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Effects of intellectual capital and management control systems on organizational performance mediated by cooperation in the franchising system

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ABSTRACT

This study analyzed the effects of intellectual capital and management control systems (MCS) on performance, mediated by cooperation in a franchising system, on the assumption that those, in the condition of antecedents, can improve performance through cooperation since contracts are signed for that purpose. The results showed that intellectual capital (human, structural, and relational) promotes improved performance and cooperation in a franchising system. Similarly, MCS (performance appraisal systems and socialization) translate into performance and cooperation. However, no mediating effect of cooperation was observed in intellectual capital and MCS` relationships with performance. A survey was carried out with 112 fuel dealer managers, and structural equation modeling was applied to test the hypotheses. It was concluded that cooperation did not potentiate the effects of intellectual capital and MCS in performance on the performance of the investigated franchising system. This finding raises the need for further research as it clashes with the purpose of cooperation with has been advocated in the literature and expected in a franchise agreement.

KEYWORDS

Intellectual capital, Management control systems, Performance, Cooperation, Franchising system

EFEITOS DO CAPITAL INTELECTUAL E DE SISTEMAS DE CONTROLE GERENCIAL NO DESEMPENHO ORGANIZACIONAL MEDIADOS PELA COOPERAÇÃO EM SISTEMA FRANCHISING

RESUMO

Este estudo analisou os efeitos do capital intelectual e dos sistemas de controle gerencial (SCG) no desempenho, mediados pela cooperação em sistema franchising, na presunção de que aqueles, na condição de antecedentes, possam melhorar o desempenho por meio da cooperação, visto que os contratos são firmados com esse propósito. Os resultados mostraram que o capital intelectual (humano, estrutural e relacional) promove a melhoria do desempenho e da cooperação em sistema franchising. Da mesma forma, SCG (sistemas de avaliação de desempenho e de socialização) se traduzem em desempenho e cooperação. Entretanto, não foi observado efeito mediador da cooperação nas relações do capital intelectual e dos SCG com o desempenho. Uma survey foi realizada com 112 gestores de revendas de combustíveis, e para testar as hipóteses aplicou-se modelagem de equações estruturais. Concluiu-se que a cooperação não potencializou os efeitos do capital intelectual e dos SCG no desempenho do sistema franchising investigado. Este achado suscita mais pesquisas por destoar do propósito da cooperação preconizado na literatura e esperado em um contrato de franquia.

PALAVRAS-CHAVE

Capital intelectual; Sistemas de controle gerencial; Desempenho; Cooperação; Sistema franchising.

1. INTRODUCTION

A variety of contractual and institutional arrangements can be used by organizations in forming cooperative networks (Berry et al., 2009; Yakimova et al., 2021). One arrangement that matters in the present study is the franchising system, which is structured from the formation and sharing of know-how and brand strengthening (Watson et al., 2005; Matthes et al., 2021). One of the primary motivations for companies to contract businesses via franchising is to take advantage of the partners' capabilities to develop know-how (Bontis et al., 2000). To this end, cooperative behaviors between franchisors and franchisees are fundamental, especially those related to the formation of intellectual capital (Bontis, 1998), the support of control systems (Mahama, 2006), and the implications of cooperation (Heide & Miner, 1992) and its effects on performance (Bisbe & Otley, 2004).

Intellectual capital, which consists of human, structural, and relational capital, is one of the most important intangible assets of the organization (Bontis, 1998); therefore, investments in intangible assets as a form of differentiation have intensified in organizations (Moura et al., 2014). Past research regarding this phenomenon in inter-organizational cooperation has investigated the effects of intellectual capital formation on performance (Beuren & Dal Vesco, 2022), on MCSs (Mahama, 2006), on knowledge generation and sharing (Okoroafor, 2014; Paswan & Wittmann, 2009), and knowledge management (Iddy & Alon, 2019; Weaven et al., 2014). However, the literature on the effects of intellectual capital on cooperation and relational performance does not present a consolidated position on the topic (Beuren & Dal Vesco, 2022; Paswan & Wittmann, 2009), which denotes a research gap.

Inter-firm partnerships, in line with the Theory of Cooperation, aim to optimize participants' reciprocal benefits, to produce effective coordination of activities, share knowledge and power, contribute to conflict resolution, and equitably distribute benefits (Beuren & Dal Vesco, 2022; Mahama, 2006). It implies a look beyond classical economic theory. Also, it demands a sociological view of inter-firm cooperation since it involves intellectual capital (human, structural, and relational) and cooperation structures, with the interaction of MCS, here circumscribed to performance evaluation systems and socialization of cooperation in franchising systems.

