

Enhancing Organizational Performance of Nepalese Commercial Banks Through Intellectual Capital

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Abstract

Intellectual capital is becoming increasingly important for a company's competitive advantage and financial as well as non-financial performance. The COVID-19 pandemic has had an impact on organizations' intellectual resources and performance, and little is known about how the company managed various intangible resources during that time. As a result, the focus of this study was on the impact of intellectual capital on the performance of Nepalese commercial banks before and during COVID-19. Quantitative and qualitative data were gathered through an in-depth interview with experienced and knowledgeable bank managers and a structured questionnaire for bank employees. The associations hypothesized were investigated with the help of the structural equation modelling (PLS) technique. The findings demonstrated a connection between both culture and trust and all Intellectual Capital (IC) components; human, structural, and relational capital. The result also demonstrated that while only structural capital had a significant impact on financial performance, all IC components are linked to non-financial performance. The study also looked at how competitive advantage mediates the relationship of intellectual capital with banks' financial and non-financial performance. It was found that competitive advantage mediated banks' non-financial performance more effectively than financial performance. Lastly, the results showed that the COVID-19 effect moderated but had minimal impact on the relationship between intellectual capital components and financial performance. Furthermore, recommendations were provided for organizations and banks to enhance and utilize their intellectual capital to achieve the best performance.

Keywords: Intellectual Capital, Organizational Performance, Competitive Advantage, COVID-19, Organizational Culture, Trust

1.0 Introduction

In today's competitive and globalized market, intellectual capital and its components are becoming increasingly important for a company's success. By combining and managing these intangible resources a firm can create a core competency and value in the form of competitive advantage (Prahalad & Hamel, 1997). Employees' knowledge and skills along with their experience are strongly linked to their function and work in the service sector like banking at all levels and positions which in turn leads a success in their business (Bontis et al., 2000). Also, rather than physical assets, banks' activities are largely based on intangible resources such as client relationships, reputation, competencies, and abilities (Iswatia & Anshoria, 2007).

Many researchers found IC has a positive impact on organizational performance in their research. For example, Bontis (1998) tested in the context of developed countries and found the positive effect of intellectual capital on performance. In developing countries like Nepal, the concept of IC as the indicator of overall organizational performance is considered positively and plans to increase IC efficiency through enhancing human resources and managing good relationships with customers. However, the exact and defined ways in which IC influences their financial and non-financial performance are still understudied. This research provides some knowledge by empirically examining the interrelationships as well as the effects of IC components on competitive advantage and organizational performance in Nepalese commercial banks, which also provide knowledge to other industries of Nepal, especially the service industry.

The rise of Information Technology (IT) has recently pushed the global economy and changed the way of doing business which they did in past years. The COVID-19 epidemic, on the other hand, has had a detrimental impact in many ways (Wen et.al., 2000). As a result, customer satisfaction may decline. Same as in the case of employees because of fear and stress due to the pandemic may decrease their performance and motivation. The goal of this research was also to look into the influence of the COVID-19 effects on bank's financial performance.

2.0 Literature review

The theories that underpin the investigation and their applicability to the structure of the study are the Resource-Based View of the Firm (RBV) (Penrose, 1959) and the Knowledge-Based View of the Firm (KBV) (Edvinsson & Sullivan, 1996). Bratianu et al. (2011) stated that organizational culture is important in the development of IC which can innovate because it serves as a very strong glue that binds together an individual's intelligence and their respective core values in fostering a culture of excellence. Puvcetaite and Lamsa (2008) suggested that trust is imperative to the advancement and creation of intellectual capital because sharing tacit knowledge is vital to the progress of IC. Samad (2012) found a significant relationship between human capital and organizational performance. Structural capital is related to mechanisms and structures which support the performance of organizations (Edvinsson, 1997). Relational capital has a positive impact on knowledge sharing and knowledge sharing increases performance (Ngah, 2011).

The research of Wahyuni et al. (2020) convincingly established the link between intellectual capital and competitive advantage. Researchers agreed that knowledge embedded in human capital was most likely to shape competitive advantage (Grant, 1991). Likewise, structural capital had

positive effects on competitive advantage (Hsu & Fang, 2009). Various researchers mentioned that a firm's likely to create competitive advantage rests upon the relational capital of the company (Dyer & Singh, 1998; Obeidat, et al., 2021). Intellectual capital is increasingly recognized as a key corporate strategic asset capable of generating a durable competitive advantage and outstanding performance (Barney, 1991). Likewise, competitive advantage played a substantial role in mediating the link between financial performance and intellectual capital (Chahal & Bakshi, 2015; Kamukama et al., 2011).

