the independent variables explain 38.4% of the changes in the dependent variable. That is Mobile Banking, Internet banking, ATM, Debit Card and Credit Card explain 38.40% of the changes in ROA. The remaining 61.60% of changes was explained by other factors, which are not included in the model. Thus, these variables affects on the profitability of commercial banks in Nepal in terms of ROA to some extent. Moreover, F statistics shows that the independent variables are statistically insignificant in predicting the profits or affecting the ROA of the banks. The study established value of  $p=0.0786$  that indicates statistical insignificance relationship. Likewise, Mobile Banking ( $P=0.978$ ), Internet Banking ( $P=0.436$ ), ATM ( $p=0.620$ ), Debit Card ( $p=0.674$ ) were not significant in predicting the profits of the banks since all the p values were more than 0.05. However, Credit Card has significant in predicting the profit of the banks since the p value was less than 0.05. However, the relationship is negative.

**Table 5**  
**Regression results of ROE on Mobile banking, Internet banking, ATM, Debit Card and Credit Card**

	Coefficients	Standard Error	t Stat	P-value
Intercept	11.97668	1.20370	9.94992	0.00000
Mobile Banking	-0.00001	0.00001	-0.89628	0.38132
Internet Banking	0.00004	0.00008	0.52279	0.60716
ATM	0.03200	0.01898	1.68613	0.10812
Debit Card	-0.00001	0.00001	-0.52126	0.60821
Credit Card	-0.00006	0.00011	-0.57927	0.56921
R = 0.655		R <sup>2</sup> = 0.430	F = 2.861	Sig = 0.043

From table 5, the R-squared statistics of the model shows 43.00%. The result indicates that the changes in the independent variables explain 43.0% of the changes in the dependent variable. That is Mobile Banking, Internet banking, ATM, Debit Card and Credit Card explain 43.00% of the changes in ROE. The remaining 57.00% of changes was explained by other factors, which are not included in the model. Thus, these variables affects on the profitability of commercial banks in Nepal in terms of ROE to some extent. Moreover, F statistics shows that the independent variables are statistically significant in predicting the profits or affecting the ROE of the banks. The study established value of p=0.043 that indicates statistical significance relationship. Likewise, the findings show the coefficients of the regression. According to the findings, Mobile Banking (P=0.381), Internet Banking (P=0.607), ATM (p=0.108), Debit Card (p=0.608) and Credit Card (p=0.569) were no significant in predicting the profits of the banks since all the p values were more than 0.05.

**Hypothesis test**

**Hypothesis 1: E-banking tools have significant effect on Return on Assets (ROA).**

The regression equation was:

$$ROA = 1.983 + (-0.00000)MB + (0.00000)IB + (-0.00133)ATM + (-0.00000)DC + (0.00003)CC$$

**Hypothesis 2: E-banking tools have significant effect on Return on Equity (ROE).**

The second regression equation was:

$$ROE = 11.977 + (-0.00001)MB + (0.00004)IB + (0.03200)ATM + (-0.00001)DC + (-0.00006)CC$$

**DISCUSSION**

The result shows that use of e-banking channels of internet banking has had a few impacts on the financial performance of the commercial banks in terms of ROA. Mobile Banking, ATM, Debit Card and Credit cards has found to negative impact on the ROA of the banks. Also, the result shows that use of e-banking channels of internet banking and ATM has had a few impacts on the financial performance of the commercial banks in terms of ROE. Mobile Banking, Debit Card and Credit cards has found to negative impact on the ROE of the banks. The finding for the sampled banks in Nepal confirms the study conducted by Dinh et.al.(2015). They reveals that internet banking has positive impacts on banks' income and in turn, banks' profitability. These effects are gradual, becoming significant three years after the adoption of Internet banking. In other words, this is the evidence to prove that, in developing countries, digital channels such as Internet banking still bring benefits to banks. This study is agree in some extent with the study by Aduda & Kingoo (2012) stating that the coefficient of investments in e-banking measured by expenditure on bank ICT investments (e-banking) has the correct sign and is significant. They found that investments in e-banking has a positive relationship with bank performance at 1% level. There is a negative relationship between number of debit/credit cards issued to customers as proxy of e-banking and bank performance. 1% increase in number of debit cards and credit cards issued to customers by the banks leads to 0.00001% and 0.00006% decrease in the bank profitability (ROE). The finding from this research is also supported by the study conducted by Olwande & Ngada (2019) concluding that internet banking and use of ATMs had a positive and significant effect on the financial performance of commercial banks in Kenya. This study found a positive relationship between number of ATM installation as proxy of e-banking and bank performance. 1% increase in number of ATM installation by the banks leads to 0.032% increase in the bank profitability (ROE).

Though there is rapid growth in Nepalese financial sector, E-banking is still in its infancy. E-banking has a huge prospective to contribute to the financial system of Nepal. Certain segments of the consumer group are only using Electronic Banking. Consumers are less aware of risk involved in E-banking. Banks are investing lots of money in technology but they have not been successful enough in E-banking activities. If the banks do not see the scenario and challenges of E-banking, they cannot be make profitable.

## CONCLUSION

In general it can be concluded that commercial bank have varieties of electronic banking services for their customer in order to provide effective and efficient service delivery. This different electronic banking promotes effectiveness and efficient service delivery since client can be able to withdraw, deposit money, bill payment and check account balance etc. From the result of statistical analysis, e-banking channels (MB, IB, ATM, DC and CC) have negative correlation with the ROA and positive correlation with the ROE of the commercial banks in Nepal. Further, use of e-banking channels of internet banking has had positive impacts on the financial performance of the commercial banks in terms of ROA. But mobile Banking, ATM, Debit Card and Credit cards has found to negative impact on the ROA of the commercial banks in Nepal. Accordingly, use of e-banking channels of internet banking and ATM has had positive impacts on the financial performance of the commercial banks in terms of ROE. But, mobile Banking, Debit Card and Credit cards has found to negative impact on the ROE of the commercial banks.

The Banking and Financial Industry (BFI) has encountered three significant changes; the combined strength of the industry, the diffusion of e-banking and the increased freedom to combine banking with other financial services especially through internet. Within this context the change it has adopted enormously is the adoption of internet technology but parallel to this it has faced many challenges such as significant high cost of installing and maintenance of IT and its infrastructure, skilled work force, issues of increasing demand to meet customer expectation for service quality, trustworthiness of the information system and ability to achieve economies of scale within IT structure.

## Future scope and Implications

The study recommends to the management of banks which are slow in innovation adoption, to move in and adopt various innovations in their operations in order to shore up their profitability. This recommendation is well supported by the fact that in Nepal, the leading banks in terms of profitability are mostly the fast movers in adoption of new technologies. Profitability is also crucial to shareholders and the market is also keen on the profitability of organizations. Government policy makers should also need to review policies related to promotion of innovation adoption and transfer of technology. Government should encourage adoption of innovations that will improve profitability of organizations because it will convert to better tax revenues for the government. Nepalese banks must ensure that their e-banking services are secured and protected. And also, they need to convince and aware their customers about security of e-banking services.

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## COMPARISON OF QUALITY OF LIFE OF ELDERLY MALE AND FEMALE IN TANSEN MUNICIPALITY, PALPA

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### Abstract

*Ensuring a high quality of life (QOL) for elderly individuals is crucial as it directly influences their health, happiness, and overall life satisfaction. The concept of QOL encompasses various factors, including cultural, social, and environmental considerations. Objective: This study aimed to compare the quality of life between elderly males and females residing in Tansen municipality, located in Palpa, western Nepal. A population-based, cross-sectional study design was employed in Tansen municipality, Nepal. The study sample consisted of 102 individuals aged 60 years and above, who were selected using systematic random sampling from wards with a high elderly population (wards 3, 5, and 9). Of the selected participants, 47 were male and 55 were female. Face-to-face interviews were conducted using a standardized, pretested questionnaire as developed by the World Health Organization (WHO) in 1996, known as the WHO BREF questionnaire. Data collection took place from February 10 to March 10, 2018. The collected data were entered and analyzed using IBM SPSS Statistics 20 software. QOL was compared using F and t statistics. Among the participants, 42.6% of males and 52.7% of females had a low QOL, while 57.4% of males and 47.3% of females reported a high QOL. The t statistic (0.034) indicated a significant association between sex and QOL at a significance level of  $\alpha = 5\%$ . The study also revealed associations between sex, disease, family support, and quality of life, while no significant associations were found with other variables. The study findings suggest that elderly males had a better quality of life compared to females. Additionally, individuals with strong family support exhibited a higher QOL, and disease condition was found to impact QOL.*

**Keywords:** Elderly, Palpa, Quality of life, Social support, WHO BREF.

### INTRODUCTION

The quality of life among the elderly population is a significant concern in today's society, as demographic shifts continue to reshape the age distribution across the globe. As individuals age, their physical, mental, and social well-being become increasingly important factors in determining their overall quality of life. Furthermore, understanding how these factors differ between genders can provide valuable insights into developing targeted interventions and support systems for specific populations. This research paper aims to investigate and compare the quality of life of elderly males and females residing in Tansen Municipality, Palpa. Tansen Municipality is a vibrant and diverse urban center in Nepal, characterized by a rich cultural heritage and a rapidly growing elderly population. By focusing on this specific location, we can gain a nuanced understanding of the unique challenges and opportunities faced by the elderly in a particular community, as well as the potential gender-based differences in their quality of life.

The comparison of quality of life between elderly males and females is an essential aspect of this study. Previous research has shown that gender-related factors, such as societal norms, cultural expectations, and biological differences, can influence various dimensions of quality of life among the elderly. By exploring these differences, we can gain a comprehensive understanding of the factors that contribute to disparities in well-being and identify areas for targeted interventions and policy development. To achieve the objectives of this research, a mixed-methods approach will be employed. Quantitative data will be collected through structured surveys to assess various dimensions of quality of life, including physical health, mental well-being, social support, and overall life satisfaction. Additionally, qualitative data will be gathered through in-depth interviews to capture the subjective experiences and perspectives of the elderly participants.

The findings of this study are expected to contribute significantly to the existing body of knowledge on the quality of life among the elderly population. By focusing on a specific geographical area and examining gender-based differences, this research will provide valuable insights into the unique challenges faced by elderly males and females in Tansen Municipality, Palpa. The results can inform policymakers, healthcare professionals, and community organizations in designing targeted interventions

and support systems that enhance the well-being of the elderly population and promote gender equity in quality of life outcomes.

In summary, this research paper endeavors to compare the quality of life of elderly males and females in Tansen Municipality, Palpa, to gain a comprehensive understanding of the factors that contribute to gender-based disparities in well-being. By combining quantitative and qualitative methods, this study aims to shed light on the specific challenges faced by elderly individuals in this community and provide actionable insights for improving their quality of life.

### REVIEW OF LITERATURE

Global aging is one of the remarkable achievements of the 21st century. The definition of senior citizens varies depending on different criteria, with chronological age being the most commonly used. In Nepal, the Senior Citizens Acts 2063 defines senior citizens as individuals who are 60 years and older. However, determining the quality of life is not as straightforward as a simple definition. It is a subjective, dynamic, and complex concept that varies from person to person and may even change within an individual over time (Acharya, 2007). Numerous factors can influence quality of life, including health, functionality, autonomy, personal fulfillment, as well as psychological, economic, social, and environmental aspects (Luzny, 2013).

Aging is a natural and universal phenomenon that encompasses multiple dimensions. While it primarily refers to the physical effects of growing older, it also encompasses the mental and social aspects, including the decline in cognitive abilities and social adaptability (Devil & Roopa, 2013). At the global level, the quality of life among the elderly is a significant concern as it reflects their health status and overall well-being. The World Health Organization (WHO) defines quality of life as an individual's perception of their position in life within the context of their culture, values, goals, expectations, standards, and concerns. It is influenced by various factors such as physical health, psychological state, independence, social relationships, and their environment (Akhouri *et al.*, 2016).

The quality of life among the elderly is a critical area of focus worldwide, as it is indicative of the health and well-being of this vulnerable population. In developing countries, the number of elderly individuals is increasing due to demographic transitions. In Nepal, the older population (aged 65 and above) has risen from 3.3% in 1981 to 5.3% in 2011. The median age has also increased from 18.92 in 1991 to 22.26 in 2011, indicating a gradual aging of the population in the country (Population Monograph of Nepal, 2014). QOL score among elderly was found to be average. The scores of social relationship were low for both male and female elderly subjects (Praveen & Rani, 2016). According to Thadathil *et al.* (2015) the age above 80 was 16.8% and mean age was 69.65 years. The percentage of female was 51.8% and illiterate participants were 33.18% which was similar to our study. This study showed the difference of scores between men and women which was statistically insignificant.

Additional studies exploring the quality of life (QOL) have been carried out in various contexts. (Shrestha *et al.*, 2019) conducted similar research focusing on elderly individuals residing with their families as well as those living in old age homes in the Morang District. Risal *et al.* (2020) examined the QOL of elderly individuals in urban and rural areas of Nepal. Samadarshi *et al.* (2021) conducted a study on QOL in the Thabang Rural Municipality of Rolpa district in the Lumbini Province of Nepal. Furthermore, Sharma *et al.* (2021) investigated the QOL and nutritional status of the geriatric population in the south-central region of Nepal. The older population embodies a wealth of knowledge, experience, and wisdom, yet they are also a highly vulnerable segment of society. As individuals age, their vulnerability becomes more pronounced. This vulnerability stems primarily from factors such as unemployment, financial instability, poor health, and societal neglect. Any social security system aimed at supporting the elderly must address these vulnerabilities comprehensively. Such a system should be multidimensional, encompassing provisions for income security, healthcare coverage, and emotional support. However, the quality of life (QOL) and its determinants have not been adequately examined, not only in Palpa but also throughout the entire western region. Consequently, this study was conducted to investigate the QOL and its associated factors among males and females in Palpa District.

