



THE MEDITATING ROLE OF INTELLECTUAL CAPITAL BETWEEN INNOVATION, CORPORATE GOVERNANCE AND FIRM PERFORMANCE OF THE SMES OF PAKISTAN

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ABSTRACT

This study aims to explore, the mediating effect of intellectual capital (IC) on the relationship between innovation, corporate governance (CG), and firm performance specifically within the SME sector in Pakistan. Data was collected through questionnaires through random sampling. PLS-SAM is used for data analysis. CG and innovation have positive relations with firm performance. Intellectual capital also indicates the relation between CG and firm performance. The current research is useful for policy makers and managers which provides the foundation for knowledge creation, knowledge sharing, and the development of innovative products, processes, and business models. Additionally, effective CG practices are essential for promoting transparency, accountability, and responsible decision-making within SMEs.

KEYWORDS: intellectual capital, innovation, corporate governance, firm performance

1. INTRODUCTION

In the current scenario, dynamic business circumstances, corporations are facing the several changes which need to constantly improve and innovative to stay in the competitive market. Therefore, the corporate governance (CG) of the corporates is directed, controlled and plays a critical role in the process of decision-making and overall corporate performance (Khan & Ali 2019). On the other side the innovation is extensively acknowledged as a key indicator to sustaining the corporation's competitive advantages and their long-term success. So, the relationship between CG, innovation, and firm performance is complex and multifaceted (Khan et al., 2019). Current studies indicate the IC includes the knowledge resources and intangible assets of a corporation, can perform as a mediating role between the CG, Innovation and firm performance (Asiaei, O'Connor, Barani, & Joshi, 2023; Canals Botines & Lepri, 2019). Moreover, CG structure plays a substantial role in the improvement of corporation wealth. So, CG takes much intension by the researchers and corporations subsequently a extensive scandal in "WorldCom and Enron" (Khan & Ali, 2017a). Therefore, the strong framework of governance can give the innovations and incentive for the innovations, whereas the IC plays the as the fundamental mechanism that explains governance practices into tangible results. Moreover, In the underdeveloped countries, appropriate governance structure gives out as a main objective in the firm accomplishment that cuts the risk of economic catastrophes and the management disputes (Huynh, Hoque, Susanto, Watto, & Ashraf, 2022) .A study explained that defend corporation protect their investors, the controlling agencies tried to dishearten the corrupt practices by executing rules and guidelines that ban these depraved practices; and utmost significantly exercise or rule is CG .On the other side, the new innovations are strategy-led, are not determined, and do not derive from corporate IC (Asad ,R, Y 2019,Asad 2020). So, the Innovation application development which can imply training and consumer cooperation, direction and assistance between several individuals, and contribution of knowledge can be considered as a acquiring opportunity (Asiaei et al., 2023). So, the innovation realization process is assumed to rouse learning and promote new learning creation. Hence, the events and energies contained during the execution process may subtly affect corporate performance by positively impacting IC (Khan & Ali, 2017a). So, previous research suppose the IC as an ancestor of innovation, which proceed from the predictable practice of examining the role of IC on innovation and consider that investigation the effects of superficially originated innovation on IC is vital in empathetic the undercurrents

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between innovation and firm performance(Asiaei et al., 2023; Huynh et al., 2022; Khan & Ali, 2017a; Ozgun, Tarim, Delen, & Zaim, 2022).

The current study proposes, to examine the mediating role of IC between CG, innovation and firm performance. By inspecting this relationship, can gain valuable understandings into how corporations can advantageously leverage their intellectual capital to develop innovation and increase overall firm performance.

2. LITERATURE REVIEW

2.1. FIRM PERFORMANCE

Firm performance describes to the overall results and outcomes achieved by a company in terms of its financial and non-financial measures of success. It is a comprehensive evaluation of the organization's ability to generate profits, create value for stakeholders, and achieve its strategic objectives (Khan et al., 2019).

2.2. CORPORATE GOVERNANCE AND FIRM PERFORMANCE

The inclusion of female directors and board independence within the framework of corporate governance has gained significant attention in recent years. Research has indicated that these factors can have an impact on firm performance(Khan & Ali, 2017b; Khan et al., 2019). The presence of women on corporate boards has been associated with improved firm performance (Gulzar, U., Khan, S (2021). in the boardroom, including gender diversity, brings diverse perspectives, experiences, and skills to decision-making processes(Huynh et al., 2022; Khan & Ali, 2017a) .This diversity can lead to better decision-making, enhanced risk management, and improved corporate governance practices, ultimately positively influencing firm performance.

