

The Mediating Effect of Intellectual Capital In The Hisense Group

Zhao Jingqi

Graduate School of Business, University of the Visayas, Cebu Philippines, 6000

Abstract: Following China's economic reforms, many Chinese enterprises have entered the global market, especially in the rapidly expanding home appliance sector. China has become a global leader in the production of household appliances, but recent problems like overcapacity, local market saturation, and imbalances between supply and demand have forced further changes. Hisense Group is a noteworthy success story in this regard, having progressively expanded its global influence over years of international development. Not only did Hisense maintain its position for the third year in a row in the "Brand z China's top 50 overseas brands" list for 2019, but it also took the top spot among all home appliance companies. Hisense's rise highlights the fact that products are "Made in China," reiterating China's position as a worldwide leader. In light of this, the study centers on the Hisense Group with the goal of examining the function and significance of intellectual capital in the business's global expansion plan.

Keywords: intellectual capital; Hisense Group

1 Introduction

1.1 Foreword

In order to provide useful insights for businesses that are similar to Hisense Group, the study aims to clarify how intellectual capital affects organizational outcomes and to highlight the mediating impacts of intellectual capital within the company.

1.2 Statement of the problem

This study aims to examine the mediating effect of intellectual capital in the Hisense Group and clarify the mechanisms by which intellectual capital affects organizational results. Specifically, this will address the following:

- (1) Evaluate the individual components of intellectual capital in terms of: human resources, structural resources, and relational resources
- (2) Measure the organizational performance indicators of: Financial Performance, Innovation Performance, and Organizational Effectiveness
- (3) Examine the relationship between intellectual capital and organizational performance
- (4) Examine the potential moderating influence of Organizational Effectiveness, clarifying how various aspects of intellectual capital contribute to the organization's overall effectiveness.
- (5) Based on the study's results, create tactical and strategic recommendations to the Hisense Group for optimizing intellectual capital resources, leveraging the identified mediating factors for enhanced organizational performance.

2 Methodology

Design. This research will use a mixed-methods approach, combining quantitative and qualitative methods to comprehensively understand the interplay between intellectual capital and organizational outcomes. The research design for this study will encompass a comprehensive approach to investigate the mediating effect of intellectual capital in the context of Hisense Group and its

impact on organizational results.

Research Environment. The study will be conducted in China at employees of the Hisense Group, a global corporation headquartered in China specializing in home appliances and consumer electronics. The company's headquarters, where important decisions are taken, will be the main focus of the study. It may also include branches and subsidiaries worldwide to get a varied viewpoint. The objective is to comprehend how relationships, information, and skills, collectively called intellectual capital, impact an organization's success. The business's organizational culture, its use of technology, and outside variables like laws and the state of the economy will all be considered.

Research Respondents. The participants for this study will be individuals associated with Hisense Group, generally employees. To ensure a well-rounded representation, inclusion criteria have been set. This includes individuals actively involved in decision-making, innovation, or knowledge-related activities. The aim is to capture diverse perspectives within the company. This approach allows for insights from internal and external perspectives, contributing to a comprehensive understanding of the research objectives. The study will be conducted outside of the Company, allowing the risk of disruption of the operations.

Research Instrument. This study will use a researcher-made questionnaire. The quantitative research will try to evaluate the individual components of intellectual capital in terms of 1.1 Human Capital, 1.2 Structural Capital, and 1.3 Relational Capital within the Hisense Group. 2. Measure the organizational performance indicators in terms of 2.1 Financial Performance, 2.2 Innovation Performance, and 2.3 Organizational Effectiveness. 3. Examine the direct relationship between intellectual capital and key organizational performance indicators (Financial Performance, Innovation Performance, and Organizational Effectiveness). 4. Examine if Innovation Capability is a mediating variable, establishing the relationship between particular intellectual capital elements and innovation results. Lastly, an open-ended question study will be used for the qualitative part. The researcher's questionnaire will be subject to content validity and reliability.