### MATERIALS AND METHODS

A cross-sectional study was conducted in Palpa district to investigate the impact of increasing modernization on people's lifestyles and behaviors, particularly regarding the lack of attention towards

geriatric care. Tansen Municipality in Palpa district was purposefully selected as the study location. Data collection took place between February 10 and March 10, 2018. A total of 102 individuals aged 60 years and above were randomly selected from wards with a high elderly population (3, 5, 9) using systematic random sampling. Out of these participants, 47 were male and 55 were female. The study utilized the WHO BREF questionnaire, a pre-designed and pretested standard questionnaire developed by the World Health Organization in 1996. Prior written consent was obtained from the relevant authorities, and informed consent was acquired from each respondent before data collection. Personal interviews were conducted with each individual in the study. Data entry and analysis were performed using IBM SPSS Statistics 20 version. Both descriptive and inferential statistics were employed for data analysis. Descriptive statistics, ANOVA, and T-test were utilized to assess and describe demographic characteristics and the quality of life of the respondents. The study's findings are presented in a table and divided into three main parts, highlighting the key results.

Part I: Socio demographic information of the respondents.

Part II: Comparison of quality of life of elderly male and female.

Part III: Analysis related to association between demographic variables and quality of life of elderly people.

## RESULTS

The results of the cross-sectional study conducted in Palpa district revealed significant insights into the impact of modernization on people's lifestyles and behaviors. The findings, presented in three parts, shed light on various aspects related to geriatric care and quality of life among the elderly population. Demographic characteristics of the participants were thoroughly assessed and described using descriptive statistics, allowing for a comprehensive understanding of the sample. The analysis further employed inferential statistics, such as ANOVA and T-test, to identify significant differences and patterns among different groups. These statistical analyses provided valuable insights into the quality of life and its association with various factors. Overall, the result section presents a comprehensive overview of the study's outcomes, offering valuable information for policymakers and healthcare professionals working in geriatric care.

**Part I:** Socio demographic information of the respondents

**Table 1:** Distribution of respondents according to selected socio- demographic information.

SN	Variable	Male (n=47) n (46.07%)	Female(n=55) n (53.93%)	Total (N=102) N (100%)
1	<b>Age in years</b>			
	60-70	19(18.6)	32(31.4)	51(50)
	70-80	18(17.6)	15(14.7)	33(32.3)
	>80	10(9.8)	8(7.8)	18(17.6)
2	<b>Religion</b>			
	Hindu	37(76.3)	50(49)	87(85.3)
	Muslim	3(2.9)	2(2)	5(4.9)
	Christian	0(0)	1(1)	1(1)
	Buddhist	7(6.9)	2(2)	9(8.8)
3	<b>Ethnicity</b>			
	Brahmin	14(13.7)	14(13.7)	33(32.4)
	Chhetri	14(13.7)	20(19.6)	34(33.3)
	Dalit	19(18.6)	10(9.8)	29(28.4)
	Janjati	0(0)	6(5.9)	6(5.9)
4	<b>Education</b>			
	Illiterate	5(4.9)	9(8.8)	14(13.7)
	Literate	25(24.50)	27(26.5)	52(51)
	Primary	11(10.8)	15(14.7)	26(25.5)
	Secondary	6(5.9)	4(3.9)	10(9.8)

According to the Table 1, it can be observed that 50% of the participants fell within the age range of 60-70 years, while individuals above 80 years accounted for 17.6% of the minority group. The majority of respondents, comprising 85.3%, identified as Hindu, whereas 8.8% belonged to the Buddhist faith.

Among the participants, 33.3% identified as Chhetri, with minorities making up 5.9% of the Dalit community. Furthermore, the table indicates that 13.7%, 51%, 25.5%, and 9.8% of the respondents were categorized as illiterate, literate, primary level educated, and secondary level educated, respectively.

**Table 2:** Distribution of Respondents According to Socio- Demographic Information.

SN	Variable	Male(n=47) n (46.1%)	Female(n=55) n (53.9%)	Total (102) N (100%)
1	<b>Occupation</b>			
	Service	13(12.7)	8(7.8)	21(20.6)
	Non-Service	34(33.3)	47(46.1)	81(79.4)
2	<b>Disease</b>			
	DM (Diabetes Mellitus)	11(10.8)	13(32.5)	24(23.5)
	HTN( Hypertension)	29(46.8)	33(53.2)	62(60.78)
	Asthma	6(5.9)	6(5.9)	12(11.80)
	Others	2(1.96)	1(0.98)	3(2.9)
	Absent	1(0.98)		1(0.98)
3	<b>Family support</b>			
	Full	38(37.3)	35(34.3)	73(71.6)
	Partial	9(8.8)	18(17.6)	27(26.5)
	None	0(0)	2(2)	2(2)
4	<b>Income</b>			
	<20000	45(44.1)	49(48)	94(92.2)
	20000 to 40000	2(2)	4(3.9)	6(5.9)
	40000 & above	0.0000	2(3)	2(2)

Table 2 indicates that (79.4%) of the participants were not involved in service-related occupations, while (20.6%) were engaged in service. The survey revealed that the majority of respondents (60.78%) were afflicted with hypertension (HTN), with only 1% reporting other conditions such as arthritis, paralysis, and so on. Among the elderly male and female respondents, 71.6% received complete support from their family members, 26.5% received partial support, and 2% received no support. Based on the data presented in the table, it is evident that a significant portion of the respondents were not employed in the service sector, and the majority of them relied on the support of their family members.

**Part II:** Comparison of quality of life of elderly male and female.

**Table 3:** Comparison of QOL of elderly male and female.

Variable	mean	Md	SD	Low QOL n (%)	High QOL n (%)	df	T	p value
Male	1.425	1	0.499	20 (42.6)	27 (57.40)	100	0.034	0.05
Female	1.527	2	0.503	29 (52.7)	26 (47.3)			
Total	1.480	1	0.502	49 (48)	53 (52)			

According to the data presented in Table 3, there were a total of 102 respondents, consisting of 47 males and 55 females. Among the respondents, 42.6% of males and 52.7% of females reported low quality of life (QOL), while 57.4% of males and 47.3% of females reported high QOL. These findings suggest that the QOL of males is better than that of females. The mean QOL score for males was 1.425, while for females it was 1.527. The overall mean QOL score for all respondents was 1.480. It is worth noting that the t-value obtained from the table is statistically significant at a 5% significance level ( $\alpha= 5\%$ ).

**Part III: Association between demographic variable and quality of life****Table 4:** Association between demographic variable and QOL.

Age interval	Mean	SD	df	F	Sig.	p-value
60-70	3.439	0.281	2	3.027	0.053	0.05
70-80	3.426	0.211				
Above 80	3.2543	0.385				
Total	3.4027	0.288				

Table 4 illustrates that there is no discernible correlation between age and quality of life. The table presents the mean, standard deviation (SD), degrees of freedom (df) of 2, test statistic value of 3.027, a significance value of 0.053, and a chosen P value of 0.05.

**Table 5:** Association between religion and QOL.

Religion	Mean	SD	df	F	Sig.	P value
Hindu	3.395	0.293	3	0.4980	0.4980	0.05
Muslim	3.523	0.168				
Christian	3.192	0.000				
Buddhist	3.427	0.309				
Total	3.402	0.288				

The absence of any association between religion and the quality of life of elderly individuals is depicted in Table 5. The table presents various statistical measures, including the mean, standard deviation (SD), degrees of freedom (df) which is 3, test statistic value of 0.498, significance level of 0.498, and a p-value of 0.05.

**Table 6:** Association between Ethnicity and QOL.

Ethnicity	Mean	SD	df	F	Sig.	P value
Brahmin	3.413	0.220	3	0.907	0.441	0.05
Chhetri	3.432	0.323				
Janjati	3.392	0.297				
Dalit	3.224	0.224				
Total	3.4027	0.288				

The table displayed above (Table 6) indicates that there is no discernible link between ethnicity and quality of life. It presents various statistical measurements, including the mean, standard deviation (SD), degrees of freedom (df) with a value of 3, a test statistic value of 0.907, a significance value of 0.441, and a P-value of 0.05.

**Table 7:** Association between Educational level and QOL.

Educational level	Mean	SD	df	F	Sig.	P-value
Illiterate	3.299	0.361	3	0.827	0.482	0.05
Literate	3.429	0.207				
Primary level	3.418	0.371				
Secondary level	3.365	0.310				
Total	3.402	0.288				

The absence of a correlation between educational level and quality of life is demonstrated in Table 7. The table provides details such as the degrees of freedom (df = 3), the test statistic value (0.827), the significance value (0.482), and the P value (0.05).

**Table 8:** Association between Occupation and QOL.

Occupation	Mean	SD	df	T	Sig.	P value
Service	3.4359	0.244	4	0.589	0.55	0.05
Non- service	3.394	0.299				

The absence of any correlation between occupation and quality of life is evident in the table displayed above (Table 8). The table provides information such as degrees of freedom (df) (4), test statistic value (0.589), significance value (0.55), and p-value (0.05).

**Table 9:** Association between disease and QOL.

Disease	Mean	SD	df	F	Sig.	P value
DM	3.435	0.201	4	2.733	0.033	0.05
HTN	3.398	0.305				
Asthma	3.426	0.267				
Absent disease	3.435	0.272				
Others	1.000	2.500				
Total	3.402	0.280				

The table presented above, Table 9, demonstrates a notable correlation between disease and quality of life. The analysis reveals important findings, including the degrees of freedom (df) being 4, a test statistic of 2.733, a significance value of 0.033, and a P value of 0.05 (hypertension (HTN) and diabetes mellitus (DM)).

**Table 10:** Association between Family Support and QOL.

Family support	Mean	SD	df	F	Sig.	P value
Full	3.413	0.235	2	2.924	0.050	0.05
Partial	3.410	0.371				
None	2.923	0.598				
Total	3.402	0.288				

The association between family support and quality of life is depicted in Table 10, indicating a notable relationship. The table presents the degrees of freedom (df) as 2, the test statistic value as 2.924, the significance value as 0.05, and the p-value as 0.05.

**Table 11.** Association between Income and QOL.

Income	Mean	SD	df	F	Sig.	P-value
< 2000	3.401	0.295	2	0.182	0.834	0.05
20000 to 40000	3.448	0.226				
40000 & above	3.4027	0.163				
Total	3.402	0.288				

Table 11 above indicates that there is no noteworthy correlation between income and quality of life. The table displays the degrees of freedom (df) as 2, the test statistics value as 0.182, the significance value as 0.834, and the p-value as 0.05.

## DISCUSSION

This prospective analytical study aimed to compare the quality of life between elderly males and females residing in Tansen municipality of Western Nepal. The sample for this study was selected using a systematic random sampling technique, resulting in a total of 102 respondents, with 47 male and 55 female participants. Only individuals above the age of 60 were included in the study. The socio-demographic characteristics of the participants are presented in Table 1. Our findings indicate that age and occupation did not show any significant association with quality of life, which is consistent with a study conducted by (Praveen and Rani, 2016) in Hiruvallur district, Tamil Nadu. In our study, 46% of the participants were male, while 54% were female, and a majority of the participants (51%) were literate. This contrasts with the study conducted by (Kanim and Jebory, 2015), which reported a women percentage of 44.2% and men percentage of 55.8% in their sample. The median age of our study sample was 68 years, with equal representation of men and women. Furthermore, approximately 60% of the participants in our study were illiterate, which is consistent with the findings of (Chandrika et al., 2015).

We observed that males had a higher quality of life compared to females, as presented in Table 3. Contrary to our findings, a study conducted by (Khan et al., 2014) in Bangladesh indicated that education plays a significant role in determining the quality of life among the elderly population. However, in our

study, despite 51% of the participants being literate, they might not have been fully aware of the concept of quality of life. Our study identified hypertension as the major health problem among the elderly population, followed by diabetes mellitus, asthma, heart disease, and joint problems. In contrast, the study by (Porto et al., 2012) in Brazil reported insomnia as the major health problem, followed by eye problems, arthritis, joint pain, heart disease, and high blood pressure. Additionally, 20.6% of the participants in our study were involved in service-related occupations, while 79.4% were engaged in non-service occupations. In the study conducted by (Porto et al., 2012), 60.8% were non-working, and the remaining participants were employed. Among the total 102 respondents in our study, 42.4% of males and 52% of females reported low quality of life, while 57.4% of males and 47.3% of females reported high quality of life. This finding aligns with the results reported by (Thomopoulou et al., 2010), who found that males generally have higher quality of life compared to females.

Overall, our study provides valuable insights into the quality of life among elderly males and females in Tansen municipality, Western Nepal. While we did not find significant associations between age, occupation, and quality of life, we observed gender differences, with males generally reporting higher quality of life. The role of education in determining quality of life remains inconclusive, as our study contradicts previous research findings. The prevalence of health problems also varied between our study and previous studies, highlighting the need for further investigation.

