JBM
The Journal of Business and Management
(B category academic journal as per UGC Nepal classification)

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Intellectual Capital and Firm Performance of Banking Industry in Nepal

Udaya Kumar Shrestha*, Sudip Wagle*

*Birendra Multiple Campus, Tribhuvan University, Bharatpur, Nepal

Received: 25 March 2025
Reviewed: 23 April 2025
Accepted: 25 May 2025
Published: 30 June 2025

Correspondence:
Sudip Wagle
sudip.wagle@bimc.tu.edu.np

Citation:
Shrestha, U. K. & Wagle, S. (2025). Intellectual capital and firm performance of banking industry in Nepal. *The Journal of Business and Management, 9*(1), 120-134.

Abstract

Background: Intellectual capital as the sum of knowledge, information, intellectual property and experience that can provide competitive advantages and high value. Intellectual capital is the most important factor to enhance firm performance.

Objectives: This study investigates the impact of intellectual capital on firm performance of banking industry in Nepal.

Methods: This study employed descriptive and casual research design. A google form survey was given to bank executives in order to achieve the objectives of the study. Out of 234 possible respondents 141 respondents completed the questionnaire as adequate form, which were taken as sample through convenience sampling method. The firm performance was the dependent variable, and intellectual capital (human, structural, social, and customer capital) were the independent variable. Both descriptive and inferential analysis were used to examine the data. Regression analysis was formulated in a linear model to analyze the relationship between the variables.

Results: The finding shows that the firm's performance explained by human capital ($\beta = 0.176$, $p = 0.090$), structural capital ($\beta = 0.003$, $p = 0.983$), social capital ($\beta = 0.307$, $p = 0.023$) and customer capital ($\beta = 0.270$, $p = 0.001$). The relationship between intellectual capital (human, structural, and customer capital) and firm performance were a statistically significant positive association. In regression coefficient, social capital and customer capital were found to be significant predictors of firm performance, but human and structural capital were not statistically significant predictors.

Conclusion: Social capital and customer capital were found to be significant predictors of firm performance, but human and structural capital were not statistically significant predictors. This study will appear as a successful piece of research work that explored both the intellectual capital conceptualization and orientation in the Nepalese banking industry. Furthermore, this study contributes to a better understanding of intellectual capital in Nepalese organization.

Keywords: Banking sectors, customer capital, firm performance, human capital, social capital

JEL Classification: L25, M12, O34

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Introduction

Intangible assets, knowledge and skill, and enterprise value are the three ways that many academics describe intellectual capital. The knowledge, skills, business training, and any other personal information that might provide a company with a competitive edge are all considered forms of intellectual capital (Andriessen, 2001). It indicates that intellectual capital is a tactical asset which provides information for a competitive advantage.

Intellectual capital as the sum of knowledge, information, intellectual property and experience held by everybody in a company, put to use to create a competitive edge and, wealth (Stewart, 1997). Intellectual capital is the sum of a company's knowledge assets that can provide competitive advantages and high value. It is a term that refers to a strategic asset of firm that supports improving performance. Intellectual capital is the most important factor to enhance firm performance. Companies require skilled workers who have the know-how, skills, experience, as well as the ability to bring new ideas for the success of the business.

The majority of the literature focuses on three primary components: customer/relational capital, structural capital, and human capital (Ahmad et al., 2012; Akbari et al., 2013; Ramírez et al., 2011). Human capital, relational capital, structural capital, technological capital, spiritual capital, and social capital components of intellectual capital highlighted by Khalique et al. (2011). Thus, firm performance is influenced by human, organizational and environmental factors. The banking industry must invest in the development of its intellectual capabilities to maintain a competitive edge that is both sustainable and long-lasting. Four elements of intellectual capital have been included in this study to examine their effects on firm performance.

The present study seems to be a fruitful investigation into the concept and orientation of intellectual capital in the Nepalese banking industry. Very rare evidence has been established to disclose how much intellectual capital they have in order to explain the firm's performance and it may be a novel concept from a Nepalese perspective. The majority of the previous study has focused on financial performance (Akkas & Asutay, 2023; Smuda, 2022; Susanti et al., 2020). There is lower priority on non-financial i.e. intellectual capital, such as human, social, structural, and customer capital. So, this study is concerned with intellectual capital on firms' performance with perspective of banking industry in Nepal.