Elnahass et al. (2021) demonstrated that the COVID-19 pandemic has had a profoundly detrimental impact on both accounting-related and market-based performance. As stated by Wei and Han (2021), banks have encountered significant issues with their profitability and risk management. Afrinaldi et al. (2022) concluded that the performance of Pekanbaru City's micro small and medium enterprises was not affected by the level of intellectual capital. Its effect on the performance of digital firms during COVID-19 was examined by Zhang (2022) who found that despite the epidemic, social capital or relational capital continues to have a strong and favourable impact on innovation performance. Since the COVID-19 situation was new, no research was found regarding the moderating effects of COVID-19 on intellectual components and financial performance during COVID-19. It was supposed that COVID-19 has a moderation effect.

Based on the past research and discussions above, the framework was proposed.

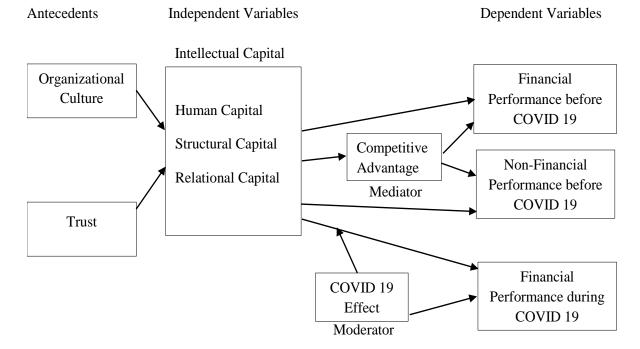


Figure 1: Research Framework

3.0 Research Methodology

This study employed both qualitative and quantitative research designs through in-depth interviews and survey questionnaires. The study's target population was unknown which was made

up of commercial bank employees of Nepal who hold officer-level or above positions and work at the head office or Gandaki province office or branch offices in the province of Gandaki. Stratified, snowball and purposive sampling methods were used for selecting banks, choosing the participants, and selecting participants for in-depth interviews respectively. 18 commercial banks out of 27 were considered in which 2 government banks, 3 joint venture banks, and 13 public banks were selected. According to Israel (1992), the minimum sample size required for the unknown population is 385. However, this study considered a sample size of more than 385 because for data analysis. Structural Equation Modelling (SEM) was used and it required a large number of samples for accuracy. Out of 691 self-administered survey questionnaires sent through Google Forms link and printed form, 537 responses were obtained which was used for data analysis. Similarly, 12 participants out of 18 were interviewed to obtain qualitative data. The quantitative data analyses were carried out using SMART PLS v4.0 and SPSS v.26. and content analysis was performed for qualitative data analysis.

The questionnaire was adapted from formerly used and validated scales for all the variables of this study. The antecedents of Intellectual Capital i.e., Organizational Culture and trust were measured with ten items each. Human, Structural and Relational Capital consists of 9 items each. Competitive Advantage, Financial Performance before COVID-19, Non-Financial Performance before COVID-19, Financial Performance during COVID-19, and COVID-19 Effect were measured by twelve, six, nine, six, and eleven items respectively. The respondents were requested to answer using a 7-point Likert Scale ranging from 1 = strongly disagree to 7= strongly agree. Additionally, the respondents were asked to answer their demographic profile. Likewise, 10 openended questions were asked in interviews to gain wide knowledge about the research topic. A pilot test with 30 respondents was carried out to obtain comments and suggestions which were used to modify questions.

4.0 Data Analysis and Results

4.1 Respondents' Profile

Out of a total of 537 respondents, 19.9 % were female and 80.1 % were male. 12% had up to a bachelor's and 88% had masters and above level of education. The majority (64%) of respondents had an age between 30 and below 40 and was followed by 40 and below 50 (23%), less than 30 (8.4%) and 50 and above (3.4%). 73% were working in public banks followed by Joint venture banks (15.5%) and government banks (11.5%). 56.4% worked in branch offices followed by head office (29.8%) and province office (13.8%). 72.1% had officer level and 27.9% were working in manager level and above position. 34.6% had working experience of 8 and below 8 followed by 13 and below 18 (30.5%), 3 and below 8 (26.4%) and 18 and above (8.5%).