### CONCLUSION

In conclusion, this study found that the QOL among elderly individuals differed between males and females, with males exhibiting a better QOL than females. Furthermore, a significant association was observed between the QOL of males and females. Several factors were found to have a significant relationship with QOL, including sex, disease, and family supports, while no significant associations were observed with other variables. The prevalence of diseases such as hypertension (HTN) and diabetes mellitus (DM) was high among the elderly population. The findings of this study have important implications for the development of strategies aimed at promoting the health and QOL of seniors. Specifically, interventions should be tailored to address the unique needs of vulnerable elderly individuals, considering their physical, social, and environmental circumstances. Additionally, increasing social security allowances could potentially enhance the overall quality of life for elderly individuals. It is recommended that further research be conducted to gain a deeper understanding of the influence of additional factors on the QOL of the elderly.

Overall, this study contributes to the existing body of knowledge and provides valuable insights into the factors influencing the QOL of elderly individuals. By utilizing these findings, policymakers, healthcare professionals, and community organizations can implement targeted interventions and policies that prioritize the well-being and quality of life of the elderly population.

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## WORKING CAPITAL MANAGEMENT EFFICIENCY USING THE INDEX METHOD

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### ABSTRACT

*In order to better understand working capital management, which includes efficient handling of current assets as well as current liabilities? Efficient management of working capital is a precondition for the success of any kind of firm. The initial study's major goal was to assess the efficiency of working capital management in the automobile industry. The present study deals with the efficiency of working capital management in the selected four-wheeler passenger car manufacturing companies in India. The source of secondary data is the annual report and CMIE Prowess. The database of ten passenger car manufacturing companies in India is drawn at random from the source Statista based on their market share and brand in terms of passenger car manufacturing companies for the 10-year period from 2011–12 to 2020–21. This study employed three parameters to assess the efficiency of working capital management: the performance index of working capital management (PI), the utilization index of working capital management (UI), and the efficiency index of working capital management (EI), following the model suggested by Bhattacharya (1997). This study's results show most of the companies reviewed did well in terms of working capital performance, current asset usage, and working capital efficiency. Some selected passenger car manufacturers have efficiently managed their working capital and increased sales with existing assets. Companies with a low or negative efficiency index must use current assets efficiently to manage working capital. We feel this is an important topic that would be of interest in decision-making. Company managers in managing the company's finances must be more effective and efficient so that the company does not experience financial distress. For investors, it can be used as a reference in making decisions to invest by looking at companies that show companies that have good financial performance.*

**Keyword:** WCM, Efficiency, Automobile, Passenger Car, Index Method

### INTRODUCTION

Working capital management entails the management of the required amount, efficient procurement, and efficient use of these current assets. There should be an optimum investment for each component of current assets. Thus, the management should also design suitable strategies to release excess funds invested in any component of current assets so that such funds can be profitably used elsewhere. The automobile industry is one of the primary mainstays of the world economy, a principal driver of full-scale monetary development and soundness in both developed and developing countries. Firm return is a key indicator of a company's ability to stay in business, and scholars, academics, and policymakers are always looking into how a company's profitability can be increased through normal business operations. The main goal of a financial manager is to make sure that shareholders get as much money as possible. This comes from the firm's return and depends on the financial manager's wise and best decisions about how to keep the level of assets and liabilities (Khalid et al., 2018). One of the operational challenges that businesses always face is how to manage their working capital. Running capital is the capital that a business uses to run its regular business operations. It is measured by the difference between the current assets and current liabilities. When a company doesn't have enough working capital, it loses money. When it has too much, it loses money. The amount of working capital a business needs changes over time based on the type of business, size, production cycle, credit policy, availability of raw materials, etc. This amount of money needs to be invested in different current assets for the long term. For example, because there is a delay between sales and cash receipts, it is always important to have enough working capital to keep sales at the level you want them to be. Research shows that poor management of working capital (Yadav, 1986) is one of the main causes of industrial disease. Modern financial management tries to cut down on current assets and keep from running out of stock (Bhattacharya, 1997). Working capital management is a key indicator of an organization's health because it reduces the amount of capital that is stuck, which lowers the cost of financing. Short-term assets and liabilities need to be looked at in detail. Working capital management is important for a company's value, risk, and profit (Smith, 1980). How current assets and liabilities are managed shows how much working capital is best to have. Most of the time, current assets are seen as an important part of total assets. By renting or leasing equipment, a company can cut down on its investment in fixed assets, but it can't do that with the part of working capital. Money that is invested in long-term assets may have less risk of running out of money because there are so many current assets. So, good

management of working capital is a key indicator of the health of an organisation. This is because it reduces squandered capital and lowers finance costs. How well do automobile companies manage their working capital? Accounting ratios have been used a lot in empirical research in the past, but it might be hard to choose the right ratio or set of ratios because there isn't a good ratio analysis theory (Bhattacharya, 1997). Bhattacharya (1997) developed an alternative ratio model for measuring and keeping track of the efficiency of working capital management to solve this problem. He split the overall efficiency index for working capital management into two parts: performance and usage.

A study of efficiency looks at how well different parts of working capital are used. There are several parts to working capital. increasing efficiency and making more money by efficiently rotating parts. Working capital management is important for the success of every business. (Howorth and Westhead, 2003; Deloof, 2003; Afza and Nazir, 2007). Firms try to keep a WC that maximizes value. A company that manages its working capital well can stay in business and do its day-to-day work well, which leads to long-term success. The company will only reach its sales goal if it has enough WC. Research from the past shows that poor management of working capital is a major cause of industrial disease. When managing working capital, a company must keep the right balance between liquidity and profit. Waste control is the ability of a company to control its waste. Working capital management is the process of managing the different parts of working capital so that a good amount of working capital is kept so that the business can run smoothly and achieve its goals. Three INDEX values are used to measure the efficiency of working capital management: performance, utilization, and total efficiency. For the empirical study, different parts of CAs, such as trade and bill receivables, are taken into account as variables. Cash, investments with a short time frame, and short-term loans and advances. The research tries to measure three parts of working capital management:

- (a) The performance index of working capital (PI)
- (b) The UI for working capital utilization.
- (c) The overall efficiency index (EI) for working capital.

Since efficient management of working capital is one of the preconditions for the success of any company, the present study deals with the efficiency of working capital management in the Indian passenger car manufacturing companies.

## LITERATURE REVIEW

Previous work has analysed WCM using several measures. Mehmet and Eda's (2009) study on working capital management and firm efficiency level showed the effective use of WC by enhancing the management of total assets, which strongly affected firm profitability. This study analysed Istanbul Stock Exchange data from 1993 to 2007 and found a negative relationship between cash conversion period, current ratio, net working capital, and return on total assets. Similar to Chisti (2012), (2012) evaluated the influence of efficiency and profitability for 16 companies in India and showed an inverse association between inventory, A/R, and cash conversion cycle, but a positive relationship for A/P. Ganesan (2007) analysed the working capital management efficiency for the communications systems industry using days sales outstanding, days inventory outstanding, days payment outstanding, days working capital, and current ratio.

Meanwhile, Cash conversion efficiency, current ratio, and income to total assets and income to sales evaluate liquidity and profitability, respectively. According to empirical evidence, liquidity and profitability negatively affect working capital management. Alipour (2011) found a significant relationship between working capital management and profitability. The study suggests reducing receivables and inventory to increase shareholder value. Jayarathne (2014) studied the influence of working capital management on profitability in Sri Lanka listed companies. He concluded that flexible lending policies affect corporate profitability and that manufacturing firms may create more wealth if they manage working capital efficiently. Similarly, to the study done by, Richard et al. (2013) studied the impact of working capital management on profitability in manufacturing firms in Ghana. They reported that working capital management components must be controlled appropriately to avoid liquidity difficulties and short-term obligations, which play a large role in organisations. He used accounts receivable, payable, and cash for this research. Conversion cycle, current asset ratio, size, and current asset turnover are independent factors; return on assets is present for profitability. Afza and Nazir (2011) highlight efficient working capital management by examining the cement business in Pakistan from 1988 to 2008. To analyse business efficiency, he used the Bhattacharya (1997) indicator, which has three parts: the performance index of working capital management; the utilisation index of working capital management; and the efficiency index of working capital management. The industry studied performed well in terms of efficiency over time. Shehzad et al. (2012) studied Pakistani textile firms' working capital management from 2004 to 2009. Instead of the standard technique, this study uses Bhattacharya's (1997) efficiency index and three indicators: the working capital performance index, the utilisation index, and the efficiency index. According to the data, industrial performance was at a high level of efficiency, indicating that they handled working capital well during

the research period. According to Press, Valipour, and Jamshidi (2012), the performance index, efficient index, and utilisation index positively correlate with asset efficiency. The results reveal that the cash conversion cycle negatively affects asset efficiency. He found that Bhattacharya's index is a better way to measure how well a company manages its working capital than the usual way.

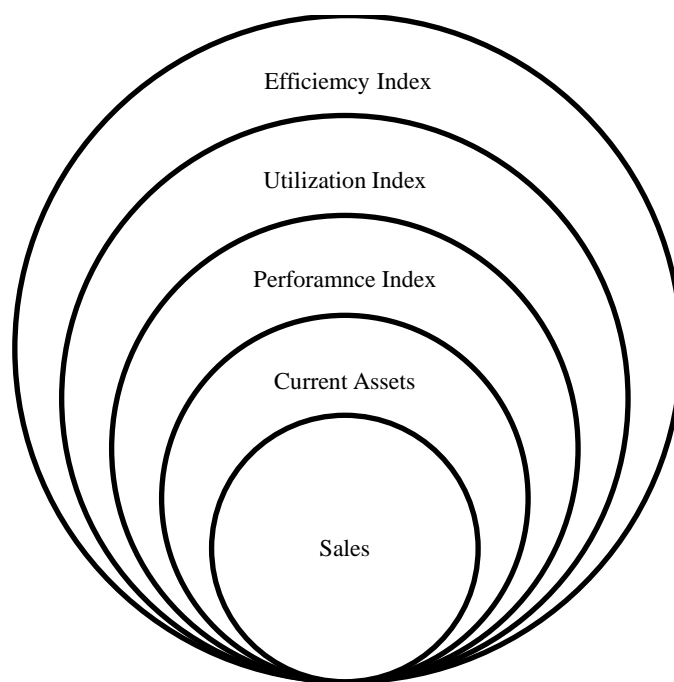
**RESEARCH METHODOLOGY**

The data used for the study are secondary in nature, ten companies taken from the Centre for Monitoring Indian Economy (CMIE) proress for the purpose of the study. The required data were collected from the Annual report and CMIE proress. And other relevant data are collected from journals, magazines, article and website. A sample of ten companies has been selected on the basis of availability of data for 10 years and its capitalization. Source: Statista., selected companies are: Maruti Suzuki India Ltd., Hyundai Motor India Ltd., Tata Motors Ltd. Mahindra & Mahindra Ltd., Toyota Kirloskar Motor Pvt. Ltd., Renault India Pvt. Ltd. Honda Carss India Ltd., Ford India Pvt. Ltd., Nissan Motor India Pvt. Ltd., Fiat India Automobiles Pvt. Ltd. “In this study, Bhattacharya’s efficiency method has been used to monitor and measure the effectiveness of working capital management. Bhattacharya (1997) developed a composed index showing the total efficiency level including performance index and utilization index in order to determine the efficiency of working capital management. The total efficiency index is calculated by multiplying the performance index and the utility index (Bhattacharya, 2007: 218- 220):”

**Conceptual Framework**

The following theoretical model explains the overall analysis adopted to understand the how Index works.

**Figure 1.1** Research Model



The performance index and utilisation index are computed using the firm's CAs and sales. The combination of PI and UI yields the Efficiency Index, which is compared to the average industry efficiency. The current research has generated the following problem: the study must be empirically examined in the context of a selection of Indian automobile manufacturing passenger car companies.

**Research questions**

The main research Questions of the study are

- Is there any significant efficiency in working capital management in utilizing the current assets of selected passenger cars manufacturing companies?
- Is there any significant overall working capital management efficiency in the selected passenger cars

manufacturing companies?

- Is there any significant speed in achieving the target level of efficiency by an individual selected passenger cars manufacturing companies in the passenger cars manufacturing companies in India?

In conformity with the Questionnaires of the study, the following are the testable hypotheses:

- H<sub>1</sub>: The passenger car manufacturing companies in India have the ability to utilise their current assets to generate sales.
- H<sub>2</sub>: The passenger car manufacturing companies in India have efficiency in managing working capital.
- H<sub>3</sub>: There is significant progress in achieving the target level of working capital efficiency by an individual selected passenger car manufacturing company in India.

**DISCUSSION AND RESULTS**

**Performance Index (PI) of working capital management**

The PI index of working capital management represents the average performance index of the various components of current assets. A company may be said to have managed its working capital efficiently if the proportionate rise in sales is greater than the proportionate rise in the current assets during the study periods. Numerically, an overall PI of more than 1 indicates efficient working capital management by the companies. To measure the overall efficiency of working capital management, first the performance index of working capital management (PI) has been calculated by applying the following model.

$$PI_{WCM} = \frac{N \sum_{i=1}^n \frac{W_i(t-1)}{W_{it}}}{N}$$

Where, Is= Sales index define as = S<sub>t</sub>/ S<sub>t-1</sub> (sales in the current period by sales in the previous period)

W<sub>i</sub>= It is the different elements of the current assets of the “i” company in the year “t”

N= Number of current assets

In this research, total current assets have been classified into five components, which are Trade & bills receivables Cash & bank balance, short term investment and short-term loans & advance.