Review of Literature

Concept of Intellectual Capital

Several researchers have separated intellectual capital into various components to better understand it. Intellectual capital is categorized as encompassing: human capital, structural capital and relational capital (Bontis 1998; Curado & Bontis, 2007; Edvinsson & Malone, 1997; Sveiby, 1997; Roos & Roos 1997; Sallebrant et al., 2007). Three main elements combine intellectual capital: customer capital, structural capital, and human capital (Bontis et al., 1998). Furthermore, Hashim et al. (2018) expanded the research framework by adding three new factors, namely technological, social, and spiritual capital. Stewart (1997) suggested that intellectual capital is made up of three components: human capital, customer capital and structural capital. According to Bueno et.al. (2006), it includes human capital, organizational capital/structural capital, technology capital, social capital and business capital/customer capital. The role of intellectual capital in creating values has become crucial to achieve competitive advantage. Edvinsson and Malone (1997) examine intellectual capital as being comprised of two primary components: human capital (i.e. the knowledge skills and experience of employees) and structural capital (i.e. the embodiment, empowerment, and supportive infrastructure of human capital). Structural capital is divided into two smaller components: organizational capital (i.e. the systems, tools and operating philosophy that speed up the flow of knowledge through the organization) and customer capital (i.e.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

relationships a company has with its customers). Similarly, Steward (1997) conceives intellectual capital as composed of human capital and structural capital. He also subsumes organizational capital into structural capital. Bontis (1998) introduces the concept of relational capital as an expanded version of customer capital that includes the value of all relationships including host of customers. Relational capital is virtually identical to what sociologists and organization theorists (Nahapiet & Ghosal, 1988) refer to as social capital.

Ismail (2005) conducted a study in Malaysia that added the model of intellectual capital with the spiritual capital. Nevertheless, Bueno et al. (2006) proposed an intellectual model which comprised of five components: human capital, technological capital, business capital, social capital and organizational capital. Khalique et al. (2011) extended by developing the integrated intellectual capital model which includes six components as follows: human capital, customer capital, structural capital, social capital, technological capital and spiritual capital.

Intellectual Capital and Firm Performance

Intellectual capital impacts significantly on the performance of an organization. As it has been proved many in literature that intellectual capital has a strong impact on an organization performance (Khalique et al., 2013). Similarly, Mention and Bontis (2013) have concluded that among the components of intellectual capital, human capital has significant relationship with performance of banking sector whereas other two components although have positive related with performance but not statistically significant. Irsyahma and Nikmah (2017) found a positive relationship between intellectual capital and firm performance in Indonesian banking sector, and it was found that banks with greater levels of intellectual capital efficiency would perform better. According to Tiwari and Vidyarthi's (2018), there was a positive relationship between intellectual capital and firm performance in Indian public and private banks, implying that banks with higher intellectual capital efficiency perform better. Soewarno and Tjahjadi (2020) and Tran and Vo (2018) reported similar findings, indicating a strong and positive correlation between firm performance and intellectual capital.

Empirical Review

Clarke et al. (2011), conducted research to measure the impact of intellectual capital on performance of companies in Australia, listed from 2004-2008. This study uses the value-added coefficient of general intellectual capital and its components (human capital, structural capital, relative capital) as an independent variable and their relationship to performance (return on assets, profitability, input growth and employee productivity). It was found that a positive correlation between human and structural capital and their impact on performance, and that intellectual capital and performance particularly the efficiency of capital use were directly related. But a moderate relationship between intellectual capital and physical and financial capital, which affects the performance of companies.

Khalique et al. (2013) concluded that all three components of intellectual capital are significantly contributing to enhance the performance of Islamic Banks in Malaysia and concluded that intellectual capital stayed a substantial impact on Malaysia's Islamic banking sector's performance. Mention and Bontis (2013) showed that human capital contributes both directly and indirectly to firm performance in the banking sector. Structural and relational capital were positively related to firm performance, though results were not statistically significant. Unpredictably, relational capital was shown to negatively the effect of structural capital on performance.

Gautam (2015) has conducted a research paper on intellectual capital and organizational performance in Nepalese pharmaceutical industries. Human capital, structural capital and relational capital were found positively correlated with organizational performance. Similarly, Dhungana et al. (2017) have found that generally respondents stated that they have idea on the concepts of intellectual capital, gender does

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

have much effect on learning and education and innovation and creation for improving organizational performance. This study examined that there was a positive relationship between all independent variables and organizational performance under human, relational and structural capital.

Tiwari and Vidyarthi (2018) have found that there was positive relation between IC and performance of banks, but only human capital and structural capital have shown instances of significant positive correlation with banks performance. Hasim et. al. (2018) investigated the relationship between six components of intellectual capital factors: human capital, structural capital, customer capital, social capital, technological capital and spiritual capital with organizational performance in Malaysia. The results found that intellectual capital was significantly influenced by organizational performance. Similarly, Hameed and Anwar (2018) found that the relationship between intellectual capital and organizational performances in selected private banks in Erbil. The relationship between organizational performance and structural capital as intellectual capital factors had highly correlated, Structural capital rational capital significantly predicted organizational performance, the lowest value was for human capital as intellectual capital dimension.

Abbas et al. (2018) have proposed to investigate the impact of six intellectual capital elements human capital, structural capital, customer capital, technology capital, social capital and spiritual capital on the overall performance of the firms. It was observed that customer capital, social capital, and spiritual capital are having a strong positive relationship. Whereas structural capital and technology capital have a strong positive relationship. Only human capital is having a significant positive relationship with organizational behavior.

Ibara et al. (2020) conducted study to ascertain human capital, structural capital and relational capital on the organizational performance of medium-sized firms in the Mexican manufacturing sector. Results showed that the three dimensions of intellectual capital have a positive and significant influence on organizational performance.

