



A Study of Firm's Innovative Capacity and Performance: Assessing the significance of Intellectual Capital

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ARTICLE INFO	ABSTRACT
	<p>Intellectual capital is a powerful tool that may produce quantifiable commercial outcomes. In today's shifting economic environment, businesses that prioritize utilizing and investing in intellectual capital are more likely to succeed over the long haul. There is a broad and complex relationship between intellectual capital and company performance. It functions similarly to the unseen engine that drives a business's success in the knowledge-based economy of today. Businesses with a lot of intellectual capital are better positioned to innovate, especially those with high levels of structural capital (patents, processes) and human capital (skilled personnel). Operations become more efficient when intellectual capital is managed well, especially when information is shared and organizational learning takes place. This study examines the relationship between intellectual capital and Indian businesses' success. This study aims to investigate the relationship between intellectual capital and corporate performance. The nature of the research investigation is quantitative. The association between company success and intellectual capital was examined using primary data. The results suggest that a company's total financial success and creative potential are significantly influenced by its intellectual capital, particularly its human, structural, and rational capital.</p> <p>Keywords: Intellectual Capital, Human Capital, Structural Capital, Rational Capital, Firm Performance</p>

Introduction:

In today's rapidly evolving business landscape, the role of intangible assets, such as intellectual capital, has become increasingly crucial in driving firm performance and gaining a sustainable competitive advantage. The current knowledge-based economy has shifted the focus from traditional physical and financial resources to the strategic management of intellectual assets, including employee knowledge, organizational processes, and innovation capabilities. There are generally three main components of intellectual capital: human capital, structural capital, and relational capital.

Human Capital: This encompasses the knowledge, skills, experience, and abilities of a firm's employees. It's about the value individuals bringing to the organization.

Structural Capital: This refers to the non-human knowledge resources that remain within the organization even when employees leave. This includes databases, patents, copyrights, organizational processes, and the overall organizational structure.

Relational Capital: This component focuses on the relationships a company builds with its external stakeholders, such as customers, suppliers, partners, and networks. It includes brand reputation, customer loyalty, and the strength of these relationships.

Research has shown a positive relationship between a firm's intellectual capital and its financial and non-financial performance (Yu et al., 2022) (Singh & Dr., 2019) (Attar, 2020).

Review Literature:

Numerous studies across various industries and geographical locations have explored the link between intellectual capital and firm performance. While measuring intangible assets like intellectual capital can be complex, research consistently shows its positive impact.

• **Positive Correlation:** A significant body of research, including (Review of empirical research on intellectual capital and firm performance, 2015) and (Intellectual capital and firm performance, 2018), confirms a positive correlation between intellectual capital and traditional measures of firm performance, such as profitability, market valuation, and return on assets.

• **Innovation and Growth:** (Mention, 2012) highlights how intellectual capital, particularly human capital and structural capital, fuels innovation and the creation of new products and services, ultimately driving firm growth and competitive advantage.

• **Efficiency and Productivity:** Effective management of intellectual capital, especially through knowledge sharing and organizational learning, can lead to improved operational efficiency and employee productivity. (A Review of Empirical Studies in Intellectual Capital and Firm Performance, 2017) suggests that intangible assets are crucial for generating abnormal earnings.

• **Intangible Value Creation:** (Hornungová, 2014) emphasizes the increasing importance of non-financial performance indicators in today's business environment. Intellectual capital contributes significantly to a firm's intangible value, which is often not reflected in traditional accounting measures.

• **Market Recognition:** Investors and financial markets recognize the value of intellectual capital. Firms with strong intellectual capital often enjoy higher market valuations compared to their counterparts with less developed intangible assets. (Mohammadi, 2015) explores this phenomenon within the context of the Tehran Stock Exchange.

