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THE INTEGRATION OF INTELLECTUAL CAPITAL DIMENSIONS AS A COMPETITIVE ADVANTAGE IN FINANCIAL INSTITUTIONS: A MANAGERIAL ANALYSIS

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Abstract: The objective of this study was to analyze how the integration of intellectual, human, structural, and relational capital dimensions contributes to building competitive advantage in financial institutions. Using a qualitative and exploratory-descriptive approach, the research was conducted through 15 semi-structured interviews with middle and senior managers of public and private financial institutions in Northeast Brazil. Data analysis used content analysis, categorizing responses according to the three dimensions of intellectual capital and their interrelationships. The results indicated that human capital acts as the initial driver, driven by specialized knowledge, creativity, and adaptability, and enhanced by structured development programs, such as corporate universities. Structural capital emerged as a facilitator, providing infrastructure, processes, and organizational culture that convert individual knowledge into lasting organizational assets. Relational capital, on the other hand, acted as an amplifier, strengthening institutional reputation and generating opportunities for innovation through trusting relationships with customers and partners. We conclude that competitive advantage does not result from the isolated use of these dimensions, but from their strategic integration, forming a virtuous cycle that sustains innovation, growth, and differentiation in the financial market.
Keywords: Intellectual Capital; Human Capital; Structural Capital; Relational Capital; Competitive Advantage.

INTRO

Years ago, knowledge was perceived as not bringing any direct economic contribution to a company, as it did not generate money in the short term (Ficco et al., 2022). This dominant view saw knowledge as an asset that was difficult to measure, a by-product of business activity, and not as a crucial strategic factor for value creation. However, the current scenario, guided by the knowledge economy, has reframed this perspective. Drucker (1993) points out that the knowledge economy occurs when knowledge becomes the only significant resource. Traditional resources such as capital, labor, and land have not disappeared, but have become secondary.

Thus, with the rise of the knowledge economy, the ability to generate, share, and apply knowledge has become the main driver of innovation and competitive advantage. For Michael Porter (1985), competitive advantage emerges when a company is able to create value for its buyers that exceeds the cost of producing it, and it is precisely at this point that intellectual capital stands out, driving the company's ability to differentiate itself and thrive in the market.

Quintero et al. (2021) state that with the advent of the knowledge economy, the valuation of intangible assets in organizations has become fundamental to gaining competitive advantage in economies that emphasize knowledge and learning. This has led to a significant evolution in the study of intellectual capital, and considering this evolution, intellectual capital is considered organizational knowledge, as well as organizational processes, which are necessary for organizational competitiveness.

According to Ibarra & Hernández (2019), intellectual capital has a strong influence on the performance of organizations. When a company focuses its resources on implementing strategies that reevaluate its intangibles, it becomes more competitive and, in turn, more profitable. In the knowledge economy, organizations face dynamic competitive environments that demand constant innovation and strategic management of intangible resources. In this scenario, Intellectual Capital (IC) emerges as one of the main sources of differentiation and value creation, directly influencing the capacity for adaptation and sustainable growth.

Intellectual capital is based mainly on the theory of resources and capabilities of organizations. The relationship between Resource and Capability Theory and intellectual capital is one of the pillars of contemporary strategic management. Penrose (1959) and Barney (1991) argue that a company's sustainable competitive advantage lies in the resources and capabilities it possesses that are valuable, rare, inimitable, and non-substitutable.

From this perspective, intellectual capital emerges as one of the main intangible resources that confer this advantage. As defined by Stewart (1998), intellectual capital constitutes the intellectual material, knowledge, information, intellectual property, and experience that can be used to generate wealth. It is the set of knowledge and intangible assets that, when managed effectively, drives performance and innovation.

Nonaka and Takeuchi (1999), in turn, conceptualize intellectual capital as a dynamic human process that involves the justification of personal beliefs in the search for truth. They also propose the existence of two types of knowledge: explicit knowledge, which is found in manuals and procedures, and tacit knowledge, which is acquired through experience and shared indirectly, often through analogies and metaphors.