Research has also found that corporations with a higher representation of women on boards tend to have better financial performance and higher shareholder value(Shan, 2019; Taljaard, Ward, & Muller, 2015). These companies often exhibit improved innovation, stronger ethical practices, and better corporate social responsibility. The different viewpoints and experiences brought by female directors can contribute to more effective problem-solving, increased employee morale and engagement, and better alignment with diverse customer preferences (Al-Gamrh et al, 2020)

Board independence refers to the composition of the board of directors with a sufficient number of independent directors who are not affiliated with the company. Independent directors bring objectivity, impartiality, and diverse perspectives to board discussions and decision-making processes(Al-Gamrh et al., 2020). They act as checks and balances on management, promoting accountability and minimizing conflicts of interest.

Studies have shown that a top level of board independence is linked with improved firm performance. Independent directors can enhance the effectiveness of corporate governance by providing objective oversight, effective monitoring of management actions, and ensuring that the interests of shareholders are protected(Al-Gamrh et al., 2020). Their presence is linked to better financial performance, lower risk of financial misconduct, and higher firm value(Al-Jaifi, Al-Qadasi, & Al-Rassas, 2023).

Furthermore, board independence is often seen as an indicator of good corporate governance practices. Companies with independent boards tend to have stronger governance structures, clearer strategic direction, and better risk management processes, all of which contribute to improved firm performance(Al-Jaifi et al., 2023).

H1: The CG (gender diversity, independent director) has a significant relationship with firm performance.

2.3. INNOVATION AND FIRM PERFORMANCE

Innovation allows companies to differentiate themselves from competitors and gain a competitive edge in the market. According to (Khan et al., 2019) innovation means the firm affinity as well as receptiveness to executing concepts that depart from the joint avenue of business. So the innovation outcome in compliance to abandon prior circles and try novel ideas innovation shows an important strength in establishing firm performance (Khan et al., 2019). Earlier studies indicates that innovation has a major impact on firm performance (Huynh et al., 2022; Ozgun et al., 2022). The following hypotheses

H2: The innovation has a significant relationship with firm performance.

2.4. MEDIATING ROLE OF INTELLECTUAL CAPITAL (IC)

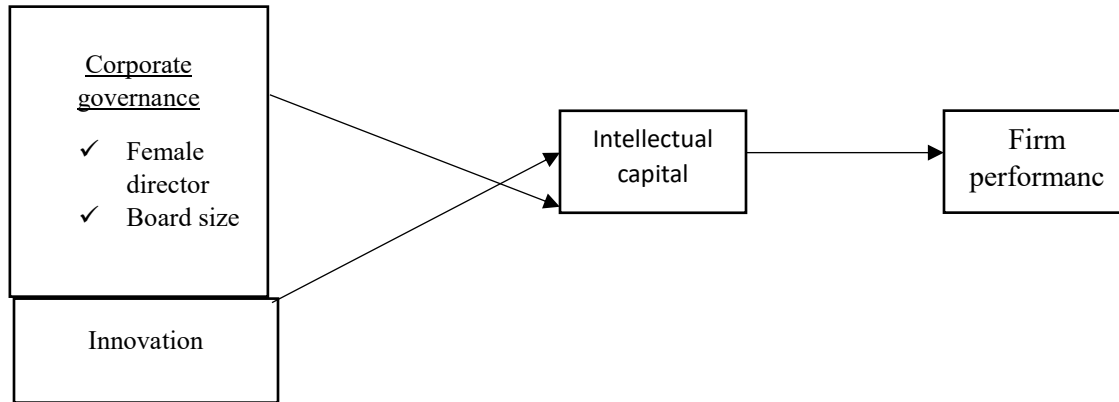
The mediating role of IC between corporate governance, innovation, and firm performance highlights the influence of IC in facilitating the relationship between these factors. IC has three different dimensions, which includes the structural capital, human capital, and relational capital, contributes to the efficiency of CG practices (Khan & Ali, 2017a)). The existence of IC inside the corporation increases the quality of administrative decisions, management processes, and strategic decisions oversight by leveraging the skills, knowledge and relationships of employees (Asiaei et al., 2023, Manahil & Khan 2023). The Strong CG structures and processes assist the formation, operation, and safeguard of IC, confirming which is essentially attached to drive innovation and firm performance (Asiaei et al., 2023). The greater efficiency of IC, firm might increase their innovative capabilities, leading to the enhancement of new products, services, processes, and business models. IC has a direct impact on firm performance(Khan & Ali, 2017a)). By effectively leveraging IC, organizations can achieve higher productivity, operational and financial outcomes(Khan & Ali, 2017a). IC

enables optimal resource allocation, effective knowledge management, and the cultivation of strong relationships with stakeholders (Khalil,2018). These factors contribute to improved firm performance, including increased profitability, market share, customer satisfaction, and overall organizational success.

H3: The IC mediates the relationship between the CG (Bord diversity and Board independence) and Firm performance.