**Table 1. Performance Index (PI)**

Company Name	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
Maruti Suzuki India Ltd.	0.21	0.24	0.20	0.20	0.21	0.20	0.20	0.19	0.18	0.18	0.20
Hyundai Motor India Ltd.	0.25	0.22	0.20	0.19	0.22	0.19	0.20	0.20	0.20	0.15	0.20
Tata Motors Ltd.	0.25	0.16	0.15	0.19	0.21	0.18	0.23	0.21	0.16	0.20	0.19
Mahindra & Mahindra Ltd.	0.29	0.24	0.19	0.17	0.19	0.18	0.20	0.20	0.17	0.19	0.20
Toyota Kirloskar Motor Pvt. Ltd.	0.30	0.28	0.26	0.16	0.20	0.15	0.25	0.17	0.21	0.15	0.21
Renault India Pvt. Ltd.	0.15	4.82	2.55	0.28	0.14	0.17	0.23	0.16	0.23	0.14	0.89
Honda Carss India Ltd.	0.21	0.23	0.39	0.29	0.18	0.16	0.22	0.18	0.13	0.21	0.22
Ford India Pvt. Ltd.	1.19	0.19	0.12	0.25	0.20	0.23	0.22	0.20	0.01	1.98	0.46
Nissan Motor India Pvt. Ltd.	0.21	0.19	0.24	0.18	0.16	0.16	0.15	0.16	0.21	0.26	0.19
Fiat India Automobiles Pvt. Ltd.	0.27	0.08	0.37	0.19	0.15	0.11	0.59	0.19	0.17	0.15	0.23
Average	0.33	0.67	0.47	0.21	0.19	0.17	0.25	0.19	0.17	0.36	<u>0.30</u>

Source: Annual reports and CMIE Prowess

The above table 1. shows the performance index of the selected ten four-wheeler automobile companies in India for the research period from 2011-12 to 2020-21. All the Selected passenger cars manufacturing companies in the automobile industry have average performance index of less than 1 or near to one with an average of 0.30. company wise average ranges from 0.89 to 0.19. This indicates that all the Selected passenger cars manufacturing companies are not able to efficiently manage their current assets. Where Renault India Pvt.Ltd. has the highest index of 0.89 and Tata Motor Ltd. and Nissan Motor India Pvt. ltd. shows the lowest index of 0.19.

**Utilization Index (UI) of working capital management**

PI represents the average overall performance in managing the component of current assets. UI indicates the ability of the company to utilize its current assets as a whole in order to generate sales. As a result, if there is an increase in total current assets greater than a proportionate rise in sales, the degree of utilisation of these assets with respect to sales is said to have improved and vice versa. This finally represents the operational cycle of the automobile industry's passenger vehicle manufacturers. This can be reduced in length by improving the usage rate. Therefore, an index value larger than one is desirable. Utilizing the following methodology, the working capital usage index (PIwcm) is computed:

$$UI_{wcm} = \frac{A_{t-1}}{A_t}$$

Where, A= Current assets / Sales

**Table 2. Utilization Index (UI)**

Company Name	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
Maruti Suzuki India Ltd.	0.88	1.21	0.81	1.45	2.60	1.06	1.17	0.67	1.27	0.42	1.15
Hyundai Motor India Ltd.	0.97	1.04	0.88	0.95	1.51	0.82	0.73	0.95	1.13	1.08	1.01
Tata Motors Ltd.	0.93	1.11	1.10	0.83	0.88	0.95	1.05	1.29	0.75	0.87	0.98
Mahindra & Mahindra Ltd.	0.93	1.12	0.79	1.05	0.93	1.00	0.80	0.99	1.01	0.74	0.94
Toyota Kirloskar Motor Pvt. Ltd.	1.21	1.34	0.87	1.13	0.66	0.95	0.94	0.75	0.99	0.84	0.97
Renault India Pvt. Ltd.	0.15	8.67	7.56	2.13	0.83	0.34	1.18	0.75	1.07	1.33	2.40
Honda Carss India Ltd.	0.86	1.51	1.72	1.06	0.74	0.90	0.90	1.18	0.62	1.50	1.10
Ford India Pvt. Ltd.	5.55	0.68	0.48	1.07	0.82	1.29	0.95	1.24	0.05	15.49	2.76
Nissan Motor India Pvt. Ltd.	1.36	0.91	0.78	1.27	1.01	0.83	0.71	0.97	1.06	1.34	1.02
Fiat India Automobiles Pvt. Ltd.	1.05	0.34	1.72	1.06	0.62	0.83	1.65	1.29	0.76	1.04	1.04
Average	1.39	1.79	1.67	1.20	1.06	0.90	1.01	1.01	0.87	2.47	1.34

Source: Annual reports and CMIE Prowess

The above table 2. shows the Utilization index of the selected ten four-wheeler automobile companies in India for the research period from 2011-12 to 2020-21. All the Selected passenger cars manufacturing companies in the automobile industry have average utilization index of more than 1 or near to one with an average of 1.34. except Tata Motors ltd., Mahindra & Mahindra Ltd. and Toyota Kirloskar Motor Pvt. Ltd. hence, company wise average ranges from 2.76 to 0.94. This indicates that all the Selected passenger cars manufacturing companies are able and have an ability of in utilizing its current assets as a whole for the purpose of generating sales except Tata Motors ltd., Mahindra & Mahindra Ltd. and Toyota Kirloskar Motor Pvt. Ltd. Where Ford India Pvt.Ltd. has the highest index of 2.76 and Mahindra & Mahindra Ltd. shows the lowest index of 0.94.

**Efficiency Index (EI) of working capital management**

The Efficiency Index of Working Capital Management (EI) is the product of both PI and UI that helps to measure the ultimate efficiency in working capital management of automobile companies.

Thus,

$$EI_{wcm} = PI_{wcm} \times UI_{wcm}$$

Whereas,

**EI wcm** = Efficiency index of working capital management

**UI wcm** = Utilization index of working capital management

**PI wcm**= Performance index of working capital management

**Table 3. Efficiency Index (EI)**

Company Name	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
Maruti Suzuki India Ltd.	0.18	0.29	0.16	0.29	0.55	0.21	0.24	0.13	0.22	0.08	0.24
Hyundai Motor India Ltd.	0.24	0.23	0.17	0.18	0.33	0.16	0.14	0.19	0.23	0.17	0.20
Tata Motors Ltd.	0.23	0.18	0.17	0.15	0.19	0.17	0.25	0.28	0.12	0.17	0.19

Mahindra & Mahindra Ltd.	0.27	0.27	0.15	0.18	0.18	0.18	0.16	0.20	0.17	0.14	0.19
Toyota Kirloskar Motor Pvt. Ltd.	0.36	0.38	0.23	0.18	0.13	0.15	0.23	0.12	0.21	0.13	0.21
Renault India Pvt. Ltd.	0.02	41.84	19.29	0.60	0.12	0.06	0.27	0.12	0.24	0.19	6.28
Honda Carss India Ltd.	0.18	0.35	0.66	0.31	0.13	0.14	0.20	0.22	0.08	0.32	0.26
Ford India Pvt. Ltd.	6.60	0.13	0.06	0.27	0.16	0.29	0.21	0.25	0.00	30.71	3.87
Nissan Motor India Pvt. Ltd.	0.29	0.17	0.19	0.23	0.16	0.14	0.11	0.15	0.23	0.34	0.20
Fiat India Automobiles Pvt. Ltd.	0.29	0.03	0.63	0.20	0.09	0.09	0.97	0.24	0.13	0.16	0.28
Average	0.87	4.39	2.17	0.26	0.20	0.16	0.28	0.19	0.16	3.24	<u>1.19</u>

*Source: Annual reports and CMIE Prowess*

The above table 3. shows the overall efficiency index of the selected ten four-wheeler automobile companies in India for the research period from 2011-12 to 2020-21. The company wise average efficiency index ranges from 6.28 to 0.19. with an average of 1.19. This indicates that the Selected passenger cars manufacturing companies in the passenger cars manufacturing companies in India are efficient in managing their working capital. Year wise average efficiency index ranges from 4.39 to 0.16. The financial year 2012-13 shows the highest index of 4.39 and financial year 2016-17 and 2019-20 has the lowest index of 0.16. The following table shows the number of efficient Selected passenger cars manufacturing companies in the passenger cars manufacturing companies in India during the research period. The following table 4 and table 5 depict the number of efficient firms and maximum and minimum values of respective index during the research period respectively.

**Table 4. Number of Efficiency companies (Index Value >1)**

Index	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Performance Index (PI)	1	1	1	0	0	0	0	0	0	1
Utilization Index (UI)	4	7	4	8	3	3	4	4	5	6
Efficiency Index (EI)	1	1	1	0	0	0	0	0	0	1

*Source: Annual reports and CMIE Prowess*

**Performance Index:** Table 4. and table 5. exhibits that the performance index varied from year to year, max value 4.82 in year 2012-13 and min value 0.01 in year 2017-18. The maximum index values for performance index of all the companies are less than 1, except Renault India Pvt. Ltd. and Ford India Pvt. Ltd. where, Renault India Pvt. Ltd. has the highest index value and Ford India Pvt. Ltd. keeping the minimum value of performance index.

**Utilization Index:** Table 4. and table 5. exhibits that the utilization index varied from year to year, max value 15.49 in year 2012-13 and min value 0.05 in year 2019-20. The maximum index values for Utilization index of all the companies are more than 1 and minimum values are below the unity. where, Ford India Pvt. Ltd., Fiat India Automobiles Pvt. Ltd. and Renault India Pvt. Ltd. have the minimum value of 0.05, 0.4 and 0.15 respectively. It shows the inefficiency in utilizing the current assets for generating sales.

**Efficiency Index:** Apart from the extreme value of 41.84 and 30.71 (Renault India Pvt. Ltd. & Ford India Pvt. Ltd.), efficiency index varied between max value 0.97 in year 2017-18 to min value 0.34 in year 2019-20. Large gap between the maximum and minimum values of efficiency index reveals the degree of inconsistency with the management. The minimum values for all companies are below 1. It shows the poor efficiency in the management of working capital.

**Table 5. Minimum and Maximum value of respective index of selected Four-wheeler selected automobile companies in India firms during 2011-12 – 2020-21**

*Source: Annual reports & CMIE Prowess*

Company name	Performance Index (PI)				Utilization Index (UI)				Efficiency Index (EI)			
	Max	Year	Min	Year	Max	Year	Min	Year	Max	Year	Min	Year
Maruti Suzuki India Ltd.	0.24	2012	0.18	2019&2020	2.60	2015	0.42	2020	0.55	2015	0.08	2020
Hyundai Motor India Ltd.	0.25	2011	0.15	2020	1.51	2015	0.73	2020	0.33	2015	0.14	2017
Tata Motors Ltd.	0.25	2011	0.16	2019	1.11	2012	0.83	2014	0.28	2018	0.12	2019
Mahindra & Mahindra Ltd.	0.29	2011	0.17	2014&2019	1.12	2012	0.74	2020	0.27	2011&2012	0.14	2020
Toyota Kirloskar Motor Pvt. Ltd.	0.30	2011	0.15	2016&2020	1.34	2012	0.66	2015	0.38	2012	0.12	2018
Renault India Pvt. Ltd.	4.82	2012	0.14	2015&2020	8.67	2012	0.15	2011	41.84	2012	0.12	2015&2018
Honda Carss India Ltd.	0.39	2013	0.13	2019	1.72	2013	0.62	2019	0.66	2013	0.08	2019
Ford India Pvt. Ltd.	1.98	2020	0.01	2019	15.49	2020	0.05	2019	30.71	2021	0.00	2019
Nissan Motor India Pvt. Ltd.	0.26	2020	0.15	2017	1.36	2011	0.78	2013	0.34	2020	0.11	2017
Fiat India Automobiles Pvt. Ltd.	0.59	2017	0.08	2012	1.72	2013	0.4	2012	0.97	2017	0.03	2012

### Automobile Industry Average of PI, UI and EI

Automobile Industry Average of PI, UI and EI, Table 6. depicts the automobile industry average of the three indices. The level of working capital is a function of sales (Sagan 1955). This statement is tested in  $H_1$ .

**Table 6. Automobile Industry Average of PI, UI, and EI index during 2011-12 to 2020-21**

Years	Performance Index		Utilization index		Efficiency Index	
	$\mu$	$\sigma$	$\mu$	$\sigma$	$\mu$	$\sigma$
2011-12	0.33	0.288	1.39	1.420	0.866	1.913
2012-13	0.67	1.387	1.79	2.314	4.387	12.485
2013-14	0.47	0.700	1.67	1.998	2.171	5.710
2014-15	0.21	0.045	1.20	0.348	1.259	0.124
2015-16	0.19	0.026	1.06	0.564	1.204	0.131
2016-17	0.17	0.030	0.90	0.228	1.159	0.060
2017-18	0.25	0.117	1.01	0.264	1.278	0.236
2018-19	0.19	0.018	1.01	0.223	1.19	0.055
2019-20	0.17	0.058	0.87	0.331	0.163	0.075
2020-21	0.36	0.541	2.47	4.351	3.241	9.157

*Source: Annual reports & CMIE Prowess*

**$H_1$ :** The passenger car manufacturing companies in India have the ability to utilise their current assets to generate sales.