Al-assaf (2020) conducted that impact of intellectual capital in achieving competitive advantage in Jordanian telecommunications companies. Qurashi et al. (2020) conducted the impact of intellectual capital on innovation in pharmaceutical manufacturing SMEs operating in Karachi. The findings demonstrated that intellectual capital has a positive impact on the innovation of SMEs operating in the pharmaceutical industry.

Rawashdeh (2022) has examined the relationship between intellectual capital components (human capital, structural capital, and relational capital) and organizational performance. The results of the analysis showed that intellectual capital components (human capital, structural capital, and relational capital) had a positive effect on organizational performance.

Jayanti and Romli (2023) have presented a paper to examine the influence of intellectual capital on the performance of UMKM Tempe craftsmen in Sukabumi City with four sub-variables, namely social capital, customer capital, human capital, and technology capital. The findings of this study indicated that social capital and technological capital had an insignificant effect on the performance of SMEs. Customer capital and human capital have a significant positive effect on MSME performance. While social capital, customer capital, human capital, and technology capital all impact the performance of UMKM Tempe craftsmen in Sukabumi City.

There are many factors that influence firm performance; after reviewing existing literature, this study focuses on the new findings in the banking sector and examines fresh findings. The purpose of this study attempted to examine the impact of intellectual capital on firms' performance of managerial levels in commercial banks as a result of these variables and context-specific changes.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Previous research in several kinds of industries, including manufacturing, banking, the pharmaceutical industry, services, and many more, has demonstrated. With a focus on Nepalese commercial banks, this study aims to investigate the effects of intellectual capital components on firms' performance. The following four components of intellectual capital are considered to analyze their impact on the firms' performance with perspective of Nepalese banking sectors.

Human capital

Human capital refers to forms associated with training, instruction, and other expert activities to increase a representative's knowledge, abilities, capacities, and social resources. According to Li-Chang and Chao-Wang (2012), human capital is the individual knowledge stock of an organization as represented by its employees; the availability of employees' skills, talents, and know-how needed to carry out the daily tasks required for the firm strategy (Rezaei & Mousavi, 2015); or the procedures related to education and training to raise the levels of knowledge, skills, abilities, values, and social assets (Radulovich et al., 2018; Kalkan et al., 2014; Marimuthu et al., 2009). Human capital affects firm performance both directly and indirectly (Hitt et al., 2001).

H1: *There is a significant impact of human capital on firm performance.*

Structural capital

Structural capital is also considered as the most important factor for development of organization. Structural capital was the knowledge embedded in an organization's processes, routines, and practices (Hejazi et al., 2016). Structural capital refers to a company's entire system and processes for overcoming obstacles and coming up with new ideas (Chu et al., 2006). According to Kamukama (2013) and Li-Chang & Chao-Wang (2012), it encompasses all non-human knowledge repositories in businesses, including databases, organizational charts, process manuals, strategies, processes, and much more.

H2: *There is a significant impact of structural capital on firm performance.*

Social capital

Social value also plays a vital role for development of organization. Social capital refers to the knowledge, capabilities of the employees or human resources to their subordinates, colleagues, customers, other organization's etc. Social capital is the ability of individuals to work together to accomplish shared objectives in different groups and organizations (Fukuyama, 2002). It is also referred to as corporate social responsibility, transparency, honesty, and ethics (Bueno et al., 2006; Khalique et al., 2011). Social capital is made up of relationships and norms that are the result of organizational behavior and that influence the quality of social interactions among stakeholders that contribute to the expansion of the economy (Hashim et al., 2018).

H3: *There is a significant impact of social capital on firm performance.*

Customer capital

A company's relationships with third parties, such as suppliers and customers, are referred to as customer capital (Clarke et al., 2011). According to Riahi-Belkaoui (2003), it considers a company's franchise value in addition to its ongoing relationships with the individuals or organizations it sells to. Siddiqui and Asadi (2014) state that it includes ties with stakeholders, industry allies, suppliers, customers, employees, and partners in strategic alliances, among other internal and external organizational relationships. Similarly, customer capital acted as a key factor in determining the market value of a business (Tabarsa et al., 2014).

H4: *There is a significant impact of customer capital on firm performance.*

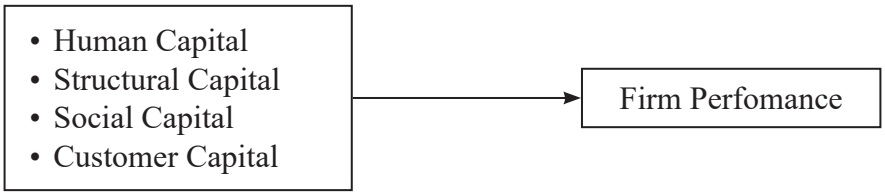
ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Conceptual framework

The goal of this study is to investigate how intellectual capital affects firm performance from the standpoint of Nepal's banking industry. Firm performance is employed as a dependent variable, while the four elements of intellectual capital (human, structural, social, and consumer capital) are regarded as independent variables. Based on actual data, the research framework and associated hypotheses are presented here. The study's conceptual framework is depicted in this graphic.