4.2 Measurement Model Assessment

All the composite reliability (CR) values exceeded 0.85, thus the scales were reliable as recommended by Hair et al. (as cited by Haji-Othman & Yusuff, 2022) for which a score between 0.60 and 0.70 is acceptable. The values of average variance extracted (AVE) were maintained above 0.5 as recommended by Henseler (2009) which indicated construct validity. However, four items of the construct COVID-19 Effect were deleted to maintain the AVE value greater than 0.50.

Also, one item of structural capital was deleted because of loading below 0.6. Table 1 below shows mean, CR, and AVE of the constructs.

Table 1: Mean, CR and AVE of Constructs

Constructs	Total	Mean	CR	AVE
	Items			
Organizational Culture	8	5.271	0.936	0.691
Trust	6	5.580	0.916	0.702
Human Capital	9	5.417	0.903	0.550
Structural Capital	7	4.478	0.899	0.620
Relational Capital	8	5.468	0.922	0.644
Competitive Advantage	8	5.271	0.917	0.627
Financial Performance before COVID-19	6	5.345	0.947	0.789
Non-Financial Performance before COVID-19	8	5.606	0.933	0.675
COVID 19 Effect	7	5.364	0.854	0.509
Financial Performance during COVID-19	5	5.008	0.933	0.786

Discriminant validity was tested based on both the Heterotrait-Monotrait (HTMT) ratio of correlation and Fornell-Lacker criteria. All the HTMT ratio were maintained below 0.85 to establish discriminant validity as recommended by Henseler, Ringle and Sarstedt (2015) for which a total of 13 items were deleted. The result showed all 10 constructs' AVE were greater than their shared variance with other constructs, thus, discriminant validity was established as suggested by Fornell & Larcker (1981). Lastly, VIF (Variance Inflation Factor) values were maintained below 5 to solve the multicollinearity issue as suggested by Hair, Ringle and Sarstedt (2011). VIF of the outer model found two items of the construct financial performance during COVID-19, and one item was deleted to solve the issue of multicollinearity. Altogether 19 items out of 91 were deleted to make a good model, and the remaining 72 items were used for analysis. The final measurement model is shown in Figure 2 below.

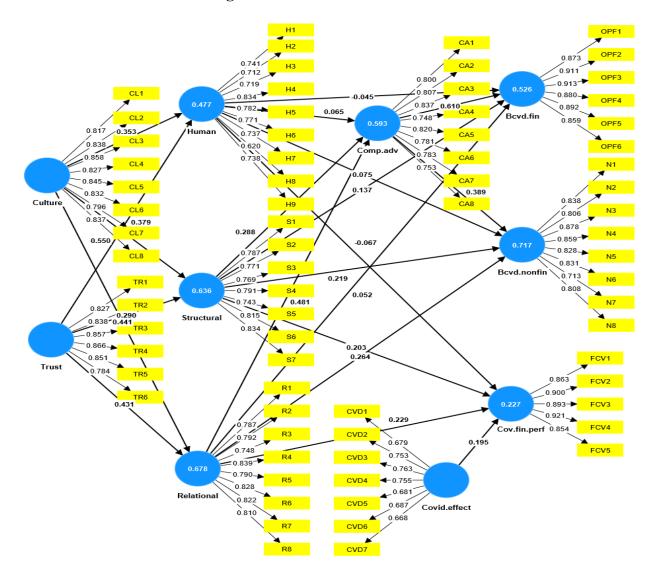


Figure 2: Final Measurement Model

4.3 Assessing Structural Model

For accessing the model's power, the coefficient of determination (R^2), effect size (F^2) and the blindfolding-based cross-validated redundancy measure (Q^2) were included. The model's R^2 values are greater than 0, which indicates the predictive power of all endogenous constructs ranges from 0 to 1 as recommended by Hair et al. (2011). Similarly, values of F-square were found satisfactory as proposed by Cohen (1998). Q^2 were found larger than 0 which indicated the predictive relevance of the model as recommended by Chin (2010).

Direct, mediation and moderation effects between the paths were analysed for hypothesis testing. SMART PLS v4.0 was chosen to use a bootstrap resampling method (5000 resamples) to determine the significance of the paths within the structural model. The p-values for the path

coefficients are depicted in Figure 3 below where the paths were denoted by the straight line with the pointed arrow, the constructs were denoted by the circle, and the moderating paths are depicted by the dotted line.