Passenger car manufacturing companies in India average of utilization index ranges from 0.87 in 2019-20 to 2.47 in 2020-21 and 8 out of 10 years have average UI > 1. "The overall UI of the passenger cars manufacturing companies in India for the selected period is 2.47 which indicates that the selected passenger car manufacturing companies in India proved the efficiency in utilizing their CAs as a whole for generating sales. Hence, (Null hypothesis is rejected). A poor and inefficient working capital Management leads to tie up funds in idle assets and reduces the liquidity and profitability of a company (Reddy and Kameswari 2004). This is tested in  $H_0^2$ ."

**$H_2$ :** The passenger car manufacturing companies in India have efficiency in managing working capital. Numerically the overall EI > 1 indicates the working capital management efficiency. Efficiency index of the automobile industry as a whole show average EI > 1 for 3 out of 10 years. The average working capital management efficiency of the automobile industry in respect of EI ranges from 0.159 to 4.387 explains on an average, firms of the industry adopted the aggressive working capital management practices in 2016-17 and followed the conservative Working capital Management practices in 2012-13. In terms of mean value of EI ( $\mu = 6.275$ ), Renault India Pvt Ltd. is the most efficient firm followed by passenger cars manufacturing companies in India. Therefore, (Null is rejected).

The passenger cars manufacturing companies in India norms as target level of Efficiency. In financial Analysis, average performance of an automobile industry is considered as the yardstick for performance evaluation of the selected four-wheeler automobile company in the automobile industry. In order to measures the selected four-wheeler automobile company in the automobile industry efficiency in achieving the target level of efficiency during the research period from 2011-12 to 2020-21, following model has been used Regression Model.

**Regression Model**

Pooled ordinary least square model of panel data regression is used for the measurement of selected four-wheeler automobile company in the automobile industry efficiency during the research period from 2011-12 to 2020-21. In the research, the t-test is performed to determine the statistical significance of the regression results. selected passenger car companies' working capital efficiency in the automobile industry Management is identical to the average level of productivity in the automobile sector. The advantage of panel data analysis over time series or cross-section modelling is that it captures variations between individual cross sections considerably more accurately. This study also attempts to quantify the rate of adaptation of chosen passenger car manufacturers in the automobile industry in relation to their sector performance. During the research period from 2011-2012 to 2020–2021, the efficiency of a selected passenger car manufacturer in the automobile industry in achieving the desired degree of efficiency will be assessed. The regression model is used to evaluate the hypothesis.

**H<sub>1</sub>:** There is a significant speed in achieving the target level of working capital efficiency by an individual selected passenger cars manufacturing companies in the Automobile Industry.

The equation of Regression Model used,

$$Y_i = Z_t - Z_{t-1} = \alpha + \beta X_i + e_i$$

$$X_i = Z^*_{t-1} - Z_{t-1}$$

Z<sub>t</sub>= Index at time ‘t’ for the Selected passenger cars manufacturing companies and Z<sup>\*</sup><sub>t</sub> = Average index of the Automobile Industry at t-1. The coefficient of the above regression equation (β) represents the speed of the individual selected four-wheeler automobile company in improving its efficiency in the passenger cars manufacturing companies in India n norms. In this regard the estimated beta value represents the speed of the individual selected four-wheeler automobile company in improving its efficiency in achieving the automobile industry norms. If β=1 for a selected individual four-wheeler automobile company in the automobile industry indicates that the degree of selected individual four-wheeler automobile company in the automobile industry efficiency in the matter of managing working capital is equal to the average efficiency level of the Automobile industry as whole.

Similarly, if β<1 for a selected individual four-wheeler automobile company in the automobile industry indicates that the degree of selected individual four-wheeler automobile company in the automobile industry efficiency in the matter of managing speaks for the need of further improvements by the selected individual four-wheeler automobile company in the automobile industry in this regard. The regression results have been shown table 6, table 7 and table 8. Further Table 9 shows the rank list of Selected passenger cars manufacturing companies based on beta value.

**Table 7. Regression Results (Performance Index)**

Name of Company	Constant	Beta	R <sup>2</sup>	F value
Maruti Suzuki India Ltd.	0.180 (18.692)	0.650 (2.422) *	0.423	5.868
Hyundai Motor India Ltd.	0.195 (10.426)	0.156 (0.446) *	0.24	0.199
Tata Motors Ltd.	0.215 (9.665)	-0.353 (-1.065) **	0.124	1.135
Mahindra & Mahindra Ltd.	0.170 (7.143)	0.473 (1.517) *	0.223	0.126
Toyota Kirloskar Motor Pvt. Ltd.	0.151 (4.565)	0.598 (2.111) *	0.358	4.455
Renault India Pvt. Ltd.	-1.758 (-3.724)	0.912 (6.298) **	0.832	39.662
Honda Carss India Ltd.	0.152 (3.239)	0.496 (1.617) *	0.246	2.615
Ford India Pvt. Ltd.	0.293 (0.644)	0.144 (0.411) **	0.021	0.169
Nissan Motor India Pvt. Ltd.	0.162 (6.561)	0.440 (1.384) **	0.193	1.916
Fiat India Automobiles Pvt. Ltd.	0.243 (2.189)	-0.059 (-0.166) ***	0.003	0.028

*Source: Annual reports and CMIE Prowess*  
*(t value are shown in the parentheses and \* denotes significant at 5% level, \*\* denotes significant at 1%)*

Table 7. Renault India Pvt. Ltd. shows the greater beta value for the performance index. But it has only third place in Utilizing current assets for generating sales (0.439). Ford India Pvt. Ltd. Shown a greater beta value of 0.770 in utilizing index Table 8. The Selected passenger cars manufacturing companies are shown a low value of beta for both performance index and utilization index. It reveals that all the companies have to improve their working capital policies to achieve their target level.

**Table 8. Regression Results (Utilization Index)**

Name of Company	Constant	Beta	R <sup>2</sup>	F value
Maruti Suzuki India Ltd.	1.866 (3.570)	-0.46 (-1.448) **	0.208	2.098
Hyundai Motor India Ltd.	0.974 (4.619)	0.057 (0.161) *	0.003	0.026
Tata Motors Ltd.	0.967 (6.074)	0.022 (0.062) *	0.000	0.004
Mahindra & Mahindra Ltd.	1.073 (9.660)	-0.420 (-1.309) **	0.176	1.712
Toyota Kirloskar Motor Pvt. Ltd.	0.885 (4.328)	0.152 (0.434) *	0.023	0.188
Renault India Pvt. Ltd.	-1.147 (-0.420)	0.439 (1.381) *	0.192	1.907
Honda Carss India Ltd.	0.357 (1.525)	0.766 (3.375) *	0.587	11.389
Ford India Pvt. Ltd.	-6.821 (-2.286)	0.770 (3.414) *	0.593	11.654
Nissan Motor India Pvt. Ltd.	0.793 (3.722)	0.378 (1.154) *	0.143	1.332
Fiat India Automobiles Pvt. Ltd.	1.056 (2.467)	-0.018 (-0.050) **	0.000	0.003

*Source: Annual reports and CMIE Prowess*

*(t value are shown in the parentheses and \* denotes significant at 5% level, \*\* denotes significant at 1%)*

Using the mean efficiency level of passenger car manufacturers in India as the target level of efficiency for each company, the rate of achieving that level has been evaluated.

**Table 9. Regression Results (Efficiency Index)**

Name of Company	Constant	Beta	R <sup>2</sup>	F value
Maruti Suzuki India Ltd.	0.258 (4.756)	-0.234 (-0.681) **	0.055	0.464
Hyundai Motor India Ltd.	0.206 (8.612)	-0.055 (-0.157) **	0.003	0.025
Tata Motors Ltd.	0.198 (9.589)	-0.180 (-0.517) **	0.032	0.268
Mahindra & Mahindra Ltd.	0.181 (9.502)	0.247 (0.721) *	0.061	0.520
Toyota Kirloskar Motor Pvt. Ltd.	0.179 (5.011)	0.460 (1.465) *	0.211	2.145
Renault India Pvt. Ltd.	-2.214 (-0.602)	0.790 (3.647) **	0.624	13.300
Honda Carss India Ltd.	0.185 (3.139)	0.570 (1.963) *	0.325	3.855
Ford India Pvt. Ltd.	0.529 (0.135)	0.450 (1.426) *	0.203	2.034
Nissan Motor India Pvt. Ltd.	0.183 (6.229)	0.329 (0.987) *	0.108	0.973
Fiat India Automobiles Pvt. Ltd.	0.321 (2.559)	-0.168 (-0.481) **	0.028	0.232

*Source: Annual reports and CMIE Prowess*

*(t value are shown in the parentheses and \* denotes significant at 5% level, \*\* denotes significant at 1%)*

The significance of empirical study results is determined using statistical tests such as the t-test and F-test. Tables table 8-10 show the results of the regression equations for PI, UI, and EI for all 10 companies.

R<sup>2</sup> is a statistical measure that represents the percentage of the index value that can be explained by the average of the targeted passenger car manufacturing companies in India. The F-value is statistically significant at the 1% level for 5 companies and at the 5% level for 5 companies out of 10 selected passenger car manufacturing companies, indicating that the regression models (the predictors) did a good job predicting the outcome variables. It's proven that the regression models suit the data.  $H_0$  is denied. The null hypothesis is rejected. Further Efficiency index is measure of performance, which reflects the combine effects of both the performance index and utilization index. Based on this index Renault India Pvt. Ltd. occupies the first position with the high beta value of 0.790 in the matter of speed in achieving the targeted Passenger car manufacturing companies in India norm over the period Table 9.

**Table 10. Rank of Companies according to Beta Value**

Name of Company	Performance Index	Utilization Index	Efficiency index
Maruti Suzuki India Ltd.	2	10	10
Hyundai Motor India Ltd.	7	6	7

Tata Motors Ltd.	10	7	9
Mahindra & Mahindra Ltd.	5	9	6
Toyota Kirloskar Motor Pvt. Ltd.	3	5	3
Renault India Pvt. Ltd.	1	3	1
Honda Carss India Ltd.	4	2	2
Ford India Pvt. Ltd.	8	1	4
Nissan Motor India Pvt. Ltd.	6	4	5
Fiat India Automobiles Pvt. Ltd.	9	8	8

Table 10: The order of companies as determined by their beta value. Renault India Pvt. Ltd. ranks first on the Performance Index, while Tata Motors Ltd. ranks tenth. Likewise, Ford India Pvt. Ltd. ranks first in Utilization Index and Maruti Suzuki India Ltd. ranks tenth, while Renault India Pvt. Ltd. ranks first in efficiency Index and Maruti Suzuki India Ltd. ranks tenth.

## CONCLUSIONS

D. Mukhopadhyay (2004) has suggested the principles of: THREE Es” to manage liquidity, solvency and Profitability, survival and growth of the business. E1 stands for economy, means at what minimum cost it can produce the goods. E2 stand for efficiency, means to do the thing right and E3 represents the effectiveness which means to do the right things only. This principle is very applicable in the case of automobile industry for the efficient management of working capital. Thus, it can be stated that the analysis reveals ample potential for improvement in managing the components of existing assets in order to enhance sales. Considering how demanding and competitive the market is right now, this potential should be used in the right way. This study's results show most of the companies reviewed did well in terms of working capital performance, current asset usage, and working capital efficiency. Some selected passenger car manufacturers have efficiently managed their working capital and increased sales with existing assets. Companies with a low or negative efficiency index must use current assets efficiently to manage working capital. Working capital management can be made better by taking better care of each current asset, or all of them together. Empirical data show that selected Indian passenger automobile manufacturers did effectively during the research period. 8 out of 10 years in the car business  $EI > 1$ . Except for two businesses, all other 18 four-wheeler automakers greatly improved their PI, UI, and EI during the research period. Selected Indian passenger car manufacturers are efficient in terms of PI, UI, and EI of WCM.

This study's findings and conclusion are consistent with those of previous empirical studies by Azhagaiah & Muralidharan (2009), Afza & Nazir (2011), Farhan Shehzad (2012), and Harsh & Sukhdev (2014), but not with those of Ghosh & Maji (2004) and Debdas & Chanchal (2012), which concluded that firms are inefficient at managing working capital. Very little empirical research exists within the automobile manufacturing industry. This study has also been referenced in other disciplines. All regression results are statistically significant at the 1% and 5% levels; hence, it is plausible to conclude that  $H_{01}$  through  $H_{03}$  are all untrue. In order to increase sales, the study suggests that there is sufficient room for improvement in managing the components of existing assets. Given how demanding and competitive the market is currently, this potential should be utilised appropriately.