Figure 1

Conceptual framework



Note. Khalique et al. (2011), Shehzad et al. (2014)

Materials and Methods

The present study was aimed at investigating the impact of intellectual capital on firm performance in banking sectors. Descriptive and casual research design were used to reach the research objective. Descriptive research design was used to identify the status of intellectual capital position and find out the characteristics, frequency and behaviour of the respondents. Causal research design was used to investigate the relationship between different factors of intellectual capital and firm performance. The study focuses on the twenty commercial banks categorized as Class 'A' by the Nepal Rastra Bank (NRB) until November 2024. The overall population comprises 1694 individuals holding managerial positions (branch managers and above) within eight selected commercial banks based on their year of establishment. Older banks may have more extensive historical data, which can be beneficial for researchers seeking comprehensive information for their analysis.

Table 1

Sample banks

Banks	CEO	DGM	D. Head	BM	Total
NBL	1	5	15	226	254
RBBL	1	7	23	270	308
ADBL	1	6	25	279	321
NABIL	1	8	29	266	311
NIMB	1	16	34	296	354
SCB				14	14
HBL				71	71
EBL				61	61
Total					**1694**

A two-stage sample selection technique was employed. Initially, a purposive sample technique was used to select banks. Managerial officers, department heads, and branch managers were selected as sources of information for the study by convenience sampling to participate in the study. Sample size was determined 234 using Cochran's (1977) formula at 90% Confidence level. Google forms were used

for conducting surveys with representatives from managers level or above. The forms were completed by accessing the bank's website, confirming mail address and contact numbers of respondents and recalled for follow-up where needed. Ultimately, one Deputy Chief Executive Officer (DCEO), one department head, and 139 branch managers responded. The final sample size was 141 responders, reflecting those who provided usable responses. Although it was the initial target, the usable response rate was 60.25%. The data and information were collected from a structured questionnaire survey which contains respondents' demographic information, multiple-choice questions, and 5-point Likert scale questionnaires ranging from '1′ strongly disagree to '5′ strongly agree. The pre-tested questionnaire were used based on previous studies from (Amrizah & Rashidah, 2013; Khalique, Bontis & Shaari, 2018; ; Ngah & Ibrahim, 2009). This study was conducted in conjunction with a previously administered questionnaire, that undertook testing for validation.

To ensure the instrument's reliability, Cronbach's Alpha was employed, and the analysis proceeded only when the obtained value surpassed 0.7. Items with loadings of 0.6 or higher were considered reliable and acceptable, as per the criteria proposed by Sekaran and Bougie (2016).

Descriptive analysis was used to describe and summarize the data in meaningful way making them more useful. The data was analyzed using percentage calculations, mean determination, and standard deviation computation. Additionally, analysis of frequency was employed. The dependent variable in this study was measured the performance using a Likert scale encompassing various constructs. Correlation and regression analysis was conducted to examine the relationship between the dependent variable and the independent variables. ANOVA was used to ascertain the significance of the regression model. Regression analysis was formulated in a linear model to examine the relationship between the dependent and independent variable with equation as below.

$FP = \beta 0 + \beta 1HumC + \beta 2StruC + \beta 3SocC + \beta 3CusC + \varepsilon$

Where;

FP = Firm Performance $\beta 0$ = Regression constant HumC = Human Capital

StruC = Structural Capital SocC= Social Capital CusC = Customer Capital

Results and Discussion

Descriptive statistics of demographic responses

Table 2

Demographic Profile of Respondents

Variables / Categories	Frequency	Percentage
Gender		
Male	125	88.7
Female	16	11.3
Marital Status		
Married	140	99.3
Unmarried	1	0.7
Age		
25 - 40 Years	79	56
Above 40 Years	62	44
Education		
Bachelor's degree	23	16.3

Master's degree	117	83.0
MPhil	1	00.7
Position / Responsibility		
Branch Manager	139	98.6
Head of department	1	0.7
Deputy CEO	1	0.7

Note: Questionnaire survey, 2024.

Table 2 depicts the demographic profile of respondents based on gender, marital, age, education and responsibility. The majority of the sample identifies as male, constituting 88.7% of the total and female group represents only 11.3% of the total respondents. Similarly, the majority of the respondents, 140 (99.3%) were married, while the remaining 1 respondent was single, representing 0.7% of the sample. The majority of the samples fall within the 25 - 40 years age group, constituting 56% and above 40 years age group represents 44% of the total respondents. The total respondents, 83.0% have a master's degree as majority. The proportion of respondents with a bachelor's degree is lower at 16.3%, and there is a single respondent with MPhil degree, for 0.7% of the total respondents respectively. Finally, the respondents representing position or responsibility. The branch manager's level was found the highest, which comes from 98.6%. The head of department level was found 0.7 %. and deputy CEO which covers 0.7% only.

Table 3

Reliability of the Instrument

Variables	N	Cronbach's Alpha
Human Capital	10	.701
Structural Capital	10	.910
Social Capital	7	.874
Customer or Relational Capital	8	.705
Firm Performance (Perceived perception)	10	.805

Note. Output of Statistical Package of Social Science (SPSS-22).