The need to consolidate the field of research exploring MCS` effects on inter-organizational cooperation, with an emphasis on a sociological approach, is corroborated by Dekker (2004; 2016) and Otley (1994). Cooperation in a franchise system crosses the organizational boundary of economic activities and presents implications for intellectual capital and control systems in the search for competitive advantage. It can be accentuated in scenarios of environmental turbulence, diversity in the marketplace, and gaps in organizational skills and resources (Cravens et al., 1993). Arguments that urge analyzing the franchising system under the sociological lens permeate this research, which emphasizes intellectual capital, performance evaluation, and socialization and cooperation systems, combined with an economic lens, since the franchising system is expected to improve competitiveness and franchisee returns (Combs et al., 2004).

Given the gaps pointed out, this study aims to analyze the effects of intellectual capital and the MCS on performance mediated by cooperation in a franchising system. To operationalize this objective, a survey was conducted with managers of fuel retailers, and, in the data analysis, the structural equation modeling technique was applied. In general, the franchising system creates a complex partnership between the parties (Hadjielias et al., 2021), which may justify that franchising and non-franchising companies coexist in the same industry (Madanoglu et al., 2011). The fuel segment contains two business models: branded and unbranded. This is a particular type of franchising system, in which the fuel distributor establishes the business format for the branded retailers and demands studies beyond the economic perspective, including on the social aspects of the relationship.

This inter-organizational cooperation model covers regulation and contracts (Anzilago & Beuren, 2022) and, n the case of franchising, between fuel distributors and resellers, which drives managers to improve management control of the resale and strengthen the cooperation network (franchisee/reseller - franchisor/distributor). Neglecting the power of cooperation in the franchising system of this sector can weaken contractual ties since the high competition, low-profit margins, and uncertainty of the economic sustainability of re-selling mark the fuel resale market. However, regulatory flexibility, since 1997, in the rule of brand loyalty between retailers and fuel distributors has impacted both behaviors (Brasil Postos, 2021). On the one hand, this new scenario forced service stations to seek competitive strategies to ensure the sustainability of the business; on the other hand, distributors felt compelled to invest in intellectual capital, management systems, and economic structuring to remain competitive, aligning and cooperating with the retailer (Brasil Postos, 2021).

Thus, the study contributes to the literature by analyzing the association of the constructs of intellectual capital, of the MCS as mechanisms of performance evaluation and socialization, and cooperation in sociological logic, combined with the association of the construct performance in economic logic. It also contributes to the consolidation of the literature by analyzing the Theory of Cooperation, the effects of intellectual capital, and the MCS in the performance of the franchising system. Besides, it has as the unit of analysis cooperation structures delimited to the inter-organizational relations of branded retailers, holders of fixed contracts of exclusivity in

the purchase and operation of resale, with fuel distributors, which is characterized as a franchising system. In this aspect, the study seeks to advance the research by considering a hybrid cooperation context, not only hierarchical power and authority, but a strategic collaboration in competitive situations (Anzilago & Beuren, 2022).

The study also contributes to managerial practice by covering small businesses involved in franchising with companies considered big in the fuel sector. Besides the distinction of the business context, it contributes to the discussion that cooperation will promote contractual alignment between distributors and retailers. Specifically, it focuses on cooperation in franchising contracts, assuming that larger companies are drivers of improved managerial control and promoters of intellectual capital formation in small companies. Underlying its scope, the paper signals the potential advantages and disadvantages of franchising in the fuel industry. On the one hand, it elucidates that franchisors and franchisees can strengthen the business's brand, positioning and competitiveness (Padilha et al., 2010), in addition to raising growth rates and rapid market coverage (Schweiger et al., 2020). On the other hand, it alerts to the risk of franchisee withdrawal in case of difficulties or decreases in profitability and profitability, problems of adequacy, and the capacity of the franchisee to operate in a franchising system (Padilha et al., 2010).

2. THEORETICAL BASIS AND HYPOTHESES

2.1. Intellectual Capital, Cooperation, and Performance

Intellectual capital represents an important intangible asset of the organization, which is not recorded in the financial statements. The intangible asset is defined as the difference between the book value of the company and the amount of money someone is willing to pay for it (Brooking, 1996). Although there is no congruence in the literature on the definitions of intellectual capital, there seems to be an agreement that it is an intangible asset that can generate wealth for companies (Moura et al., 2014; Xu & Li, 2022).

Intellectual capital, an integrating dimension of human, structural, and relational capital, can amplify its utility in the organization (Tefera & Hunsaker, 2022). Human, structural, and relational capital interact among themselves and affect each other reciprocally, this internally produced interaction creates synergy, adding value to the company (Edvinsson & Malone, 1997; Sveiby, 1997), consequently providing improved performance (Bontis, 1998; Bontis et al., 2000). The joint existence of these resources is one of the main intangible assets internally generated by organizations (Tefera & Hunsaker, 2022).

The interactions among the components of intellectual capital are considered the proper sources of firm-specific competitive advantage that is difficult to imitate (Tefera & Hunsaker, 2020). A company's value comes from its intangible resources and physical and monetary assets (financial capital) (Xu & Li, 2022). In forming alliances between companies, this intangible asset can assume even greater relevance with a view to performance (Cabrita & Bontis, 2008), as, for example, franchising relationships that seek to improve the ability to compete and thus increase the performance of franchisees and franchisor. Hence, it is assumed that:

- **H₁:** There is a direct positive relationship between intellectual capital and franchisee performance.