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## IMPACT OF COMMUNICATION ON EMPLOYEE PERFORMANCE OF PHARMACEUTICAL COMPANIES IN NEPAL

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### Abstract

*This study aimed to examine the impact of communication on the employee performance of Pharmaceutical Companies in Nepal. The variables included in the study are independent variables of communication, i.e., oral communication, written communication & non-verbal communication, with employee performance as a dependent variable. A descriptive and analytical research design using a questionnaire method on a 5-point Likert scale was used to collect and analyze the data. The study was conducted with a sample size of 115 employees of pharmaceutical companies in Nepal. The data were analyzed using descriptive statistics, correlation, multiple regression analysis, and t-test using SPSS software. The finding of this study provides empirical evidence to the management to ensure effective oral, written & non-verbal communication in the pharmaceutical companies in Nepal. The results of the study showed that only oral communication significantly impacts employee performance, and both written and non-verbal communication have an insignificant impact on employee performance of pharmaceutical companies of Nepal.*

**Keywords:** Employee Performance, Oral Communication, Written Communication, Non-Verbal Communication, Pharmaceutical Companies

### INTRODUCTION

Communication is a crucial aspect of organizational activities; organizations must meet their requirements with better resources by communicating (Femi, 2014). Communication is the process of exchanging information from the highest level of management to the lowest level of employees and personnel to achieve objectives. Communication at the Puri Saron Hotel must be improved, as indicated by the high number of complaints regarding the slow response to employee requests and the absence of coordination between departments. According to Atambo and Momanyi (2016), previous research demonstrates a relationship between communication and performance, with communication having a positive and significant influence on performance.

Employee performance is crucial in any organization because a satisfied employee will have higher performance, which will, in the long run, increase the productivity of the organization. Today, everyone is appointed to play their assigned roles and fulfil their responsibilities in order to ensure that the organization's objectives are met. To increase organizational productivity, employees' efforts are focused on the organization's overall mission or on their specific aspects. It conveys the meaning that employees must set goals based on their managers' expectations, but they must also establish their own, internal goals on occasion. Employees' behaviors are observable and mental actions influence their decision-making. Consequently, a high-performing employee will be encouraged to remain with the organization for as long as feasible due to the benefits he brings and the positive image he creates. Performance is one of the most important factors to consider when discussing companies' internal marketing, but not the only one. Given the continuous development of companies and the rise in market standards, attaining the highest level of performance becomes a growing challenge (Vosloban, 2012).

An organization's performance could be improved by sharing information with employees and involving them in policy formulation. However, this restores employee satisfaction and productivity throughout an organization. In some cases, the communication gap between managers and employees makes employees feel untrustworthy, unappreciated, and unqualified for responsibility in their field of work. According to his studies, an organization's most valuable resources are its employees; therefore, managers must encourage a two-way flow of information to maximize both organization performance and employee productivity. Consequently, communication is essential for all parties, as it services the majority of managerial functions. Internal communication is required from an ethical standpoint in order to initiate expansion plans, consolidate resources in a cost-effective manner, and select, develop, and evaluate organization members. In contrast, external communication is necessary to create awareness among

management's stakeholders, such as suppliers, government agencies, and others, in order to conduct business with them. The essence of communication is crucial and cannot be disregarded; the monarch of mechanical systems determines the growth of an organization in every facet of the modern era (Puth, 2002).

In the context of Nepal pharmaceutical companies, the sustainability of an organization depends on effective communication among employees, and effective communication is the basis for the development of relationships.

The main problems of the research are:-

- How does oral communication affect the employee performance of Pharmaceutical Companies in Nepal?
- What is the relationship between written communication and employee performance of Pharmaceutical Companies in Nepal?
- How does non-verbal communication influence employee performance of Pharmaceutical Companies in Nepal?

The primary purpose of this research paper is to determine the Effect of communication on employee performance in Nepalese pharmaceutical companies. However, the specific objectives of the studies are below:-

- To analyze the impact of oral communication on the employee performance of Pharmaceutical Companies in Nepal.
- To identify the relationship between written communication and employee performance of Pharmaceutical Companies in Nepal.
- To examine the influence of non-verbal communication on employee performance of Pharmaceutical Companies in Nepal.

## REVIEW OF LITERATURE

Idayanti, Ayu, and Piartrini (2020) carried the research on the effects of communication, competency, and workload on employee performance at Hotel Puri Saron, the organization must cope with increasingly intense market pressures. To achieve their objectives, organizations must develop their human resources and infrastructure. The performance of employees is one of the management concepts intended to sustain and improve institutional competitiveness. To function effectively, employees must have communication, competence, and workload. This research was conducted in one of the hotels in Seminyak Kuta because some problems were initially identified, including complaints about workloads, a lack of competence due to a lack of training, a lack of interdepartmental coordination due to a lack of effective communication, and individual employee personality differences. Using the saturated samples technique, 114 employees of the Puri Saron Hotel served as the sample. For data analysis, utilize SPSS.25. Communication had a significant positive effect on employee performance, according to the findings. Competence significantly improves employee performance. Significantly enhancing employee performance is the effect of workload. The implication of this study is that communication system must be improved within the company's environment so that all workloads can be resolved, such as by enhancing employee competence, which will have a positive impact on employee performance.

Sarah et al. (2019). Understanding the effects of interpersonal communication and task design on the job performance of manufacturing employees through research. This study seeks to investigate the influence of task design and interpersonal communication on manufacturing workers' job performance. The data is examined using a survey (questionnaire) of 152 employees from one of the manufacturing companies in Penang, Malaysia. The purpose of regression analysis is to test hypotheses concerning all direct relationships between the criterion (job performance) and the variables (such as interpersonal communication and task design). The findings indicate that the employees of these companies have high levels of job performance (= 3.70), interpersonal communication (=3.64), and task design (=3.66). There are also positive correlations between employee performance and interpersonal communication ( $r=.53$ ,  $p=.001$ ) and task design ( $r=.54$ ,  $p=.001$ ). Consequently, this study produced valuable information regarding employee performance, internal communication, and task design in one of Malaysia's manufacturing companies.

Hee et al. (2019) Investigated the effect of communication on employee performance through research. This study aims to examine the impact of upstream, downward, and horizontal communication on employee performance in Malaysian real estate development firms. This investigation's data were gathered using a survey questionnaire. There were 120 participants in the investigation. The results indicate that both horizontal and downward communication have a positive impact on employee performance. This study's findings can assist real estate development firms in gaining a deeper comprehension of the significance of employee communication in enhancing employee performance. In order for this to occur, management may prioritise the enhancement of employees' expressive and

communicative abilities through the development of soft skills. More interdepartmental gatherings should be organized by management in order to strengthen relationships between superiors and subordinates. To accomplish effective organization-wide communication, it is necessary to establish an appropriate training and development plan.

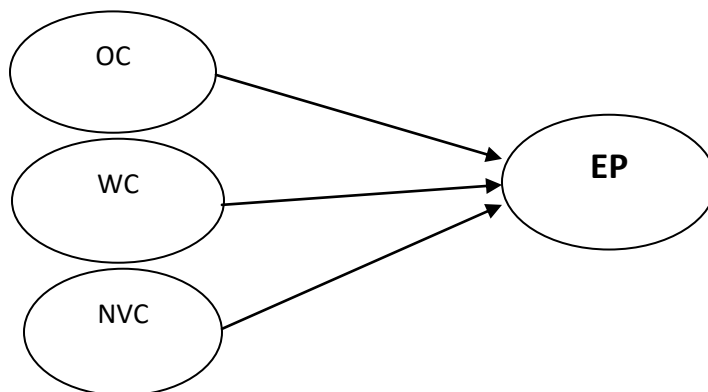
Otoo (2016) Research on the effect of communication on employee performance at the Ghana Revenue Authority was presented; any organization where information is transmitted verbally and nonverbally will experience communication. Despite occasional challenges, the Ghana Revenue Authority (GRA) utilizes communication in its daily operations, in formal and informal interactions with colleagues as well as between supervisors and subordinates. When the three (3) Revenue Agencies that comprise the GRA — the Internal Revenue Service (IRS), Customs Excise and Preventive Service (CEPS), and Value-Added Tax Service (VAT) — merged into one Authority, the situation deteriorated. Role clarity has become an issue as a result of employees having to relocate and share offices with colleagues from different departments. This study examined, using GRA as a case study, how effective communication influences organizational performance. The study focused on the communication systems offered by GRA and assessed employee performance. It also established a connection between effective corporate communication and employee productivity. It also disclosed which communication channels were most valued by staff. In the end, it was determined that the GRA's communication systems contained obstacles and defects. Primary sources were utilized. Using straightforward random sampling, 200 respondents were chosen. The analysis utilised the results of the mean, correlation, and regression. Face-to-face, telephone, written memos, email/Internet, and grapevines appear to be the most frequently used channels of communication, with face-to-face being the most efficient. Additionally, the majority of GRA employees execute admirably. Barriers and malfunctions in communication systems include selective listening, distraction, time pressure, communication inundation, information distortion, and prejudice. Finally, correlations are found between various employee performance indicators and diverse measures of organizational communication effectiveness. If communication system restrictions are eliminated or kept to a minimum, employee performance can be enhanced further. To improve communication clarity, both management and employees must address omissions and exaggerations that distort information.

It is the responsibility of management, according to Beyerlein et al. (2003), to align support systems with the strategic design so that employees can communicate their requirements and frustrations. This will maintain an organization's efficiency and maximize its greatest resource: its employees. Moreover, other studies have discovered a direct correlation between communication transparency and employee performance (Dwyer, 2005). In addition, communication from colleagues that is supportive has been identified as a source of employee performance (Ducharme & Martin, 2000).

**A conceptual framework**

The conceptual framework for communication on employee performance presented here consists of 3 independent variables, 1= oral communication, 2=written communication, 3= non-verbal communication. Dependent variable is employee performance. Based upon these variables this study formulates following hypothesis and analysis as follows:-

**Figure:1**



**Hypothesis formulation**

- H1 : There is relationship between oral communication and employee performance.
- H2 : There is relationship between written communication and employee performance.
- H3 : There is relationship between non-verbal communication and employee performance.

**RESEARCH METHODOLOGY**

**Research design**

This study uses descriptive and analytical research design for achieving specific objectives of the research. This study is based on primary data obtained through a self-administered questionnaire to employees of pharmaceutical companies of Nepal.

**Sampling and Data Collection**

Data was collected through simple random sampling with a sample size of 115 employees from the population of employees working in pharmaceutical companies in Nepal. The study is based on the primary data collected through structured questionnaires. The total of 100 questionnaires were completely filled and returned.

All scales used in this study have been validated in previous studies. However, while all items (oral communication, written communication & non-verbal communication) were adopted from previous measures, they were modified to suit the context of this study. All measures have been measured on a five-point Likert-type scale from 1 = strongly disagree to 5 = strongly agree (Likert, 1932).

**Data Analysis**

The study uses descriptive statistics, correlation analysis, multiple regression analysis and independent samples t-test to examine the relationship between factors of communication & employee performance of pharmaceutical companies in Nepal.

**Results and Analysis**

This section deals with the detailed analysis of data collected with the help of a self-developed questionnaire; the data were analyzed using SPSS. The results are presented and discussed in the following sections.

**Table no.1**

Correlations						
	Mean	S.D.	EP	OC	WC	NVC
EP	4.3143	0.53032	1			
OC	4.1857	0.47123	.561**	1		
WC	4.4571	0.43931	.405**	.618**	1	
NVC	3.9286	0.58662	.110	.372**	.195	1

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

The table 1 shows the level of employee performance among communication variables in pharmaceutical companies in Nepal. As per the mean scores, it is found that the pharmaceutical companies of Nepal are moderately satisfied with their employee performance in respect of all the independent variables of communication studied. In particular, the findings depict that employee performance of pharmaceutical companies in Nepal is relatively less satisfied with the communication variables of their institutions.

It is found that there is a significant and positive linear relationship between oral communication, and employee performance ( $r=0.561$ ); hence we can infer that oral communication is positively associated with employee performance. The relationship between written communication & employee performance has been found to be positive linear and significant ( $r= 0.405$ ), hence nature of written communication & employee performance also have positive relation. The non-verbal communication & employee performance are having positive linear and insignificant correlation ( $r=0.110$ ). So, we conclude that the relationship between both these variables is positive. Hence, all the communication variables are positively correlated with employee performance in Pharmaceutical Companies in Nepal.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.975a	.631	.610	.44063

Predictors: (Constant), NVC, WC, OC

The study reveals that the independent variables i.e., oral communication, written communication & non-verbal communication, have a significant influence on employee performance in pharmaceutical companies. The value for R-squared is high in the case of communication variables ( $R^2 = 0.631$ ). It means 63.1% of the total variation in the dependent variable is due to independent variables, and 39.9% is due to other variables. It signifies that communication variables influence the employee performance of pharmaceutical companies in Nepal.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.029	3	3.010	15.501	.000
	Residual	18.251	94	.194		
	Total	27.280	97			

a. Dependent Variable: EP

b. Predictors: (Constant), NVC, WC, OC

For the value of  $F=15.501$  which is significant at 1 percent level of significance, hence a significant model has emerged from the regression analysis.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.651	.511		3.231	.002
	OC	.616	.128	.547	4.825	.000
	WC	.107	.130	.089	.829	.409
	NVC	-.100	.082	-.111	-1.221	.225

a. Dependent Variable: EP

The result of the t-test statistic shows that characteristics of oral communication have a significant influence on employee performance of pharmaceutical companies in Nepal. Therefore, an alternative hypothesis is accepted H1: There is relationship between oral communication and employee performance. Thus, the findings say that there are good relations between oral communication and employee performance.

It is revealed from the findings that the influence of written communication and employee performance is insignificant. Thus, an alternative hypothesis is rejected H2 : There is a relationship between written communication and employee performance The written communication are not the determining factor to increase job employee performance.