Table 3 depicts the questionnaire's dependability in terms of respondents' perceptions of intellectual capital. Better internal consistency reliability is usually indicated by higher Cronbach's Alpha values. All of the variables have a Cronbach's Alpha of more than 0.7. It can be concluded that each variable's item is reliable due to the greater than threshold value.

Table 4

Overall Descriptive Statistics

Variables	N	Min	Max	Mean	Std. Deviation
Human Capital	141	3.0	4.5	3.756	0.366
Structural Capital	141	2.3	4.9	3.517	0.580
Social Capital	141	2.6	4.8	3.697	0.566
Customer Capital	141	3.2	5.0	4.112	0.308
Firm Performance	141	3.3	5.0	3.976	0.372

Note. Output of Statistical Package of Social Science (SPSS-22).

Table 4 demonstrates that firm performance is measured by four independent variables (human capital,

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

structural capital, social capital and customer capital). The mean ± SD of human capital was 3.756 ± 0.3659, structural capital was 3.517 ± 0.580, social capital was 3.697 ± 0.566 and customer capital was 4.112 ± 0.308. The finding revealed that there was a positive attitude (>3) of firm performance through human, structural, social and customer capital.

Correlation Analysis

Bivariate Pearson Correlation tests were used to acquire a statistical evaluation of the strength of each linear relationship between dependent (firm performance) and independent variable (human, structural, social and customer capital).

Table 5

Association between Intellectual Capital and Firm Performance

	Firm Performance	Human Capital	Structural Capital	Social Capital	Customer Capital
Firm Performance	1				
Human Capital	.465**	1			
Structural Capital	.519**	.718**	1		
Social Capital	.573**	.704**	.838**	1	
Customer Capital	.481**	.300**	.500**	.518**	1

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

Table 5 represents the relationship between human capital and firm performance has positive correlation (r =0.465, p=0.000) which is statistically significant. The relationship between structural capital and firm performance has a positive correlation (r =0.519, p=0.000) which is statistically significant. The relationship between social capital and firm performance has a positive correlation (r =0.573, p=0.000) which is statistically significant. Furthermore, the relationship between customer capital and firm performance has a positive correlation (r =0.481, p=0.000) which is statistically significant.

Regression Analysis

Table 6

Coefficient of Regression Result of IC on Firm Performance

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tol.	VIF
	B	Std. Error	Beta				
(Constant)	1.186	0.431		2.748	0.007		
Human Capital	0.183	0.107	0.176	1.710	0.090	0.436	2.294
Structural Capital	0.002	0.087	0.003	0.021	0.983	0.257	3.891
Social Capital	0.204	0.089	0.307	2.295	0.023	0.259	3.865
Customer Capital	0.327	0.099	0.270	3.315	0.001	0.697	1.436
R = 0.625 R2 = 0.390 F= 21.129 Sig.= 0.000							

Note. Output of Statistical Package of Social Science (SPSS-22).

Table 6 indicates that the coefficient of determination (R2) was 0.390 which indicates 39.0% of the firm's performance is explained by independent variable remaining 61.0% explained by other variables. Furthermore, there is a positive correlation (r=0.625) between dependent and independent variable.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Moreover, the significant test for the overall model by goodness of fit. Findings show that the firm's performance was statistically significant for four independent variables (F = 21.129; p-value = 0.000).

Regression-coefficient shows that firm performance explained by human capital (β = 0.176, p = 0.090), structural capital (β = 0.003, p = 0.983), social capital (β = 0.307, p = 0.023) and customer capital (β = 0.270, p = 0.001). The social capital and customer capital variables appear to be statistically significant predictors of the dependent variable, while human capital and structural capital are not statistically significant in this model. Furthermore, there was no possibility of multi-collinearity (VIF <10) among the independent variable in the study. Likewise, the values of Tol ≥ 0.1 indicate that there was an absence of multicollinearity.

Table 7

Hypothesis Testing

S. N.	Statement	B	p-value	Remarks
1	There is a significant effect of human capital on the performance of the firms.	0.183	0.090	Not supported
2	There is a significant effect of structural capital on the performance of the firms.	0.002	0.983	Not supported
3	There is a significant effect of a social capital on the performance of the firms	0.204	0.023	Supported
4	There is a significant effect of customer capital on the performance of the firms.	0.327	0.001	Supported

Table 7 reveals that social capital and customer capital as a major predictor of firm performance whereas human capital and structural capital are not statistically significant predictors at 5% level of the significant. Hence, it seems that social and customer capital has a positive impact on firm performance.