Intellectual capital has two distinct focuses: accounting and management. From an accounting perspective, intellectual capital is static, which implies that it can be measured as an intangible asset. From a management perspective, however, it is dynamic and seen as an organizational competitive advantage, with an external focus (BLANKENBURG, 2018).

Several authors emphasize three dimensions that are part of or represent intellectual capital. Morales *et al.* (2020), for example, point out that intellectual capital arises from the interrelationship between human capital, relational capital, and structural capital, which will be evidenced in its ability to attract sustainable competitive advantages and generate value in organizations. For Fernández Pérez *et al.* (2017), the dimensions of intellectual capital will interact at different organizational levels, playing different roles in the creation of ambidextrous capabilities. Table 3 illustrates the classification of the dimensions of intellectual capital, in addition to presenting the details of the dimensions that constitute it.

HUMAN CAPITAL	
- *Know-how* - Education - Vocational qualifications - Work-related knowledge - Occupational assessments - Psychometric assessments - Work-related competencies - Entrepreneurial drive, innovativeness, proactive and reactive abilities, mutability	
RELATIONAL CAPITAL	
- Franchise agreements - Customers - Customer loyalty - Company names - Backlog - Distribution channels - Business partnerships - Licensing agreements - Favorable contracts	
STRUCTURAL CAPITAL	
Intellectual property	Infrastructure assets
- Patents - Copyright - Design rights - Trade secrets - Trademarks	- Management philosophy - Corporate culture - Management processes - Information systems - Network systems

Table 3 – Elements of Intellectual Capital

Source: Dezinkowski (1998, p.10)

As seen previously, intellectual capital takes three basic forms, which can be summarized as follows: human capital—the knowledge generated by the entity's employees; structural capital—the availability of the entity's infrastructure; and relational capital—the relationship with the external public (Xu; Liu, 2021).

Schultz (1961) points out that human capital is composed of the skills, knowledge, and metacognitive characteristics of human beings. Human capital works best in the company network when it is transformed into structural capital and becomes shared (Pacheco, 2016). Preserving knowledge and creating relationships between people, data, and techniques are the purposes of structural capital. Managers can truly control this capital since it is the capital that companies openly have at their disposal (Matos et al., 2019).

Reza et al. (2020) attest that structural or organizational capital comprises the internal value drivers of an organization, namely routines, processes, customer files, databases, manuals and literature, and the structure of an organization. Sucena (2021) further describes that structural capital is characterized by being responsible for attracting and retaining people with excellent skills, who end up benefiting the company in its economic performance.

Roberto Tranjan (2021) states that relational capital goes beyond a technique, becoming a way of life based on principles that rescue the essence of the relationships between companies and their audiences. Lopes (2021) explains that to create advantages within the market, companies need to use relational capital generated through relationships with their customers. From this, the institution will be able to increase the amount of resources and generate new possibilities for organizational success.

Authors such as Dzinkowski (1998) also comment that there is a model for creating intellectual capital value that is composed of the three instances mentioned above, in which they interrelate to form the value of human capital, relational (social) capital, and structural (organizational) capital. Value creation, he adds, is the main goal of all commercial activities, while the fundamental function of traditional accounting is to provide reliable information to external investors, and for this it depends on the economy underlying all commercial activities. Figure 1 illustrates this context.

In summary, the formation of intellectual capital lies in the development of the skills and abilities that individuals need to manage the organization's business, managed through practices that can be constituted by Corporate Education, for example. It is clear that when employees mobilize knowledge and share their experiences, they strengthen intellectual capital, generating better results for the organization (Altmann, 2021).

However, it is observed that the literature still has gaps in the practical understanding of how these dimensions of intellectual capital (human, structural, and relational) are systematically linked to sustain the competitive advantage of organizations. Most of the studies contacted tend to analyze these dimensions in isolation, neglecting the dynamics of their interdependence.