The result of the t-test also revealed that there is an insignificant influence of non-verbal communication on employee performance. Hence, an alternative hypothesis is rejected H3: There is relationship between non-verbal communication and employee performance. Therefore, non-verbal communications do not affect employee performance.

## CONCLUSION

The main objective of the study is to see the impact of communication on employees performance of pharmaceutical companies in Nepal. The main aim of this research is to explore the relationship between communication variables (i.e., oral communication, written communication & non-verbal communication) and employee performance. The finding of this study provides empirical evidence to the management to ensure effective, oral, written & non-verbal communication in the pharmaceutical companies in Nepal. The results of the study showed only oral communication is significant impact on employee performance and both written and non-verbal communication have an insignificant impact on employee performance of pharmaceutical companies in Nepal.

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## IMPACT OF LIQUIDITY MANAGEMENT ON THE PROFITABILITY OF DEVELOPMENT BANK IN NEPAL

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### Abstract

*This research investigates the impact of liquidity management on the profitability of three development banks in Nepal: SDBL, MNBBL, and GDBL. Data was collected from books and financial annual reports, covering Fiscal Years 69/70 to 78/79, resulting in 30 observations. The study employed correlation analysis and regression analysis to examine the relationship between liquidity management indicators, which are, in this case, Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Non-Performing Assets (NPA), Total Liabilities and Total Assets Ratio (TLTA), and Deposit to Total Assets Ratio (DTA) and profitability of development banks, i.e., Return on Equity (ROE). The findings indicate that liquidity management indicators have varying effects on profitability. The correlation analysis reveals strong positive correlations between CRR and ROE and moderate positive correlations between CDR, TLTA, and DTA with ROE. Additionally, NPA exhibits a significant negative correlation with ROE. The regression analysis further confirms the overall significance of the model, with CRR having a statistically significant positive impact on ROE. Based on these findings, the study recommends that development banks focus on optimizing liquidity management by maintaining an appropriate CRR level. Strengthening credit risk management practices and reducing non-performing assets are also suggested to enhance profitability. These findings contribute to understanding liquidity management's impact on profitability in the context of development banks in Nepal and provide valuable insights for bank management and policymakers.*

**Keywords** – Cash Deposit Ratio, Non-performing Assets, Return on Equity, Deposit to Total Assets, Total Loan to Total Asset

### INTRODUCTION

The commercial bank's liquidity refers to its capacity to meet its financial obligations when they come due. This includes responsibilities such as loan and investment agreements, customer withdrawals and deposits, as well as accrued debts (Amengor, 2010).

The recent trends on the global financial scene have significantly impacted the banking industry worldwide, with one major need being for effective liquidity management in banking institutions. Liquidity is generally referred to as the ability to generate adequate cash to pay off financial obligations but in banking, it mainly refers to the ability to honor maturing deposits (Adalsteinsson, 2014). According to Choudhry (2011), liquidity management refers to funding deficits and investment of surpluses, managing and growing the balance sheet, and ensuring that the bank operates within regulatory and stipulated limits. Ideal bank management is an uninterrupted endeavor to assuring that a balance exists between liquidity, profitability and risk (Banks, 2014). Banks indeed require liquidity since such a large proportion of their liabilities are payable on demand (deposits) but typically, the more liquid an asset is, the less it yields. Hence, choosing a particular combination of assets over another, considering a bank's liability size, would have a massive effect on bank liquidity management, profitability and risk (Choudhry, 2012). In managing its assets and liabilities in the wake of uncertainties in cash flows, cost of funds and return on investments, a bank must ascertain its trade-off between risk, return and liquidity (Landskroner & Paroush, 2011). Indeed, studies in other countries across the globe have attributed bank failures to poor liquidity management. This is so because scholars argue that one major contributor to the Global Financial crisis of 2007-2008 was poor liquidity management (Adalsteinsson, 2014). This was largely as a result of the collapse of Lehman Brothers, a leading Investment Bank, which ended up spreading across the globe through the "contagion effect".

Efficient liquidity management is crucial for financial institutions' stability and profitability, including development banks. Liquidity management involves the strategic allocation and utilization of funds to meet the institution's short-term obligations while ensuring the optimal utilization of resources for long-term profitability. In the context of development banks in Nepal, where financial intermediation plays a vital role in supporting economic growth and development, the impact of liquidity management on profitability becomes a topic of significant interest and importance.

The profitability of development banks directly influences their ability to fulfil their developmental objectives and provide sustainable financial services to various sectors of the economy. Liquidity management is essential for ensuring financial soundness and profitability. However, the specific relationship between liquidity management and profitability in the context of development banks in Nepal still needs to be explored.

The findings of this study are expected to contribute to the existing literature on liquidity management and profitability in the banking sector. They will contribute to a deeper understanding of the relationship between liquidity management and profitability in development banks. The insights gained can provide recommendations for enhancing financial performance and ensuring sustainable operations in the banking industry. The results may have practical implications for development bank managers, policymakers, and regulators in Nepal, enabling them to make informed decisions regarding liquidity management practices that can optimize profitability while fulfilling developmental objectives. Furthermore, the research may serve as a basis for future studies exploring additional factors influencing bank profitability and extending the analysis to other financial institutions within the Nepalese context.

By analyzing the relationship between liquidity management variables, including the Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Non-Performing Assets Ratio (NPA), Total Liabilities to Total Assets Ratio (TLTA), and Deposit Total Assets Ratio (DTA), and the profitability measure of Return on Equity (ROE), this research aims to provide insights into the effectiveness of liquidity management strategies in enhancing the profitability of development banks.

The study focuses on five key indicators of liquidity management: Cash Reserve Ratio (CRR), Credit to Deposit Ratio (CDR), Non-Performing Assets Ratio (NPA), Total Liabilities to Total Assets Ratio (TLTA), and Deposit to Total Assets Ratio (DTA). These indicators will be analyzed in relation to the dependent variable, Return on Equity (ROE), which measures profitability.

The study's objectives are to assess the impact of CRR, CDR, NPA, TLTA, and DTA on the profitability of the selected banks. The research hypotheses include alternative hypotheses, aiming to determine whether there is a significant relationship between the liquidity management indicators and profitability in SDBL, MNBBL, and GBBL.

## **LITERATURE REVIEW**

Binay and Chaurasiya (2023) examined the influence of liquidity management on the profitability of joint venture commercial banks in Nepal in 2023. Analyses of data from five banks revealed that the Total Loan to Total Assets Ratio (TLTAR) substantially influenced profitability (ROA), accounting for 61.5% of the variance. However, the effects of the Credit Deposit Ratio (CDR), Capital Adequacy Ratio (CAR), Current Reserve Ratio (CRR), and Total Deposit to Total Assets Ratio (TDTAR) were not statistically significant. The findings highlight the significance of effective liquidity management, especially TLTAR, for increasing the profitability of joint venture commercial banks in Nepal.

Zaharum, et al. (2022) Conducted research on The influence of liquidity management on banks' profitability. The main objective for this study is to examine the relationship between liquidity management and profitability of commercial banks in Malaysia. A sample of top 5 commercial banks listed in Bursa Malaysia has been used to examine the relationship between the liquidity and profitability for the period of 10 years from 2011-2020. The data has been taken from the annual financial statements of the banks. In order to analyze data, the current ratio (CR), cash deposit ratio (CDR), loan to total deposit (LTD), capital to asset ratio (CAR) and non-performing loan (NPL) were used as a proxy for liquidity as an independent variable while the return on assets (ROA) was used as proxies for banks' profitability as dependent variables. The study concluded that current ratio (CR) is positively related to return on asset (ROA). This indicates that higher the current ratio (CR), higher would be the return on assets (ROA). However, the study reveals that non-performing loan (NPL) is negatively related to return on assets (ROA). This indicates that higher the non-performing loan (NPL), lower would be the return on assets (ROA). The study therefore recommended that banks keep liquidity as needed to meet up defined liabilities and not needlessly keeping too much liquidity as it erodes banks' profits.

Paul, Bhowmik, & Famanna, (2021) Conducted research on Impact of Liquidity on Profitability: A Study on the Commercial Banks in Bangladesh. This research aims to investigate the effect of banks' liquidity on its profitability; with the ordinary course of business and in the medium term (10 years). A quantitative analysis is performed on a

statistical sample of forty (40) commercial banks in Bangladesh. Secondary data is used to evaluate the performance of the last ten years (2009-2018) of the annual report of the commercial banks in Bangladesh with 206 bank years of data gathered to consider all Bangladeshi commercial banks. Proposed variables are: LDR, DAR, CDR, LAR and CR as liquidity representation; on the other hand, ROE is the profitability representation. Five hypotheses have been established to assess the effect of liquidity on profitability. Following a correlation and regression analysis, it is observed that LDR, DAR and CDR had a substantial effect on the profitability measured as ROE, but LAR and CR proved insignificant. Therefore, it can be concluded that, in general, the impact of liquidity has a significant effect on the profitability in the commercial banking sector of Bangladesh. By relying on this report; Bangladeshi banks will be best positioned to keep equality between its liquidity and profitability.

Sathyamoorthi, Mapharing, & Dzimiri, (2020) examined the influence of liquidity management on the financial performance of commercial banks in Botswana. Return on Assets and Return on Equity were used as financial performance indicators, while a number of ratios were used as liquidity management proxies. The investigation spanned nine years and analyzed data from Botswana's nine commercial banks. Regression analysis uncovered significant positive correlations between the Loans to total assets ratio and the Liquid assets to total assets ratio and the return on assets and return on equity. In contrast, the relationship between the Loans to deposits ratio and the Liquid assets to deposits ratio was significantly negative. Cash-related ratios were not significantly related. The research indicates that optimizing liquidity variables can improve bank performance and suggests instituting minimum liquidity requirements to support bank profitability.

Yüksel, et al. (2018) identified the factors impacting bank profitability in thirteen post-Soviet nations. Their analysis utilized annual data from 1996 to 2016 and employed panel regression with fixed effects and the Generalized Method of Moments (GMM). The findings reveal that loan size, non-interest income, and economic development substantially impact profitability. The 2008 global mortgage crisis has had a negative impact on the profitability of banks in these nations. Higher non-interest income, fueled by credit card fees and commissions, and economic expansion correlate positively with profitability. However, a greater loan-to-GDP ratio hurts the profitability of banks. Based on these findings, it is suggested that post-Soviet banks priorities non-interest income growth and employ caution in their lending practices.

Alshatti, (2015) demonstrated the effect of liquidity management on the profitability of Jordanian commercial banks from 2005 to 2012. The sample of thirteen banks represents the total Jordanian commercial banking sector in the study. Various liquidity indicators are analyzed, including the investment ratio, the fast ratio, the capital ratio, the ratio of net credit facilities to total assets, and the liquid assets ratio. Profitability is measured using return on equity (ROE) and return on assets (ROA) as surrogates. Hypotheses are examined using regression analysis and the Augmented Dickey Fuller (ADF) stationary test model to ascertain the presence of a unit root in the time series data of the variables. The empirical findings disclose that an increase in the quick and investment ratios positively affects Jordanian commercial banks' profitability. In contrast, the capital ratio and liquid assets ratio negatively affect profitability. To increase bank profitability, the researcher suggests optimizing the utilization of available liquidity across various investment aspects. Moreover, it is suggested that banks adopt a comprehensive framework for liquidity management in order to assure sufficient liquidity for efficient operations. Analyzing the rates of change in liquidity and achieving a balance between sources and uses of funds are also recommended.

Ibe, (2013) randomly select three representative institutions. Cash, bank balances, and treasury bills served as substitutes for liquidity management, whereas profitability was measured by profit after tax. The study revealed that liquidity management is a major concern in the Nigerian banking sector. It is recommended to employ competent personnel in order to make informed decisions regarding optimal liquidity levels and maximize profits.

## RESEARCH METHODOLOGY

This study is based on secondary data from 3 development banks of Nepal from 2069/70 to 2078/79 leading to a total of 30 observations of selected development banks which are Shangrila Development Bank, Muktinath Bikas Bank, and Garima Bikas Bank by using convenient Sampling technique. The primary data sources include the Nepal Rastra Bank's Quarterly Economic Bulletin and Bank Supervision Reports, as well as the annual reports of the selected development banks. The number of development banks selected for the study, as well as the number of observations.

**Variables define:**

**Return on Equity (ROE)** is a financial ratio that measures a company’s profitability by indicating the percentage of net income generated in relation to the shareholders' equity invested.

**Cash Reserve Ratio (CRR)** is the portion of total deposits that commercial banks must hold with the central bank as a reserve to maintain liquidity and control inflation.

**Credit to Deposit Ratio (CDR)** is a financial ratio that indicates the proportion of loans and advances a bank grants in relation to its total customer deposits. It measures the bank's lending capacity and liquidity position.

**Non-Performing Assets (NPA) Ratio** measures the proportion of loans and advances that have stopped generating income for a bank due to non-payment or default by borrowers. It reflects the quality of the bank's loan portfolio.

**Total Loan to Total Assets Ratio(TLTA)** is a financial metric that indicates the proportion of a bank's total loan portfolio in relation to its total assets. It assesses the extent of the bank's lending activities relative to its overall asset base.