Data Gathering Procedures. The primary premise behind this research study is that before any investigation can begin, the researcher needs to submit a concept paper for permission to the Graduate School of Business Dean’s office. The dissertation will be presented to the dissertation panel members for a design hearing by the researcher following approval. The researcher will then take the panelists’ advice to heart. Once completed, the research paper will be sent to the University of the Visayas Research Ethics Committee for ethical review. The data collection process, which will be conducted online and through referrals to obtain the most significant number of respondents, will start as soon as the researcher is granted approval. After the information has been gathered, it will be compiled, examined, analyzed, and presented.

Data Analysis. To facilitate the data, the following approach will be used: **Quantitative Analysis:** The associations between organizational performance metrics and components of intellectual capital will be investigated using statistical techniques, including regression analysis and correlation coefficients.

Qualitative Analysis: Thematic analysis will be utilized to find patterns and themes in the qualitative information gathered through interviews.

3 Results and discussions

3.1 Descriptive Analysis

Table 1: Intellectual capital

| Human Resources | Mean | Description |
|--|------|----------------|
| 1. The Hisense Group makes significant investments in the education and training of its staff members. | 3.41 | Strongly agree |
| 2. The Hisense Group’s workforce is highly skilled and knowledgeable. | 3.49 | Strongly agree |
| 3. The Hisense Group promotes information exchange among its staff members. | 3.5 | Strongly agree |
| 4. The Hisense Group often offers its employees participation in training and development programs. | 3.37 | Strongly agree |
| 5. The Hisense Group’s workforce is encouraged to advance professionally. | 3.41 | Strongly agree |
| Factor Mean | 3.44 | Desirable |
| Structural Resources | Mean | Description |
| 1. The Hisense Group operates with set procedures and frameworks. | 3.45 | Strongly agree |
| 2. The Hisense Group’s organizational structure encourages efficiency and creativity. | 3.45 | Strongly agree |
| 3. The Hisense Group improves its operations through the appropriate use of information technology. | 3.42 | Strongly agree |
| 4. The Hisense Group has efficient and well-organized systems and processes. | 3.5 | Strongly agree |
| 5. The Hisense Group’s organizational structure encourages departmental cooperation and communication. | 3.49 | Strongly agree |
| Factor Mean | 3.46 | Desirable |
| Relational Resources | Mean | Description |
| 1. Strong ties exist between the Hisense Group and its suppliers and customers. | 3.4 | Strongly agree |

| | | |
|---|------|----------------|
| 2. The Hisense Group is always involved in joint ventures and partnerships. | 3.53 | Strongly agree |
| 3. The Hisense Group upholds a favorable reputation and business image. | 3.45 | Strongly agree |
| 4. Customers, suppliers, and partners enjoy mutually beneficial relationships with the Hisense Group. | 3.47 | Strongly agree |
| 5. To enhance its operations, the Hisense Group constantly solicits opinions and suggestions from stakeholders. | 3.46 | Strongly agree |
| Factor Mean | 3.46 | Strongly agree |
| Overall Mean | 3.45 | Desirable |

3.26- 4.00- Strongly agree; 2.51-3.25 Agree; 1.76- 2.50 - Disagree; 1.00-1.75 - Strongly disagree

Significant strengths in relational, structural, and human resources are highlighted by the Hisense Group’s intellectual capital assessment. All three categories had high mean scores, showing good agreement on a number of factors. With a mean score of 3.44, the human resources component exhibits a strong strategy that includes large investments in training and education, a workforce with a high level of ability, active information sharing, development initiatives, and possibilities for professional progress.

A very positive assessment of the intellectual capital of the Hisense Group is indicated by the overall mean score of 3.45. These advantages suggest that the team is in a strong position to use its intellectual capital to maintain competitive advantage and organizational success. The high grades in every category point to a sensible and successful strategy for managing intellectual capital, which should be preserved and improved by ongoing strategic investments in workforce training, operational effectiveness, and relationship building. This all-encompassing strategy guarantees thorough development and sustainability, fostering more organizational success and flexibility in a cutthroat marketplace.