H4: The IC mediates the relationship between the Innovation and firm performance

2.5. RESEARCH FRAMEWORK



3. RESEARCH METHODOLOGY

3.1. POPULATION OF THE RESEARCH

Investigate IC as mediating between CG, innovation, and firm performance of (SMEs) in Pakistan. The research used a cross-sectional design to capture the current state of corporate governance, innovation, IC, and firm performance in SMEs in Pakistan. The survey questionnaires were utilized to gather data from SMEs. The unit administered to SME owners, managers, and key decision-makers. PLS-SAM use for data analysis.

3.2. SIMPLE AND DATA COLLECTION

This current study chosen the random sampling method. In non-probability random sampling, the data presented is nonparametric, that is linear, and this kind of sampling is much appropriate for quantitative research described by researchers. The 450 questionnaires were distributed for study and returned 289 after screening the data. Only 256 were useable for analysis.

3.3. MEASUREMENT OF THE VARIABLES

Corporate governance (CG) (female directors (5), board independence (4) were measured 09 items and adapted by (Honghui, 2017). The intellectual capital(IC) was measured by 23 items which were adapted by (Bontis, 1998) on the other hand the innovation adapted nine items(Djellal & Gallouj, 2005). The firm performance was measured the 9 items was adopted by ((Henri, 2006). Current study use the seven Likert scale for data collection.

4. ANALYSIS AND RESULTS

4.1. MEASUREMENT MODEL

A measurement model, also known as a measurement framework or measurement structure, is a conceptual model that defines the relationships between constructs and the observable variables used to measure those constructs in a research study (Hair et al 2014). It provides a framework for assessing and quantifying the concepts or phenomena under investigation.

Table 1: Reliability & validity

| Variable | Cronbach's alpha | CR | AVE |
|----------|------------------|-------|-------|
| BI | 0.811 | 0.876 | 0.639 |
| FD | 0.855 | 0.896 | 0.632 |
| FP | 0.86 | 0.889 | 0.472 |
| IC | 0.771 | 0.845 | 0.521 |
| INNO | 0.844 | 0.878 | 0.447 |

Table 2: Heterotarit-Monotarit Ratios

| | BI | FD | FP | IC | INNO |
|------|-------|-------|-------|-------|------|
| BI | | | | | |
| FD | 0.832 | | | | |
| FP | 0.876 | 0.808 | | | |
| IC | 0.842 | 0.881 | 1.039 | | |
| INNO | 0.629 | 0.654 | 0.862 | 0.809 | |

Table :3 R-square

| | R-square | R-square adjusted |
|----|----------|-------------------|
| FP | 0.752 | 0.752 |
| IC | 0.646 | 0.644 |

The R-square indicates the value of variation of independent to depended on variables.

4.2. STRUCTURAL MODEL

PLS path modeling is the estimation of the structural model after the assessment of the measurement model.

Table: 4 Assessment of Path Coefficients

| Variables | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics ((O/STDEV)) | P values | Results |
|-----------------------|---------------------|-----------------|----------------------------|--------------------------|----------|----------|
| BI -> FP | 0.367 | 0.366 | 0.026 | 13.874 | 0.000 | Accepted |
| BI -> IC (HC-SC-RC) | 0.404 | 0.403 | 0.029 | 14.101 | 0.000 | Accepted |
| FM -> FP | 0.432 | 0.432 | 0.025 | 17.428 | 0.000 | Accepted |
| FM -> IC (HC-SC-RC) | 0.476 | 0.475 | 0.027 | 17.346 | 0.000 | Accepted |
| IC (HC-SC-RC) -> FP | 0.908 | 0.909 | 0.009 | 97.366 | 0.000 | Accepted |
| INNO -> FP | 0.185 | 0.186 | 0.024 | 7.768 | 0.000 | Accepted |
| INNO -> IC (HC-SC-RC) | 0.204 | 0.205 | 0.026 | 7.753 | 0.000 | Accepted |

5. RESULTS

The following hypothesis, H1 the relationship between board independence and firm performance indicating the positive and significant relations (T= 13.874, P=0.000). These results are align with previous studies (Asiaei et al., 2023, Khan & Ali, 2017). H2 also accepted and positive significant relationship between female and firm performance (T= 14.101, P=0.000). H3 and H4 is also accepted the intellectual capital mediates the relationship between the board independence and innovation.

6. CONCLUSION

In result, the mediating role of IC between innovation, CG, and firm performance of the SMEs sector indicates the critical value of IC in driving firm achievement. IC acts as a key feature that links and influences the relationships between innovation, CG, and firm performance. Furthermore, IC plays an essential role in determining CG practices. The IC of the firm can enhance the quality of decision-making, strategic oversight, and risk management within the governance framework. This, in turn, enhances transparency, accountability, and responsible decision-making, leading to better governance outcomes and organizational performance.