Intellectual capital, as an intangible asset, comprises human, structural, and relational (or customer) capital, with some studies also including social capital as a distinct component (Clarke et al., 2011; Gautam, 2015; Hameed & Anwar, 2018; Rawashdeh, 2022; Riahi-Belkaoui, 2003). This study examined the effects of these four elements human, structural, customer, and social capital on firm performance within the Nepalese banking sector. The findings indicate a positive relationship between intellectual capital components and firm performance, particularly emphasizing the significant role of customer capital. These results align with prior research by Subramaniam and Youndt (2005) and Abbas et al. (2018), which similarly found that intellectual capital positively influences organizational outcomes. Furthermore, this study is supported by research (Khalique et al., 2013). This study has reached the same conclusion: customer capital is a substantial predictor of company performance, but neither human nor structural capital are significant predictors.

In this study, the hypothesis H1 and H2 were rejected. Hence, human and structural capital have not impact on firm performance in banking sectors in Nepal and this finding was supported with the finding of Sarwenda (2020). Human capital and structural capital by individually do not significantly impact the firm performance, according to Muhammad and Ismail (2009). However, the results of this study supported the banking sectors in Nepal. The performance of the firms is found to be insignificantly impacted by both structural and human capital. The lack of significant impact may be attributed to contextual factors specific to the Nepalese banking sector, such as limited investment in human resource development or underdeveloped structural frameworks.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Conclusion and Suggestions

There is a positive and statistically significant correlation between intellectual capital (specifically human, structural, social, and customer capital) and firm performance. This suggests that as the levels of intellectual capital increase within the organization, the overall performance of the firm also tends to improve. The hypothesis regarding the impact of human capital on firms' performance was rejected. This suggests that, based on the analysis, there is no statistically significant evidence to support the notion that human capital has a direct impact on the performance of commercial banks in Nepal. Similarly, the hypothesis related to the impact of structural capital on firms' performance was rejected. The statistical analysis did not provide significant evidence to conclude that structural capital plays a direct role in influencing the performance of commercial banks in the context of Nepal. In contrast, the hypothesis regarding the impact of social capital on firms' performance was accepted. The statistical analysis suggests a positive and statistically significant relationship between social capital and the performance of commercial banks in Nepal. The hypothesis related to the impact of customer capital on firms' performance was also accepted. The analysis indicates a positive and statistically significant impact of customer capital on the performance of commercial banks in the Nepalese context. In conclusion, while customer and social capital significantly enhance firm performance in Nepalese banks, human and structural capital appear to have limited impact. These findings highlight the need for targeted strategies to strengthen human and structural capital utilization to maximize their potential contribution to organizational success.

Nepal is a developing country with enormous human resource potential that can be very beneficial to the country's future growth. Human resources are the most valuable resources in many developed countries. In Nepalese organizations, intellectual capital is a relatively recent notion. Nepalese culture has a very poor and weak intellectual capital orientation. This study could be highly implacable for future study for making concept of intellectual capital and further improvement. It may be a valuable piece of research work for academicians, practitioners, and the management body of any concerned organizations.

Author contribution statement

Udaya Kumar Shrestha: Conceptualization, methodology, data analysis and writing; **Sudip Wagle:** Data analysis and writing. All author(s) involved in addressing the comments, revision of the paper and finalization of manuscript.

Funding

There is no funding support for this study.

Declaration statement

The authors declare no conflict of interest.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

References

Abbas, S. K., Hassan, H. A., Hashmi, Z. M., Junaid, H. M., Majid, S., & Ijaz, T. (2018). Intellectual capital impact on organizations' performance. *International Journal of Advanced Engineering, Management and Science (IJAEMS), 4*(7), 519-524. https://doi.org/10.22161/ijaems.4.7.3

Ahmad, F., & Parivizi, B. Meyhami, B., & Ziaee, M. (2012). Intellectual capital accounting and its role in creating competitive advantage at the universities. *Interdisciplinary Journal of Contemporary Research in Business, 4*(1), 894-912.

Akbari, P., Rostami, R., & Veismoradi, A. (2013). The analysis impact of Human Resource Management and Intellectual Capital on Organizational Performance in Physical Education Organization of Iran (Case Study: Physical Education General Department of Kermanshah). *International journal of sport studies, 3*(3), 263-273.

Akkas, E., & Asutay, M. (2023). The impact of intellectual capital formation and knowledge economy on banking performance: a case study of GCC's conventional and Islamic banks. *Journal of Financial Reporting and Accounting, 21*(5), 1149-1170. https://doi.org/10.1108/JFRA-08-2021-0267

Al-assaf, A. (2020). The impact of intellectual capital on the competitive advantage in Jordanian telecom companies: A case study of orange company. *Review of Applied Socio-Economic Research, 19*(1), 33-46.

Andriessen, D. (2001). Weightless wealth: Four modifications to standard IC theory. *Journal of Intellectual Capital, 2*(3), 204-214. https://doi.org/10.1108/14691930110400007

Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management decision. 36* (2), 63-76.