Table 2: Organizational Performance

| Financial Performance | Mean | Description |
|---|------|----------------|
| 1. The Hisense Group has consistently demonstrated financial progress over the past five years. | 3.55 | Strongly agree |
| 2. The financial resources of the Hisense Group are efficiently managed. | 3.41 | Strongly agree |
| 3. The Hisense Group’s profitability meets or exceeds industry norms. | 3.45 | Strongly agree |
| 4. The Hisense Group exhibits responsible financial management. | 3.47 | Strongly agree |
| 5. The Hisense Group’s financial performance is straightforward for stakeholders to comprehend. | 3.47 | Strongly agree |
| Factor Mean | 3.47 | Desirable |
| Innovation Performance | Mean | Description |
| 1. The Hisense Group creates innovative goods and services with success. | 3.44 | Strongly agree |
| 2. The Hisense Group’s R&D investments aim to spur innovation. | 3.32 | Strongly agree |
| 3. The Hisense Group often releases cutting-edge products onto the market. | 3.41 | Strongly agree |
| 4. Employee innovation and creativity are encouraged by the Hisense Group culture. | 3.43 | Strongly agree |

| | | |
|--|------|----------------|
| 5. The Hisense Group uses technology to efficiently propel innovation in its goods and services. | 3.5 | Strongly agree |
| Factor Mean | 3.42 | Desirable |
| Organizational Effectiveness | Mean | Description |
| 1. The corporate goals and objectives of the Hisense Group are accomplished. | 3.42 | Strongly agree |
| 2. Operating efficiency within the Hisense Group is excellent. | 3.38 | Strongly agree |
| 3. The Hisense Group has highly motivated and productive workers. | 3.41 | Strongly agree |
| 4. The Hisense Group adeptly handles changes in the business environment. | 3.41 | Strongly agree |
| 5. The organizational structure of the Hisense Group fosters collaboration and innovation. | 3.41 | Strongly agree |
| Factor Mean | 3.41 | Desirable |
| Overall Mean | 3.43 | Desirable |

3.26- 4.00- Strongly agree; 2.51-3.25 Agree; 1.76- 2.50 - Disagree; 1.00-1.75 - Strongly disagree

Financial performance, innovation performance, and organizational effectiveness are all evaluated for organizational performance within the Hisense Group; all three receive high marks and show significant agreement on several performance-related factors. A mean score of 3.47 for financial performance indicates steady financial growth, effective resource management, profitability that meets or exceeds industry standards, responsible financial management, and transparent financial performance reporting to stakeholders.

A culture that fosters employee creativity, the successful development of novel products and services, smart R&D investments, the regular release of cutting-edge items onto the market, and the efficient use of technology to spur innovation are all highlighted by Innovation Performance, which has a mean score of 3.42. With a mean score of 3.41, organizational effectiveness places a strong emphasis on meeting corporate goals and objectives, having a highly productive and driven workforce, being able to handle changes in the business environment with skill, and having an innovative and collaborative organizational structure. The total mean score of 3.43 indicates that organizational performance in each of these areas is at a desired level.

Table 3: Relationship between Organizational performance and intellectual capital

| Pair of Variables | Chi2 | Cramer's V | df | p |
|---|------|------------|----|-------|
| Organizational Performance - Intellectual Capital | 100 | 0.1 | 1 | <.001 |

The chi-square test reveals a significant association ($p < 0.001$) between Organizational Performance and Intellectual Capital, supported by a substantial chi-square value of 100. However, the strength of this relationship is relatively weak, indicated by Cramer's V of 0.1. Despite the statistical significance, the modest Cramer's V suggests that while there is a discernible connection between Organizational Performance and Intellectual Capital, its practical significance might be limited. Nonetheless, these findings underscore the importance of Intellectual Capital in influencing Organizational Performance, albeit with potentially nuanced implications warranting further investigation.