Thus, it is relevant to investigate the mechanisms by which the synergy between these components translates into a robust competitive advantage that is difficult to imitate, especially in knowledge-intensive sectors such as finance. To this end, this article starts from the following research question: How does the interaction between human, structural, and relational capital contribute to organizational performance?

The objective is to understand how the integration of the three dimensions of intellectual capital enhances the performance of organizations, potentially giving them a competitive advantage. The relevance of this study lies in investigating this relationship and consolidating it as a strategic factor for fostering competitive advantage in financial institutions.

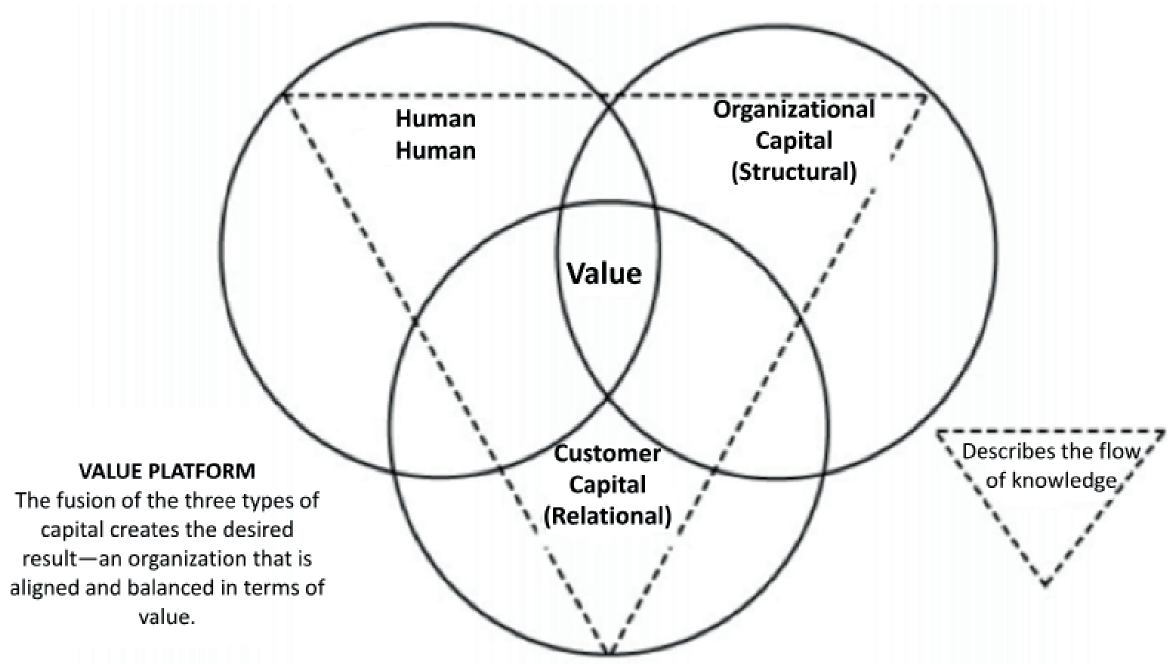

Figure 1 – Intellectual Capital Value Creation

Source: Edvinsson and Malone (1998, p. 10).

METHODOLOGY

The research is exploratory in nature (Alves--Mazzotti and Gewandsznajder, 1999), using a qualitative approach (Myers, 1997) of an exploratory-descriptive nature. To this end, 15 semi-structured interviews were conducted with managers of financial institutions operating in Northeast Brazil. The objective was to construct and reanalyze the approaches, concepts, and categories of this organizational strategy, always respecting the diversity of the topic.

The research was conducted with professionals who hold managerial positions in public and private financial institutions in the Northeast region of Brazil, including middle and senior managers. These managers work in medium and large organizations belonging to different sectors, recognized for their excellence in the strategic management of intangible assets.

Data collection was carried out through semi-structured interviews, conducted based on a script previously prepared from a systematic review of the specialized literature on intellectual capital. This script covered key topics and issues related to the dimensions of intellectual capital, aiming to ensure the breadth and depth of the information collected.