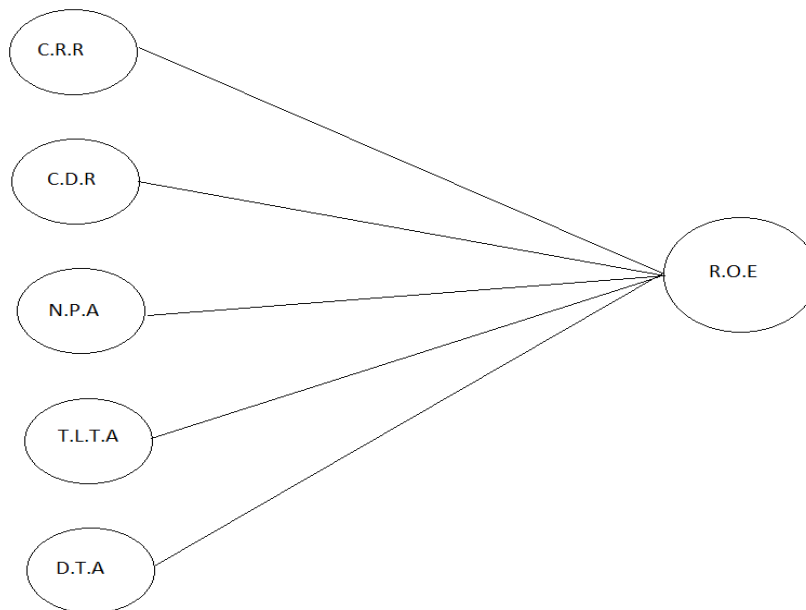
**Deposit to Total Assets Ratio(DTA)** is a financial indicator measuring the proportion of a bank's total customer deposits concerning its total assets. It reflects the bank's reliance on deposits as a funding source and its liquidity position.

**Conceptual framework**

The model estimated in the study implies that the bank’s profitability depends on capital ratio, deposit, current ratio, liquid asset ratio, quick ratio, and investment ratio. Therefore, the model assumes the following forms:

Bank profitability (Return on equity) = f (Cash Reserve Ratio, Credit to Deposit Ratio, Non-Performing Assets Ratio, Total Loan to Total Assets Ratio, and Total Deposit to Total Assets Ratio).

**Figure:1**



### Hypothesis formulation

Hypothesis is formulated on the basis of objective which are as follows;

- **H1:** There is a significant relationship between liquidity management (CRR) and profitability (ROE) of sample development banks in Nepal.
- **H2:** There is a significant relationship between liquidity management (CDR) and profitability (ROE) of sample development banks in Nepal.
- **H3:** There is a significant relationship between liquidity management (NPA) and profitability (ROE) of sample development banks in Nepal.
- **H4:** There is a significant relationship between liquidity management (TLTA) and profitability (ROE) of sample development banks in Nepal.
- **H5:** There is a significant relationship between liquidity management (DTA) and profitability (ROE) of sample development banks in Nepal.

### DATA ANALYSIS

#### Descriptive Statistics:-

**Table 1** represents descriptive analysis of 3 development banks including correlation analysis from Fiscal Year 2069/70 to 2078/79.

Variables	Mean	S.D	ROE	CRR	CDR	NPA	DTA	TLTA
ROE	17.34	6.79	1					
CRR	5.13	1.74	.634**	1				
CDR	0.84	0.03	.406*	.430*	1			
NPA	0.57	0.53	-.550**	-0.324	-.441*	1		
DTA	0.85	0.08	0.355*	0.101	0.142	-0.316	1	
TLTA	0.84	0.04	.364*	0.178	0.120	-0.164	0.297	1

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

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

The table-1 provides a summary (Descriptive statistics) of mean, and standard deviation for each variable, giving an overview of their range and distribution within the dataset. The Return on Equity (ROE) ranged from 5.78% to 32.17%, with a mean of 17.34% and a standard deviation of 6.79%. The Cash Reserve Ratio (CRR) varied between 3.00% and 10.00%, with a mean of 5.13% and a standard deviation of 1.74%. The Credit to Deposit Ratio (CDR) ranged from 0.78 to 0.91, with a mean of 0.84 and a standard deviation of 0.03. The Non-Performing Assets Ratio (NPA) ranged from 0.00 to 2.17, with a mean of 0.57 and a standard deviation of 0.53. The Deposit to Total Assets Ratio (DTA) ranged from 0.61 to 0.93, with a mean of 0.85 and a standard deviation of 0.08. The Total Liabilities to Total Assets Ratio (TLTA) ranged from 0.74 to 0.88, with a mean of 0.84 and a standard deviation of 0.04.

The table also states about the correlation between variables, which shows the relationships between the dependent variable, Return on Equity (ROE), and the independent variables: Cash Reserve Ratio (CRR), Credit to Deposit Ratio (CDR), Non-Performing Assets Ratio (NPA), Deposit to Total Assets Ratio (DTA), and Total Liabilities to Total Assets Ratio (TLTA).

The analysis reveals the following:

CRR has a strong positive correlation with ROE (0.634\*\*), indicating that as CRR increases, ROE tends to increase as well. CDR also shows a positive correlation with ROE (0.406\*), suggesting that a higher CDR may be associated with higher ROE. NPA has a significant negative correlation with ROE (-0.550\*\*), suggesting that higher NPA levels may negatively impact ROE. DTA shows a positive correlation with ROE (0.355\*), indicating that as DTA increases; ROE also trend to increase. TLTA exhibits a positive correlation with ROE (0.364\*), implying that a higher TLTA may be associated with a higher ROE. These findings highlight the relationships between the independent and dependent variables, providing insights into their impact on the profitability of the entity measured by ROE.

**Regression Analysis**

Having indicated the correlation coefficients, the regression analysis of return on equity on CRR, CDR, NPA, TLTA, and DTA has been performed, and the results are presented.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.775 <sup>a</sup>	0.6	0.517	4.721576

a. Predictors: (Constant), TLTA, CDR, DTA, CRR, NPA

Table 2 is a model summary, and it presents the summary of a statistical model. The model has an R-squared value of 0.6, indicating that the independent variables can explain 60% of the variation in the dependent variable. The adjusted R-squared value is 0.517, which considers the number of predictors and is slightly lower than the R-squared value. The standard error of the estimate is 4.721576, representing the average distance between the actual values and the predicted values of the dependent variable. The predictors included in the model are TLTA, CDR, DTA, CRR, and NPA a constant term. Similarly, the analysis of variance (ANOVA) for the regression model showed that the independent variables (TLTA, CDR, DTA, CRR, NPA) collectively explain a significant amount of variation (803.362) in the dependent variable (Return on equity). The model's overall significance was confirmed by an F-statistic of 7.207 ( $p < 0.05$ ). The residual sum (535.039) accounted for unexplained variation, while the total sum of squares (1338.401) represented the combined effect of the regression and residual sum of squares. The regression model is statistically significant, and the independent variables contribute to its explanatory power.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
(Constant)	-0.278	0.325		-0.855	0.401
CRR	0.020	0.006	0.515	3.592	0.001
CDR	-0.032	0.319	-0.015	-0.100	0.921
NPA	-3.751	1.914	-0.293	-1.960	0.062
DTA	0.351	0.240	0.195	1.462	0.157
TLTA	0.118	0.108	0.153	1.085	0.289

Table 3 shows the coefficients, standard errors, standardized coefficients (betas), t-values, and p-values for the independent variables (CRR, CDR, NPA, DTA, and TLTA) about to with concerning the dependent variable (ROE). About to with concerning the ANOVA table and model summary, where the overall regression model was found to be statistically significant, we observe that not all independent variables in this table are statistically significant.

The CRR, NPA, DTA, and TLTA coefficients indicate the direction and magnitude of their respective relationships with the dependent variable (ROE). However, to determine the statistical significance of these relationships, we look at the associated t-values and p-values.

In this table, only the coefficient for CRR has a statistically significant impact on ROE, as evidenced by its significant t-value (3.592) and low p-value (0.001). This means that for every one unit increase in CRR, there is a corresponding increase in ROE.

On the other hand, the coefficients for CDR, NPA, DTA, and TLTA are not statistically significant. This is supported by their t-values close to zero and their p-values being above the typical significance level of 0.05. Therefore, we cannot confidently conclude that these variables significantly impact ROE in this model.

Overall, the lack of statistical significance for certain independent variables indicates that their relationships with ROE may not be significant or influenced by other factors not considered in the model.

Independent Variable	Interpretation
<b>Cash Reserve Ratio</b>	The coefficient for CRR is 0.020, indicating that a one-unit increase in CRR is associated with a positive increase in the dependent variable (ROE). This relationship is statistically significant, evidenced by the significant t-value (3.592) and low p-value (0.001). Therefore, higher CRR levels are likely to have a positive impact on ROE.
<b>Credit Deposit Ratio</b>	The coefficient for CDR is -0.032, indicating that a one-unit increase in CDR is associated with a slight negative change in the dependent variable (ROE). However, this relationship is not statistically significant, as reflected by the non-significant t-value (close to zero) and high p-value (0.921). Therefore, CDR does not have a significant impact on ROE in this model.
<b>Non-Performing Assets Ratio</b>	The coefficient for NPA is -3.751, suggesting that higher NPA levels are associated with a negative impact on the dependent variable (ROE). However, this relationship is not statistically significant, with a t-value of -1.960 and a p-value of 0.062. While there is some indication of a negative impact, the lack of statistical significance implies that the relationship may not hold in this model.
<b>Deposit to Total Assets Ratio</b>	The coefficient for DTA is 0.351, indicating that a one-unit increase in DTA is associated with a positive change in the dependent variable (ROE). However, this relationship is not statistically significant, as reflected by the t-value of 1.462 and the p-value of 0.157. Therefore, DTA does not have a significant impact on ROE in this model.
<b>Total Liabilities to Total Assets Ratio</b>	The coefficient for TLTA is 0.118, suggesting that higher TLTA levels may have a positive impact on the dependent variable (ROE). However, this relationship is not statistically significant, with a t-value of 1.085 and a p-value of 0.289. Therefore, TLTA does not have a significant impact on ROE in this model.

The findings of this study provide insights into the impact of liquidity management indicators on the profitability (ROE) of development banks, specifically focusing on the case of SDBL, MNBBL, and GBBL. The results indicate that the Cash Reserve Ratio (CRR) has a significant positive relationship with ROE, suggesting that higher CRR levels are likely to have a favorable impact on profitability. This finding aligns with the study by Agbada and Osuji (2013), who also found a positive relationship between liquidity management and banking performance in Nigeria. However, the Credit Deposit Ratio (CDR) does not demonstrate a significant relationship with ROE in this model. This result is consistent with the research by Alshatti (2015), who found no significant impact of liquidity management on profitability in Jordanian commercial banks. It suggests that variations in CDR may not have a substantial influence on the profitability of the selected development banks.

Regarding the Non-Performing Assets Ratio (NPA), the results indicate a negative relationship with ROE, although it is not statistically significant in this model. This finding is in line with the study by Ibe (2013), who found that higher levels of non-performing loans have a negative impact on bank profitability in Nigeria. However, further investigation is required to establish the significance of this relationship in the context of the selected banks. The Deposit to Total Assets Ratio (DTA) shows a positive relationship with ROE, but it is not statistically significant. This finding is consistent with the research by Sathyamoorthi et al. (2020), who found no significant impact of liquidity management on financial performance in Botswana's commercial banks. It suggests that DTA may not be a significant determinant of profitability in the selected development banks.

Similarly, the Total Liabilities to Total Assets Ratio (TLTA) does not demonstrate a significant relationship with ROE. This result aligns with the study by Yüksel et al. (2018), who found no significant impact of TLTA on bank

profitability in post-Soviet countries. It suggests that TLTA may not be a major driver of profitability in the selected development banks.

Overall, the findings of this study contribute to the existing body of literature on liquidity management and profitability in the banking sector. The significant positive relationship between CRR and profitability highlights the importance of effective liquidity management practices in enhancing bank profitability. However, the non-significant relationships of CDR, NPA, DTA, and TLTA with ROE indicate that other factors beyond liquidity management may play a more significant role in determining profitability in the context of SDBL, MNBBL, and GBBL.

## CONCLUSION

In this study, we examined the impact of liquidity management on the profitability of development banks, focusing on three banks: SDBL, MNBBL, and GBBL. We utilized regression analysis and correlation data to analyze the relationship between liquidity management indicators (CRR, CDR, NPA, DTA, and TLTA) and the profitability measure (ROE).

The regression analysis indicated that the overall regression model was statistically significant, meaning that the independent variables collectively contributed to explaining the variation in ROE. However, when we examined the individual coefficients, we found that not all independent variables were statistically significant.

Based on the correlation analysis, we observed the following associations between liquidity management and ROE: CRR had a strong positive correlation, CDR and TLTA showed positive correlations, NPA had a significant negative correlation, and DTA exhibited a positive correlation.

Taking these findings into account, we can draw the following conclusions:

Liquidity management, as measured by CRR, has a strong positive impact on profitability (ROE). Banks should aim to maintain an optimal CRR level to maximize their profitability. While CDR and TLTA show positive correlations with ROE, their individual impact on profitability is not statistically significant. However, banks can still consider managing their credit risk (CDR) and maintaining a reasonable level of total liabilities to total assets (TLTA) to support overall financial stability. NPA has a significant negative impact on profitability. Banks should prioritize effective measures to reduce non-performing assets and strengthen their loan portfolio quality to enhance profitability.

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