Research Objective:

This study aims to investigate the impact of intellectual capital on performance of firms. Proposed hypotheses in the context of commercial banks in Lucknow city. The following hypotheses were considered in an attempt to attain the objective:

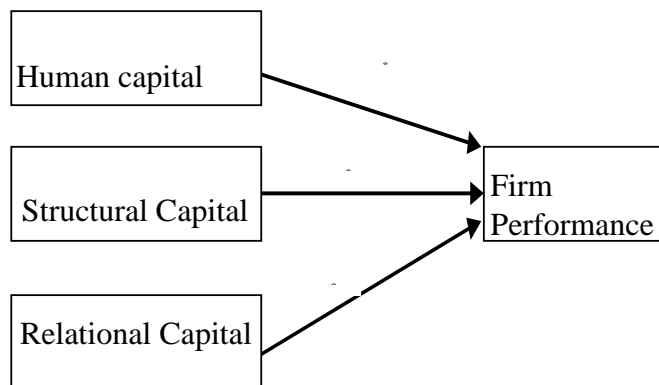
Hypothesis 1: Human capital has a favourable impact on firm performance.

Hypothesis 2: Structural Capital improves firm performance.

Hypothesis 3: Relational capital improves firm performance.

Conceptual Framework

Figure: 1



Note: Conceptual Model

Research Methodology:

This research study is quantitative in nature. Primary data was used to analyse the relation between intellectual capital and firm performance. For this study questionnaires were used to collect the primary data. The research population consisted of commercial banks in Lucknow. A thorough review of the literature on intellectual capital and firm performance, including Boudreau and Ramstad (1997), Marr and Neely (2001), Man and Wafa (2008) and Atieno (2009), led to the development of the question items. To ensure a sufficient response rate, 250 questionnaires were circulated through online mode which was google form. Only 200 of the 250 surveys were returned, with 14 questions removed due to incomplete responses. As a result, the study included 186 questionnaires. Data from the 186 questionnaires were analysed, and three hypotheses were tested using correlation and regression analyses in SPSS (Statistical Software).

Data Analysis and Interpretation:**Table: 1 Reliability Test**

Variables	Cronbach's Alpha Value
Human Capital	0.952
Structural Capital	0.765
Relational Capital	0.836
Firm Performance	0.897

Result and Interpretation: Nunnally (1978) states that a Cronbach's Alpha value greater than 0.70 indicates acceptance. The obtained alpha coefficients were acceptable because they were greater than 0.70.

Table: 2 Rotated Component Matrix

Factors	1	2	3	4
Human Capital	0.608 0.588 0.764 0.685 0.655 0.678			
Structural Capital		0.758 0.829 0.683 0.597 0.781		
Relational Capital			0.736 0.847 0.784 0.627	
Firm Performance				0.728 0.675 0.694 0.743 0.814

Result and Interpretation: Sig. is 0.000 and the Kaiser-Meyer-Olkin (KMO) indicator of sample adequacy is 0.735. The KMO value exceeds 0.50. The data set is therefore appropriate for factor analysis. 64.031 is the total percentage of rotation sums of squared loadings. According to this finding, factor analysis revealed that four variables accounted for 64.031 percent of the variance in the whole.

Table: 3 Pearson Correlation Result

Variables		HC	SC	RC	FP
Human capital (HC)	Pearson Correlation Sig.	1	0.276 0.000	0.284 0.000	0.216 0.001
Structural Capital (SC)	Pearson Correlation Sig.	0.276 0.000	1	0.587 0.000	0.234 0.001
Relational Capital (RC)	Pearson Correlation Sig.	0.284 0.000	0.587 0.000	1	0.157 0.003
Firm performance (FP)	Pearson Correlation Sig.	0.216 0.001	0.234 0.001	0.157 0.003	1

Note: Pearson Correlation and Significance

Result and Interpretation: The relationships between the variables were investigated using the Pearson correlation. The findings indicate a correlation between each variable and the performance of the company.