Bueno, E., Salmador, M. P., Rodriguez, O., & De Castro, G. M. (2006). Internal logic of intellectual capital: A biological approach. *Journal of Intellectual Capital, 7*(3), 394-405. https://doi.org/10.1108/14691930610681474

Chu, P. Y., Lin, Y. L., Hsiung, H. H., & Liu, T. Y. (2006). Intellectual capital: An empirical study of ITRI. *Technological Forecasting and Social Change, 73* (7), 886-902. https://doi.org/10.1016/j.techfore.2005.11.001

Clarke, M., Seng, D., & Whiting, R. H. (2011). Intellectual capital and firm performance in Australia. *Journal of intellectual capital, 12*(4), 505-530. https://doi.org/10.1108/14691931111181706

Curado, C., & Bontis, N. (2007). Managing intellectual capital: the MIC matrix. *International journal of knowledge and learning, 3*(2-3), 316-328. https://doi.org/10.1504/IJKL.2007.015537

Dhungana, D., Phuyal, R. K., & Regmi, R. R. (2014). Intellectual capital and organizational performance on commercial banks of Nepal. *Advances in Economics and Business Management (AEBM), 4*(8), 525-529.

Edvinsson, L., & Malone, M. (1997). *Intellectual capital*. New York: Harper Business.

Fukuyama, F. (2002). Social capital and development. *SAIS Review (1989-2003), 22*(1), 23-37. https://doi.org/10.1353/sais.2002.0005

Gautam, P. K. (2015). Intellectual capital and organizational performance: An evidence from Nepalese pharmaceutical industry. *Journal of Management, 7*(1), 233-242.

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Hameed, A. A. & Anwar, K. (2018). Analyzing the relationship between intellectual capital and organizational performance: A study of selected private banks in Kurdistan. *International Journal of Social Sciences & Educational Studies, 4* (4), 39. https://doi.org/10.23918/ijsses.v4i4p39

Hashim, M. J., Adeyemi, A. A., & Alhabshi, S. M. (2018). Effects of intellectual capital on microfinance institutions' performance. *In Proceedings of the 2nd Advances in Business Research International Conference*, (pp.187-196). Springer, Singapore. https://doi.org/10.1108/14691930110400007

Hejazi, R., Ghanbari, M. and Alipour, M., (2016). Intellectual, human and structural capital effects on firm performance as measured by Tobin's Q. knowledge & process management, 23, 259–273. https://doi.org/10.1002/kpm.1529

Hitt, M., Bierman, L., Shimizu, K. & Kochhar, R. (2001), Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective. A*cademy of Management Journal, 44*(1), 13-28. https://doi.org/10.5465/3069334

Ibarra-Cisneros, M. A., Hernández-Perlines, F., & Rodríguez-García, M. (2020). Intellectual capital, organizational performance and competitive advantage. *European Journal of International Management, 14*(6), 976-998.https://doi.org/10.1504/EJIM.2020.110628

Ismail, M. (2005). *The influence of intellectual capital on the performance of Telekom Malaysia* (Doctoral dissertation, Universiti Teknologi Malaysia).

Irsyahma, A. & Nikmah, N. (2017). Intellectual capital, firm value, and financial performance. *AFEBI Accounting Review, 1*(01), 29-43. https://doi.org/10.47312/aar.v1i01.12

Jayanti, D., & Romli, R. (2023). The influence of intellectual capital on the performance of UMKM tempe craftsmen in Sukabumi city. Journal of Economics, *Finance and Accounting Studies, 5*(1), 16-25. https://doi.org/10.32996/jefas.2023.5.1.2

Kalkan, A., Bozkurt, Ö. Ç., & Arman, M. (2014). The impacts of intellectual capital, innovation and organizational strategy on firm performance. *Procedia-social and behavioral sciences, 150*, 700-707. https://doi.org/10.1016/j.sbspro.2014.09.025

Kamukama, N. (2013). Intellectual capital: company's invisible source of competitive advantage, *Competitiveness Review: An International Business Journal, 23*(3), 260-283. https://doi.org/10.1108/10595421311319834

Khalique, M., Nassir Shaari, J. A., Isa, A. H. B. M., & Samad, N. (2013). Impact of intellectual capital on the organizational performance of Islamic banking sector in Malaysia. *Asian Journal of Finance & Accounting, 5*(2), 75-83. https://doi.org/10.5296/ajfa.v5i2.3999

Li-Chang, H. & Chao-Wang, H. (2012). Clarifying the effect of intellectual capital on performance: the mediating role of dynamic capability, *British Journal of Management, 23*(2), 179-205. https://doi.org/10.1111/j.1467-8551.2010.00718.x

Mention, A. L. & Bontis, N. (2013). Intellectual capital and performance within the banking sector of Luxembourg and Belgium, *Journal of Intellectual capital, 14* (2), 286-309. https://doi.org/10.1108/14691931311323896

Muhammad, N. M. N., & Ismail, M. K. A. (2009). Intellectual capital efficiency and firm performance: Study on Malaysian financial sectors. *International journal of economics and finance, 1*(2), 206-212. https://doi.org/10.5539/ijef.v1n2p206

Nahapiet, J. & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage, *Academy of Management Review, 23*(2), 242-266. https://doi.org/10.5465/amr.1998.533225

Ousama, A. A., Hammami, H. & Abdulkarim, M. (2019). The association between intellectual capital and financial performance in the Islamic banking industry: An analysis of the GCC banks. *International Journal of Islamic and Middle Eastern Finance and Management, 13*(1), 75-93. https://doi.org/10.1108/IMEFM-05-2016-0073