-0.045 (0.382) 0.610 (0.000) 0.065 (0.133) Bcvd.fin Comp.adv 0.353 (0.000) Human 0.075 (0.049) Culture 0.389 (0.000) 0.378 (0.000) 0.137 (0.042) -0.058 (0.292) 0.288 (0.000) 0.551 (0.000) Bcvd.nonfin 0.219 (0.000) 0.053 (0.358) 0.480 (0.000) 0.290 (0.000) Structural 0.441 (0.000) 0.218 (0.001) -0.126 (0.072) Trust Cov.fin.perf 0.265 (0.000) 0.198 (0.005) 0.234 (0.001) 0.431 (0.000) 0.197 (0.000) -0.104 (0.069) Relational Covid.effect

Figure 3: Structural Model Showing Results of the Proposed Research Model

The direct paths of the structural model are shown in Table 2.

Table 2: Directs Paths of Structural Model

Hypothesis	Path	β value	p-value	Std. Error	t statistics	Decision
H1a	Organizational Culture -> Human Capital	0.352***	0.000	0.056	6.331	Support

H1c	H1b	Organizational Culture ->	0.441***	0.000	0.059	7.420	Support
H2a	H1c		0.551***	0.000	0.049	11.134	Support
H2b	H2a	•	0.378***	0.000	0.054	7.010	Support
H2c		*					
Human Capital -> Financial Performance before COVID-19		*					
Performance before COVID-19							
H3b Structural Capital -> Financial Performance before COVID-19 H3c Relational Capital -> Financial Performance before COVID-19 H4a Human Capital -> Non-Financial Performance before COVID-19 H4b Structural Capital -> Non-Financial Performance before COVID-19 H4c Relational Capital -> Non-Financial Performance before COVID-19 H4c Relational Capital -> Non-Financial Performance before COVID-19 H4c Relational Capital -> Non-Financial Performance before COVID-19 H5a Human Capital -> Competitive Advantage H5b Structural Capital -> Competitive Advantage H5c Relational Capital -> Competitive Advantage H6 Competitive Advantage -> COVID-19 H7 Competitive Advantage -> COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID-19 H10 COVID-19 H10 COVID-19 H10 Covid-19 H111a Human Capital -> Financial Performance during COVID-19 H11a H10b M10b M10b M10b M10b M10b M10b M10b M	1100	*	0.0.0	0.002	0.001	0.076	110,000
Performance before COVID-19 Relational Capital -> Financial Performance before COVID-19 H4a Human Capital -> Non-Financial Performance before COVID-19 H4b Structural Capital -> Non-Financial Performance before COVID-19 H4c Relational Capital -> Non-Financial Performance before COVID-19 H4c Relational Capital -> Non-Financial Performance before COVID-19 H5a Human Capital -> Competitive Advantage H5c Relational Capital -> Competitive Advantage H5c Relational Capital -> Competitive Advantage H5c Relational Capital -> Competitive Advantage H6 Competitive Advantage O.601*** O.000 O.051 S.980 Support Competitive Advantage H6 Competitive Advantage O.601*** O.000 O.053 S.980 Support Competitive Advantage H7c Competitive Advantage O.601*** O.000 O.054 S.875 Support Financial Performance before COVID-19 H7 Competitive Advantage -> O.601*** O.000 O.049 7.947 Support Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 H11a Human Capital -> Financial Performance during COVID-19 O.058 O.292 O.055 I.108 Reject Reject O.001 O.058 O.058 O.058 O.058 O.055	H3b		0.137**	0.042	0.067	2.034	Support
Relational Capital -> Financial Performance before COVID-19	1100		0.127	0.0.2	0.007	2.05	Бирроп
Performance before COVID-19	Н3с		0.053 ns	0.358	0.057	0.953	Reject
Human Capital -> Non-Financial Performance before COVID 19		•				*****	
Financial Performance before COVID 19	H4a						Support
H4b Structural Capital -> Non-Financial Performance before COVID-19	11.00		0.075**	0.049	0.037	1.971	о м рроге
H4b Structural Capital -> Non-Financial Performance before COVID-19							
Financial Performance before COVID-19	H4b						Support
H4c Relational Capital -> Non- Support			0.219***	0.000	0.047	4.685	11
Financial Performance before COVID-19							
Financial Performance before COVID-19	H4c	Relational Capital -> Non-					Support
H5a Human Capital -> Competitive Advantage 0.065ns 0.133 0.043 1.504 Reject Reject Redvantage H5b Structural Capital -> Competitive Advantage 0.288*** 0.000 0.053 5.980 Support Suppor			0.265***	0.000	0.051	5.217	11