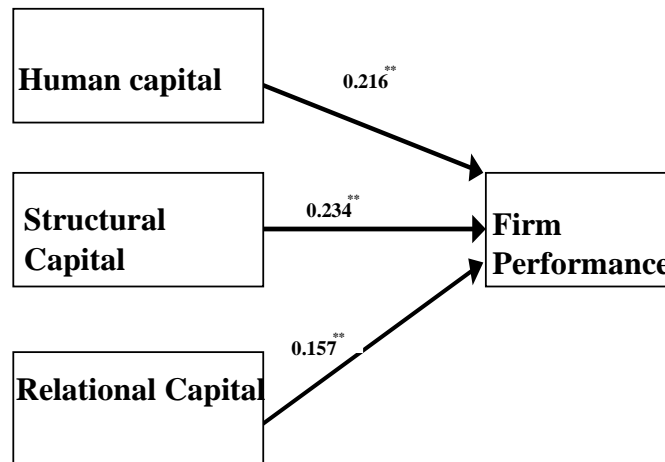
Table: 4 Regression Results for Firm Performance

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
Contant	6.817	2.047		3.330	0.001
Human capital (HC)	0.242	0.043	0.211	5.628	0.000
Structural Capital (SC)	0.185	0.052	0.174	3.558	0.014
Relational Capital (RC)	0.472	0.065	0.293	7.262	0.000

DV= FP

Result and Interpretation: The direction and degree of the correlations between relational capital, structural capital, human capital (intellectual capital) and company performance were ascertained by regression analysis.

Figure:2



Note: Conceptual Model Linking Intellectual Capital and Firm Performance

Result and Interpretation: Above is a schematic representation of the findings from several linear regression analyses pertaining to performance, human capital, social capital, and relational capital. Thick line arrows indicated the recognised associations.

Table: 5
Hypotheses' Result

Hypotheses	E	Sig. (U)	Accepted/Rejected
Human capital has a favourable impact on firm performance	0.242	0.000	Accepted
Structural Capital improves firm performance	0.185	0.014	Accepted
Relational Capital improves firm performance	0.472	0.000	Accepted

Result and Interpretation:

Table:5 displays the findings with respect to the hypotheses. In this table, there are three possibilities in total. Regarding the outcomes, the table additionally includes the beta coefficients (E), significance (U), and accepted/rejected (A/R) status. Based on these findings, three hypotheses were accepted at the significance levels of 0.01 and 0.05.

Conclusion and Suggestions:

The empirical findings of this study indicate that there are positive relationships between intellectual capital and firm performance. This study looked at the literature on intellectual capital and its impact on firm performance. The literature overwhelmingly supports the notion that intellectual capital is a valuable intangible asset that positively influences firm performance. Companies that prioritize the development and management of their intellectual capital – their people, knowledge, and relationships – are more likely to achieve sustainable success in today's knowledge-based economy. According to Veltri (2010), the primary goal of this paper is to provide a state-of-the-art of empirical evidence on the relationships between intellectual capital (IC) and firm performance by systematising existing research on the subject. The literature review revealed that intellectual capital has a positive effect on firm performance.

Companies with strong intellectual capital are better at creating new products, services, and processes. This is largely driven by their human capital (skilled employees) and structural capital (knowledge management systems). (Kalkan et al., 2014). Intellectual capital is difficult to imitate. A company's unique blend of employee expertise, organizational structure, and external relationships gives them an edge in the market. (Review of empirical research on intellectual capital and firm performance, 2015). Relational capital is key here. Strong brands, loyal customers, and reliable partnerships lead to increased sales and profitability while not always directly reflected on the balance sheet, intellectual capital contributes to higher profitability, market valuation, and long-term growth. (Intellectual capital and firm performance, 2018)

Limitations and Future Scope of the Study:

The biggest constraint of the research was the difficulty in collecting replies from respondents, which is understandable. As a result, the whole number of people in the sample could not be attained, but the percentage obtained was adequate to meet the specified goal.

This study used a single research instrument in the form of a survey questionnaire prepared under controlled settings, with participants serving as key informants. Measuring intellectual capital can be tricky, as it's intangible. Various models and methods exist, but there's no one-size-fits-all approach. The impact of specific intellectual capital components can vary across industries. For example, human capital might be more critical in knowledge-intensive sectors.

A longitudinal survey should be used in future research to investigate the causation and interrelationships between the present research components that influence the financial sector's intellectual capital and innovation performance. The next line of inquiry will look into how organisations develop intellectual capital. By researching and implementing best practices, a route may be given to aid other businesses in leveraging their intellectual capital and serving as the basis for greater organisational performance.

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