Although the relationship between Intellectual Capital and Organizational Performance is not very strong, the existence of a meaningful association implies that Intellectual Capital is not the only factor that influences Organizational Performance. This suggests that businesses should take into account other elements that could affect success in addition to improving intellectual capital, such as operational effectiveness, leadership efficacy, and market dynamics. In addition, while investing in intellectual capital is crucial, businesses should also give top priority to plans that improve how well this capital is used and managed to optimize its performance impact. Moreover, this relationship's intricacy implies that firms should approach performance management holistically, considering several variables at once rather than concentrating on a single one.

3.2 Multiple Regression Analysis

Table 4 :Model Summary

| R | R2 | Adjusted R2 | Standard error of the estimate |
|------|-----|-------------|--------------------------------|
| 0.31 | 0.1 | 0.07 | 0.42 |

The multiple linear regression analysis reveals a moderate positive correlation ($R = 0.31$) between the observed values of Organizational Performance and the predictions made by the model using Human Resources, Structural Resources, and Relational Resources as independent variables. The model explains 9.59% of the variance in Organizational Performance ($R^2 = 0.1$), suggesting that these resources collectively account for some variability in performance outcomes. However, after adjusting for the number of predictors, only about 6.76% of the variance is accounted for (Adjusted R^2). The standard error of the estimate is 0.42, indicating the average distance between predicted and actual values. While this error may or may not be significant depending on the context, it underscores the need for further exploration and consideration of additional factors influencing Organizational Performance beyond the resources examined in the model.

Table 5: ANOVA

| Model | df | F | p |
|------------|----|------|------|
| Regression | 3 | 3.39 | .021 |

The table shows how well the regression model fits the data by looking at the ANOVA table. Your model has three independent variables, and when the F-statistic of 3.39 is used to evaluate the model's overall significance, a statistically significant result with a p-value of .021 is obtained. This suggests that your model's independent variables have an overall impact on the dependent variable. Essentially, your regression model shows a better fit than a model with no predictors, supporting its validity and statistical importance in explaining the variability of the dependent variable.

In the multiple linear regression model as presented in table 4 , the constant (intercept) represents the expected value of Organizational Performance when all independent variables (Human Resources, Structural Resources, and Relational Resources) are zero, yielding a value of approximately 3.21 ($p < .001$). This indicates that even in the absence of these resources, there's a baseline level of Organizational Performance. The coefficient for Human Resources suggests that a one-unit increase in Human Resources is associated with a decrease of -0.19 units in Organizational Performance ($p = .037$), implying that higher levels of Human Resources might hurt performance.

Table 6: Coefficients Model

| Model | Unstandardized Coefficients | Standardized Coefficients | Standard error | t | p | 95% confidence interval for B | |
|----------------------|-----------------------------|---------------------------|----------------|-------|-------|-------------------------------|-------------|
| | B | Beta | | | | lower bound | upper bound |
| (Constant) | 3.21 | | 0.6 | 5.35 | <.001 | 2.02 | 4.4 |
| Human Resource | -0.19 | -0.21 | 0.09 | -2.12 | .037 | -0.37 | -0.01 |
| Structural Resources | 0.17 | 0.16 | 0.1 | 1.65 | .101 | -0.03 | 0.36 |
| Relational Resources | 0.16 | 0.16 | 0.1 | 1.67 | .099 | -0.03 | 0.36 |

However, Structural Resources and Relational Resources show coefficients of 0.17 and 0.16, respectively, indicating potential positive impacts on Organizational Performance, although these effects are not statistically significant at conventional levels ($p = .101$ and $p = .099$, respectively). Therefore, while Human Resources appears to have a statistically significant influence on Organizational Performance, the effects of Structural Resources and Relational Resources are inconclusive based on the provided p-values. Further investigation may be necessary to elucidate their true impact.

4 Conclusion

Relational, structural, and human resources all show notable strengths according to the Hisense Group's intellectual capital assessment, with high mean scores indicating great agreement on a number of aspects. With a mean score of 3.44, human resources represent significant training investments, a highly skilled workforce, active information exchange, development programs, and chances for professional advancement. With a mean score of 3.46, structural resources are characterized by excellent departmental collaboration, efficient use of information technology, and successful application of established norms. They also have a structure that enhances creativity and productivity. With a mean score of 3.46, relational resources also perform well, demonstrating excellent reputations, active joint ventures, strong ties with suppliers and customers, and constructive stakeholder interactions. Overall, the mean score of 3.45 suggests a very positive assessment of the Hisense Group's intellectual capital, positioning the group to leverage these resources for competitive advantage and organizational success.