Advantage H5b Structural Capital -> Competitive Advantage 0.288*** 0.000 0.053 5.980 Support H5c Relational Capital -> Competitive Advantage 0.482*** 0.000 0.054 8.875 Support H6 Competitive Advantage -> Competitive Advantage -> Financial Performance before COVID-19 0.601*** 0.000 0.050 12.089 Support H7 Competitive Advantage -> Non-Financial Performance before COVID-19 0.389*** 0.000 0.049 7.947 Support H10 COVID 19 Effect -> Financial Performance during COVID 19 0.197*** 0.000 0.048 4.128 Support H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		COVID-19					
H5b Structural Capital -> Competitive Advantage 0.288*** 0.000 0.053 5.980 Support Support Support Support Competitive Advantage H5c Relational Capital -> Competitive Advantage 0.482*** 0.000 0.054 8.875 Support Sup	H5a	Human Capital -> Competitive	0.065^{ns}	0.133	0.043	1.504	Reject
Competitive Advantage H5c Relational Capital -> 0.482*** 0.000 0.054 8.875 Support Competitive Advantage H6 Competitive Advantage -> 0.601*** 0.000 0.050 12.089 Support Financial Performance before COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject							Ü
H5c Relational Capital -> 0.482*** 0.000 0.054 8.875 Support Competitive Advantage H6 Competitive Advantage -> 0.601*** 0.000 0.050 12.089 Support Financial Performance before COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject	H5b	Structural Capital ->	0.288***	0.000	0.053	5.980	Support
Competitive Advantage H6 Competitive Advantage -> 0.601*** 0.000 0.050 12.089 Support Financial Performance before COVID-19 H7 Competitive Advantage -> Non- Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		Competitive Advantage					
H6 Competitive Advantage -> 0.601*** 0.000 0.050 12.089 Support Financial Performance before COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject	H5c	Relational Capital ->	0.482***	0.000	0.054	8.875	Support
Financial Performance before COVID-19 H7 Competitive Advantage -> Non- Financial Performance before COVID-19 H10 COVID-19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		Competitive Advantage					
COVID-19 H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 Solve Covided S	H6	Competitive Advantage ->	0.601***	0.000	0.050	12.089	Support
H7 Competitive Advantage -> Non-Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		Financial Performance before					
Financial Performance before COVID-19 H10 COVID 19 Effect -> Financial 0.197*** 0.000 0.048 4.128 Support Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		COVID-19					
COVID-19 H10 COVID 19 Effect -> Financial 0.197*** 0.000 0.048 4.128 Support Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject	H7	Competitive Advantage -> Non-	0.389***	0.000	0.049	7.947	Support
H10 COVID 19 Effect -> Financial 0.197*** 0.000 0.048 4.128 Support Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		Financial Performance before					
Performance during COVID 19 H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject		COVID-19					
H11a Human Capital -> Financial Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject	H10	COVID 19 Effect -> Financial	0.197***	0.000	0.048	4.128	Support
Performance during COVID-19 -0.058 ^{ns} 0.292 0.055 1.108 Reject							
\mathcal{E}	H11a		ns				
H11b Structural Capital -> Financial 0.298*** 0.001 0.067 3.244 Support				0.292	0.055	1.108	
	H11b	Structural Capital -> Financial	0.298***	0.001	0.067	3.244	Support
Performance during COVID-19		Performance during COVID-19					
H11c Relational Capital -> Financial 0.197*** 0.000 0.048 4.128 Support	H11c		0.197***	0.000	0.048	4.128	Support
Performance during COVID-19							

^{***} p<0.01; ** p<0.05; ns not significant

To test the mediation hypotheses, the indirect effects are examined using the decision tree and a step-by-step method for testing mediation from Zhao, Lynch Jr and Chen (2010). The analysis of the mediation role of competitive advantage is presented in Table 3.