Qurashi, I. A., Khalique, M., Ramayah, T., Bontis, N., & Yaacob, M. R. (2020). Impact of intellectual capital on innovation in pharmaceutical manufacturing SMEs in Pakistan. *International Journal of Learning and Intellectual Capital, 17*(1), 61-76. https://doi.org/10.1504/IJLIC.2020.108296

Radulovich, L., Javalgi, R.G. & Scherer, R.F. (2018). Intangible resources influencing the international performance of professional service SMEs in an emerging market: evidence from India, *International Marketing Review, 35*(1), 113-135. https://doi.org/10.1108/IMR-02-2016-0049

Ramírez Córcoles, Y., Santos Peñalver, J. F., & Tejada Ponce, Á. (2011). Intellectual capital in Spanish public universities: stakeholders' information needs. *Journal of Intellectual capital, 12*(3), 356-376. https://doi.org/10.1108/14691931111154689

Rawashdeh, A. M. (2022). Intellectual capital and organizational performance from the perspective of airliners. *Journal of Positive School Psychology, 6*(5), 34-54.

Rezaei, Z. & Mousavi, Z. (2015). The impact of intellectual capital on the performance of Islamic banking. *Indian Journal of Fundamental and Applied Life Science, 5* (1), 1806-1813.

Riahi-Belkaoui, A. (2003). Intellectual capital and firm performance of US multinational firms -a study of the resource-based and stakeholder views. *Journal of Intellectual Capital, 4* (2), 215-226. https://doi.org/10.1108/14691930310472839

Roos, G., & Roos, J. (1997). Measuring your company's intellectual performance. Long range planning, 30(3), 413-426. https://doi.org/10.1016/S0024-6301(97)00022-8

Sällebrant, T., Hansen, J., Bontis, N., & Hofman-Bang, P. (2007). Managing risk with intellectual capital statements. *Management decision, 45*(9), 1470-1483.

Sarwenda, B. (2020). Intellectual capital, business performance, and competitive advantage: An empirical study for the pharmaceutical companies. *Quality Access to Success, 21*(6)103-106. https://doi.org/10.1108/00251740710828725

Sekaran, U. & Bougie, R. (2016). *Research methods for business: A skill building approach*. UK: John Wiley & Sons.

Shehzad, U., Fareed, Z., Zulfiqar, B., Shahzad, F., & Latif, H. S. (2014). The impact of intellectual capital on the performance of universities. *European Journal of Contemporary Education, 10*(4), 273-280. https://doi.org/10.13187/ejced.2014.10.273

Siddiqui, M. A. & Asadi, A. (2014). Relational capital and performance: a case of brand developing firm. *Middle East Journal of Scientific Research, 21*(11), 2115-2122. https://doi.org/10.5829/idosi.mejsr.2014.21.11.21744

Smuda-kocon, M. (2022). The causal relationship between intellectual capital and financial performance. *Scientific Papers of Silesian University of Technology. Organization & Management/ Zeszyty Naukowe Politechniki Slaskiej. Seria Organizacji i Zarzadzanie*, (163). https://doi.org/10.29119/1641-3466.2022.163.9

ISSN 2350-8868
Volume IX | Issue 1 | June 2025

Soewarno, N. & Tjahjadi, B. (2020). Measures that matter: An empirical investigation of intellectual capital and financial performance of banking firms in Indonesia, *Journal of Intellectual Capital, 21*(6), 1085-1106. https://doi.org/10.1108/JIC-09-2019-0227

Stewart, T. A. (1997). Intellectual capital: the new wealth of organizations, Bantam Doubleday Dell Publishing Group. *Inc., New York, NY*.

Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management journal, 48*(3), 450-463. https://doi.org/10.5465/amj.2005.17407911

Susanti, N., Widajatun, V. W., Aji, M. B., & Nugraha, N. M. (2020). Implications of intellectual capital financial performance and corporate values, *International Journal of Psychosocial Rehabilitation, 24*(07), 6588-6599. https://doi.org/10.37200/IJPR/V24I7/PR270638

Sveiby, K. E. (1997). *The new organizational wealth: Managing & measuring knowledge-based assets*. Berrett-Koehler Publishers.

Tabarsa, G. A., Fakhari, M., & Hamidian, M. (2014). Investigation of the role of intellectual capital (human, structural, relational and Innovation capital) on organizational performance using SEM method, *International Journal of Scientific Management & Development, 2*(10).

Tayles, M., Pike, R. H. & Sofian, S. (2007). Intellectual capital, management accounting practices and corporate performance: Perceptions of managers. *Accounting, Auditing & Accountability Journal, 20* (4), 522-548. https://doi.org/10.1108/09513570710762575

Tiwari, R. & Vidyarthi, H. (2018). Intellectual capital and corporate performance: a case of Indian banks, *Journal of Accounting in Emerging Economies, 8* (1), 84-105. https://doi.org/10.1108/JAEE-07-2016-0067