The choice of semi-structured interviews allowed for flexibility in conducting the dialogues, enabling interviewees to explore their experiences and perceptions in detail, which is fundamental for a qualitative understanding of the phenomena investigated.

The data collected was analyzed using content analysis (Bardin 2016), which allowed for the systematization and interpretation of the information obtained in the interviews. The responses were categorized according to the dimensions of intellectual capital , namely human capital, structural capital, and relational capital, as well as the interactions and relationships between these dimensions.

This procedure made it possible to identify patterns, recurring themes, and meanings present in the participants' discourses, favoring a deeper understanding of the integrated role of intellectual capital in the organizational context studied.

RESULTS

The results of this research present perceptions and evidence collected about the integration of the dimensions of intellectual capital in financial institutions in the Northeast region of Brazil. The analysis of the interviews revealed how managers identify, value, and apply the elements of human, structural, and relational capital to promote organizational competitive advantage.

The three central findings revealed in the analysis of the interviews are detailed below. They are organized according to predefined theoretical categories, highlighting both the particularities of each dimension and the interrelationships that contribute to the strategic performance of the organizations studied.

In this sense, the first and fundamental finding is that human capital is understood by most respondents as the initial driving force. This translates into how organizational performance begins, the form of specialized knowledge, creativity, and adaptability of employees. It was found that companies with structured personnel development programs have a greater capacity for innovation and response to market changes; corporate universities stand out in this regard. They play a strategic role in the continuous training of employees, promoting the constant updating of knowledge, alignment with organizational objectives, and the strengthening of a learning culture through courses, lectures, knowledge trails, and other educational activities.

However, this knowledge and potential generated by human capital have proven to require an organizational environment that supports and amplifies them appropriately. It is in this context that structural capital has stood out, playing a fundamental role by providing the infrastructure, processes, and culture necessary to transform individual knowledge into organizational assets.

Nevertheless, it is necessary to mention that structural capital, from a managerial perspective, is still understood as a facilitator of processes within the organizational culture that, when oriented towards learning, allows knowledge to be converted into organizational assets, preserving it and multiplying its impact.

The last finding categorized is relational capital, which acts as a strategic catalyst, enhancing the impact of the other dimensions of intellectual capital. In the view of managers, trusting relationships with customers and strategic partners not only broaden the scope of organizational knowledge, but also enable cooperation on high value-added projects.

And, according to them, this dynamic is capable of strengthening the institution's reputation in the market, further consolidating its competitiveness and generating unique opportunities for innovation and growth.

CONCLUSION

The research sought to investigate the integration of intellectual capital dimensions as a competitive advantage factor in financial institutions from a managerial perspective. The results showed that successful intellectual capital management transcends the isolated valuation of human, structural, or relational capital.

The main finding of the study demonstrated that organizations that actively integrate these three dimensions are able to create a combination that acts as a means of innovation, providing the basis for competitive advantage. Furthermore, it showed that this relationship establishes the creation of a coevolution in which human capital acts to generate knowledge, structural capital consolidates and disseminates it, and relational capital expands it and feeds it back with new opportunities.

This interconnection, which manifests itself in the form of a virtuous cycle, transforms knowledge into a valuable, unique, and lasting organizational asset and extends it to the company's network of relationships, reinforcing the relevance of intellectual capital in the knowledge economy. Based on connection and mutual influence, it also interconnects and develops the elements of IC in a constant synergy, where each element strengthens the others.

The study confirms that organizational performance does not depend exclusively on the isolated presence of human, structural, or relational capital, but on the capacity for strategic integration between them. This orchestration generates alignment, strengthens innovation, and sustains competitive advantage in the long term.

From a theoretical point of view, the study contributes to the understanding of the dynamics between the dimensions of intellectual capital, highlighting their interdependence as a key element for value creation within the organization. From a practical point of view, it provides support for managers to develop integrated policies for strengthening corporate education and people development, innovation, and stakeholder relations.

Suggestions for future research include quantitative studies to measure the impact of this interaction on financial performance and comparative analysis between different sectors and geographical contexts.

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