Table 3: Analysis of Mediation Role of Competitive Advantage

Relationship	Total Effect (β, t, P)	Direct Effect (β, t, P)	Indirect effect (β, SE, P)	Percentile bootstrapping 95% percent confidence interval (lower, Upper)	Hypo thesis	Result/ Mediation Type
Human Capital ->	(-0.005,	(-0.045,	(0.039,	(-0.014,	8a	Not supported/
Financial	0.094,	0382,	0.026,	0.090)		Direct only (non-
Performance before COVID-19	0.925)	0.875)	0.134)			mediation)
Structural Capital	(0.313,	(0.137,	(0.176,	(0.111,	8b	Supported/
-> Financial	4.266,	2.034,	0.035,	0.249)		Complementary
Performance	0.000)	0.042)	0.000)			(Partial)
before COVID-19						
Relational Capital	(0.346,	(0.053,	(0.293,	(0.214,	8c	Supported/
-> Financial	5.131,	5.131,	0.043,	0.382)		Indirect-only
Performance	0.000)	0.902)	0.000)			(Full)
before COVID-19	(0.400		/0.05 T			
Human Capital ->	(0.100,	(0.075,	(0.025,	(-0.009,	9a	Not supported/
Non-Financial	2.292,	1.971,	0.170,	0.059)		Direct only (non-
Performance	0.022)	0.049)	0.143)			mediation)
before COVID 19	(0.221	(0.210	(0.100	(0.064	01	C . 1/
Structural Capital	(0.331,	(0.219,	(0.122,	(0.064,	9b	Supported/
-> Non-Financial	6.761,	4.700,	0.027,	0.170)		Complementary
Performance before COVID-19	0.000)	0.000)	0.000)			(Partial)
Relational Capital	(0.452,	(0.265,	(0.187,	(0.132,	9c	Cumported/
-> Non-Financial	(0.432, 8.531,	5.217,	0.187,	0.510)	90	Supported/ Complementary
Performance	0.000)	0.000)	0.030,	0.510)		(Partial)
before COVID-19	0.000)	0.000)	0.000)			(1 artiar)
001010 CO (1D-1)						

Where β is path coefficient; t is the unstandardized path coefficient; SE is the standard error, P is confidence interval

In Table 3, the 95% confidence interval (0.111, 0.249) did not include zero, so the indirect effect a x b (0.176) is significant and mediation through competitive advantage is established. The direct effect c' (0.313) is also significant (p<0.05). Since the total effect a x b x c is positive, it is a complementary (partial) mediation according to (Zhao et al., 2021). Thus, hypothesis 8b (competitive advantage mediates the relationship between structural capital and financial performance before COVID-19) was consequently supported. Likewise, hypotheses 8c, 9b, and 9c were supported but 8a and 9a were rejected.

In the study, the role of the COVID-19 effect as a moderator between the independent variable (Human, Structural, and Relational Capital) with the dependent variable financial performance during COVID-19 were analysed. Based on the guideline recommended by Memon, et al. (2019),

this study analysed the moderation effect of COVID-19, the result of which is presented in Table 4

Table 4: Testing Moderating Relationship of COVID-19 Effect

Effects	β	T	P	Hypothesis	Result
COVID 19 Effect x Human Capital ->	-0.126	1.798	0.072	H12a	Supported
Financial Performance during COVID 19					
COVID-19 Effect x Structural Capital ->	0.234	3.223	0.001	H12b	Supported
Financial Performance during COVID-19					
COVID 19 Effect x Relational Capital ->	-0.104	1.821	0.069	H12c	Supported
Financial Performance during COVID 19					

The relationship between human capital and financial performance during COVID-19 was not significant (β =-0.058, p= 0.292). But there was a significant impact of COVID-19 effect on financial performance during COVID-19 (β =0.197, p= 0.000). Further, there was a relationship significant between the interaction of human capital and the COVID-19 Effect, and financial performance during COVID-19 (β =-0.126, t= 1.798, p= 0.1). Thus, hypothesis H11a was supported. Similarly, the result demonstrated that hypotheses H12b and H12c were also supported. Further, slope analysis was performed to analyse the moderation effect and found that a) during COVID-19, the negative relationship between financial performance and human capital is lessened, b) the positive relationship between financial performance and structural capital is strengthened in COVID-19, and c) COVID-19 dampens the positive relationship between relational capital and financial performance during COVID-19.

4.4 Analysis of Qualitative Data

Ten open-ended questions were asked to twelve province heads to share their thoughts on the related subject and the conclusion was drawn through content analysis. Almost all participants agreed that organizational culture and trust played a crucial role in enhancing intellectual capital. Regarding strategy for gaining competitive advantage, participants emphasized cost minimization and control, developing innovative products, and providing service excellence. According to their views, non-financial performance has received more attention in the recent competitive market.