6.1. LIMITATIONS AND FUTURE RECOMMENDATIONS

The results of the current study is specific to the context of SMEs in Pakistan and cannot be fully generalizable to SMEs in other countries or regions. The cultural, economic, and regulatory factors unique to Pakistan may influence the relationships between IC, innovation, corporate governance, and firm performance.

The future studies can compare the SMEs in Pakistan with SMEs in other countries or regions can empower a broader understanding of the influences of contextual factors on the relationships between IC, innovation, corporate governance, and firm performance. Comparative studies can help identify best practices and lessons learned from different contexts.

REFERENCES

- Asad, M., Iftikhar, K. I., & Jafary, A. Y. (2019). Relationship between capital structure and financial performance of textile sector companies. *Kashmir Economic Review*, 28(1).
- Asad, M., Chethiyar, S. D. M., & Ali, A. (2020). Total Quality Management, Entrepreneurial Orientation, and Market Orientation: Moderating Effect of Environment on Performance of SMEs. *Paradigms*, 14(1), 102-108.
- Al-Gamrh, B., Al-Dhamari, R., Jalan, A., & Afshar Jahanshahi, A. (2020). The impact of board independence and foreign ownership on financial and social performance of firms: evidence from the UAE. *Journal of Applied Accounting Research*, 21(2), 201-229.
- Afzal, C. M., Khan, S. N., Baig, F. J., & Ashraf, M. U. (2023). Impact of Green Human Resource Management on Environmental Performance: The Mediating Role of Green Innovation and Environmental Strategy in Pakistan. *Review of Applied Management and Social Sciences*, 6(2), 227-242.
- Al-Jaifi, H. A., Al-Qadasi, A. A., & Al-Rassas, A. H. (2023). Board diversity effects on environmental performance and the moderating effect of board independence: evidence from the Asia-Pacific region. *Cogent Business & Management*, 10(2), 2210349.
- Asiaei, K., O'Connor, N. G., Barani, O., & Joshi, M. (2023). Green intellectual capital and ambidextrous green innovation: The impact on environmental performance. *Business Strategy and the Environment*, 32(1), 369-386.
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management decision*, 36(2), 63-76.
- Canals Botines, M., & Lepri, C. (2019). An editor in the creative process: Denise Johnstone-Burt in Anthony Browne's into the forest. *Revista Internacional de Culturas y Literaturas*, 22, 24-36.
- Djellal, F., & Gallouj, F. (2005). Mapping innovation dynamics in hospitals. *Research policy*, 34(6), 817-835.
- Henri, J.-F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, organizations and society*, 31(6), 529-558.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*, 26(2), 106-121.
- Huynh, Q. L., Hoque, M. E., Susanto, P., Watto, W. A., & Ashraf, M. (2022). Does financial leverage mediate corporate governance and firm performance? *Sustainability*, 14(20), 13545.
- Khan, S. N., & Ali, E. I. E. (2017a). How intellectual capital moderates the relationship between corporate governance and firm performance in the capital market of Pakistan: A conceptual review and proposal. *Journal of Economic & Management Perspectives*, 11(2), 359-371.
- Khan, S. N., & Ali, E. I. E. (2017b). The moderating role of intellectual capital between enterprise risk management and firm performance: A conceptual review.
- Khan, S. N., Hussain, R. I., Maqbool, M. Q., Ali, E. I. E., & Numan, M. (2019). The mediating role of innovation between corporate governance and organizational performance: Moderating role of innovative culture in Pakistan textile sector. *Cogent Business & Management*.
- Khalil, R., Asad, M., & Khan, S. N. (2018). Management motives behind the revaluation of fixed assets for sustainability of entrepreneurial companies. *International Journal of Entrepreneurship*, 22(Special), 1-9.
- Ozgun, A. H., Tarim, M., Delen, D., & Zaim, S. (2022). Social capital and organizational performance: The mediating role of innovation activities and intellectual capital. *Healthcare Analytics*, 2, 100046.
- Gulzar, U., Khan, S. N., Baig, F. J., Ansari, M., Akram, R., & Kamran, M. (2021). The impact of corporate governance on risk management: evidence from the banking sector of Pakistan. *Bulletin of Business and Economics (BBE)*, 10(3), 196-207.
- Shan, Y. G. (2019). Managerial ownership, board independence and firm performance. *Accounting Research Journal*, 32(2), 203-220.
- Taljaard, C. C., Ward, M. J., & Muller, C. J. (2015). Board diversity and financial performance: A graphical time-series approach. *South African Journal of Economic and Management Sciences*, 18(3), 425-447.