The results of the chi-square test indicate that there is a weak but significant correlation between intellectual capital and organizational performance (Cramer's V of 0.1, $p < 0.001$). This implies that although intellectual capital plays a role in determining organizational performance, it is not the only one. Other aspects that businesses should take into account are market dynamics, leadership efficacy, and operational efficiency. This is corroborated by the regression analysis, which demonstrates that whereas

Human Resources significantly impair Organizational Performance ($p = .037$), the effects of Structural and Relational Resources do not reach statistical significance, indicating that more research is necessary.

In conclusion, the Hisense Group's strengths in intellectual capital and organizational performance underscore the importance of maintaining and enhancing these resources through strategic investments, operational efficiency, and relationship building. This holistic approach ensures sustained growth, competitiveness, and adaptability in a dynamic market environment.

5 Recommendation

The Hisense Group should enhance training programs by expanding investments in employee education and development to maintain a highly skilled workforce, fostering innovation and professional growth. Optimizing structural resources through regular reviews and enhancements of protocols, frameworks, and IT systems will improve productivity and operational efficiency. Strengthening relationships with suppliers and customers, and actively pursuing joint ventures, will improve market positioning and collaboration. Maintaining robust financial management by implementing sound financial strategies and transparent reporting will support organizational stability and growth. Fostering innovation by supporting creativity and innovation through R&D and technology investments will help introduce cutting-edge products and maintain competitiveness.

Adapting organizational effectiveness by regularly evaluating and adjusting structures and processes will ensure the organization responds well to business changes. Conducting further research on the impact of structural and relational resources will help understand and optimize these areas effectively. Lastly, adopting a holistic performance management approach that integrates strategies considering intellectual capital, efficiency, leadership, and market dynamics will ensure sustained success and competitive advantage. Implementing these recommendations will help the Hisense Group capitalize on strengths, address areas needing improvement, and ensure continued growth and adaptability.

References

- [1] Bassi, J., & Buren, M. (1999). Valuing Investments in Intellectual Capital. *International Journal of Technology Management*, 18(5 - 8), 414 - 432.
- [2] Brooking, A. (1997). The management of intellectual capital.
- [3] Deking, I. (2002). *Intellectual Capital: Management des Intellectual Capital. Bildung einer strategiefokussierten Wissensorganisation* [Dissertation, Technische Universität München].
- [4] Edvinsson, L., & Malone, M. S. (1997). Intellectual capital: Realizing your company's true value by finding its hidden brainpower.

Fortune, 130(7), 68 - 73.

[5] Joia, L. A. (2000). Measuring intangible corporate assets: Linking business strategy with intellectual capital. *Journal of Intellectual Capital*, 1(1), 68 - 84.

[6] Leitner, K. H. (2015). Intellectual capital, innovation, and performance: Empirical evidence from SMEs. *International Journal of Innovation Management*, 19(5), 1550060.

[7] Marr, B., & Adams, C. (2004). The Balanced Score Card And Intangible Assets: Similar Ideas Unaligned Concepts. *Measuring Business Excellence*, 8(3), 18 - 27.

[8] Prahalad, C. K., & Hamel, G. (2006). The Core Competence of the Corporation.

[9] Robinson, R. D., & Jewett, G. F. (1989). Toward creating an international technology transfer paradigm. *International Trade Journal*, 1 - 19.

[10] Stewart, T. A. (1994). Your company's most valuable asset: Intellectual capital. *Fortune*, 130(7), 68 - 73.

[11] Young, S., Hood, N., & Wilson, A. (1994). Targeting policy as a competitive strategy for European inward investment agencies. *European Urban & Regional Studies*, 1(2), 143 - 159.