Participants also provided their opinions on plans and strategies to deal with similar situations like COVID 19 which may occur in future. Six participants concurred that the banking services would be completely digitalized and an effective information technology framework could be established to support digital products. Others stated that mobile banking would be promoted and cashless banking would take precedence. Changes in technology, digital banking, a rapid action force, employee safety, introduction of deposit ATMs, customer training, asset quality maintenance, and IT from home are additional measures taken to deal with unfavourable future circumstances.

5.0 Discussions

The study found a positive relationship between culture and all components of IC which was similar to the study of Weston et al. (2007) and culture was also vital for effective organizational modification and was capable of growing IC (Petty & Guthrie, 2000). Kaveh (2004) found that culture had a significant positive relationship between human and structural capital whereas there was no significant relationship to relational capital. The study also found a significant positive relationship between trust and (human, structural, and relational capital). All these findings were consistent with the results of previous studies (Horwitz et al., 2003; Kohtamaki et al., 2013).

The results confirmed that the investment in structural capital can potentially bring about financial performance before COVID-19 improvement in Nepalese commercial banks. Conversely, no significant effect was found regarding human capital and relational capital. In terms of structural capital, similar results were found (Bontis et al., 2000; Edvinsson,1997). The results of this study did not lend support for the significant effect of human capital and relational capital on financial performance before COVID-19. Mention and Bontis (2013) claim that structural and relational capital positively affected business performance. The result was consistent with Cabrilo and Dahms (2018) and inconsistent with Samad (2012).

The study also examined the effect of human, structural and relational capital respectively on non-financial performance and found it significant. However, Kaveh (2004) found that human and relational capital had a significant impact on financial and non-financial performance whereas the effect was not significant for structural and social capital. The study found that structural capital and relational capital had a significant positive relationship with competitive advantage which was consistent with the outcomes of Hsu and Fang (2009). The result showed that the higher the competitive advantage higher the financial performance of the bank which was consistent with the study of Nguyen et al. (2021). The result also identified competitive advantage had a significant effect on non-financial performance before COVID-19.

Further, competitive advantage mediated the effect of two components of IC (structural and relational), but there was no mediation role found between human capital and financial performance before COVID-19. Studies of the importance of the role of intellectual capital in attaining higher organizational Performance through competitive advantage have been highlighted in numerous literatures (Puntillo, 2009; Zeghal & Maaloul, 2010). The hypothesis indicating that the COVID-19 effect had a significant effect on financial performance during COVID-19 was supported. Additionally, structural and relational capital had an effect on financial performance before COVID-19. Finally, the result found that the COVID-19 effect moderates the effect of all components of IC (human, structural and relational capital) on financial performance during COVID-19.

5.1 Conclusion

The results of the qualitative and quantitative analysis showed that intellectual capital had a very beneficial effect on organizational performance. Organizations with friendly cultures and trust can raise their human, structural, and relational capital. Competitive advantage, which boosts organizational performance through more intellectual capital, is crucial for success in today's fiercely competitive business environment. Banks with superior structural and relational capital can create a competitive advantage. Only structural capital had a significant positive relationship with financial performance before COVID-19. However, before COVID-19, all aspects of IC (human, structural, and relational capital) significantly positively correlated with non-financial performance. Therefore, efficient use of intellectual capital can improve non-financial performance like customer and employee satisfaction, internal business processes, effectively managed operational issues, and the growth of social and financial networks.

The result showed that structural and relational capital can enhance competitive advantage which in turn boost financial and non-financial performance of banks. The study also found that the COVID-19 effect moderated the relationship between intellectual capital components and financial performance during COVID-19. Additionally, a qualitative analysis revealed that while banks' profits were growing, the growth rate was slower than it was before COVID-19. In general, the study's findings were found to be similar to those of earlier researchers in some cases and different in others.

Banks need to focus more on their structural capital and must maintain strong relationships with their stakeholders to maximize their performance. By managing each aspect of competitive advantage bank management could improve their performance. Under circumstances like COVID-19, organizations are encouraged to manage adaptive organizational structures and cultures for the smooth operation of their intellectual capital.

Although the constructs have been precisely defined, a better intellectual capital framework could be created in future research through additional dimensions. The study made conclusion about the COVID-19 effect only from the response of employees of banks. In case a similar situation like COVID-19 occurs in future, it would be better if the responses be collected about the effects of those situations from loan and deposit customers as well as from firms associated with the banks.

6.0 References

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