Organizations can use a variety of contractual and institutional arrangements (Berry et al., 2009), for example, cooperative networks in models of alliances for diversification, synergistic

alliances, or franchising. One reason for firms to participate in alliances is to learn to build on the know-how and capabilities of their alliance partners through cooperative behavior (Bontis et al., 2000). This implies sharing information, restricting the use of power, joint problem-solving, and flexibility (Heide & Miner, 1992).

A franchising system is structured from the formation and sharing of know-how and the strengthening of the brand, which implies the franchisor's transfer of intellectual property rights (Watson et al., 2005). Franchisees provide managerial talent and local market knowledge and, therefore, also cooperate and provide intellectual capital (Watson et al., 2005). Relational capital, when supported by mutual trust and interaction among cooperating actors, creates a basis for learning and know-how transfer while reducing opportunistic behavior and know-how leakage (Kale et al., 2000).

However, the socialization of intangible assets can be affected by the perceived risks/safety associated with sharing information and knowledge, and the structure and culture of organizations can inhibit/facilitate this process (Paswan & Wittmann, 2009), just as relational norms can mitigate the adverse effect of opportunism (Anzilago & Beuren, 2022). Socialization allows agents to gain knowledge about the organization, work teams, and their tasks so that they adjust to and understand cooperation (Mahama, 2006).

Although knowledge sharing is a risk inherent to intellectual capital management, its sharing is crucial for leveraging intangible assets (Silva & Beuren, 2020). This way, it is argued that collaboration across internal organizational boundaries involves the coordination of groups with divergent and mutually inconsistent goals and interests (Berry et al., 2009). Given the above, it is assumed that:

- **H$_2$:** There is a direct positive relationship between intellectual capital and cooperation in a franchise system.

A franchise requires a cohesive and cooperative network involving franchisees and franchisors who work together to achieve mutual goals (Yakimova et al., 2021). For these authors, inter-organizational cooperation is a must in a franchise environment, with individuals expecting more positive behavior from those with whom they share group membership than from strangers. The opposite effects are anchored in strategic or operational incompatibilities between the franchise partners (Matthes et al., 2021).

Inter-organizational cooperation is a strategy considered by companies when there is a perception of potential gains and opportunities (Beuren et al., 2020) and, consequently, of obtaining competitive advantages for its participants (Tefera & Hunsaker, 2020) that would hardly be achieved individually. In a franchising system, the partnership provides valuable resources, such as information and knowledge (Allred et al., 2011), which are essential for franchisees since it is common for them to present gaps in skills and organizational resources (Cravens et al., 1993).

Among the valuable resources glimpsed in a franchising system, Bescorovaine and Beuren (2021) identified the sharing of information by the franchisor as an element that strengthens the relationship and impacts the franchisees' performance. This suggests that inter-firm cooperation exhibits characteristics that drive improvements in the outcomes between intangible assets and performance. While it is recognized to be a multifaceted construct, in this study, franchisee performance is gauged by the perception in relation to competition (Bisbe & Otley, 2004). Thus, it is postulated that:

- **H₃:** There is a mediating effect of cooperation in the franchising system on the relationship between intellectual capital and franchisee performance.

It is expected, with this set of hypotheses, that the results will resemble those found by Bontis (1998) and Cabrita and Bontis (2008); however, both did not observe intellectual capital formation mediated by interfirm cooperation.

2.2. Management Control Systems, Cooperation, and Performance

MCSs are assets with the capacity to achieve their ends and not just liabilities designed to assist managers in decision-making (Chenhall, 2003). Interpersonal relationships, which predispose individuals toward collective action, are mutually beneficial to the enhancement of MCSs (Chenhall et al., 2010). From this perspective, MCSs directed toward achieving performance goals include actions and agreements among participants with performance-oriented benefits (Mahama, 2006).

The interaction of those involved in the socialization of the performance evaluation system indicators tends to assist in achieving the goals and provides a perception of autonomy and influence of the individual in the design of his work, which can lead to better performance (Ansari, 1977). From this perspective, research by Mahama (2006) demonstrated that MCSs (performance appraisal and socialization) are positively associated with performance in inter-organizational relationships. Thus, the hypothesis is the following:

- **H₄:** There is a direct positive relationship between MCSs and performance in a franchise system.

The results of this study are expected to be similar to those of Mahama (2006), who observed positive influence of the performance appraisal system and its socialization process on performance in strategic supply relationships.

In an approach directed toward information and communication systems, Ansari (1977) states that the operation of systems supported by technologies requires performance measures and their socialization within organizations. Based on this conception, but under a particular lens focused on inter-organizational relationships and a specific MCS approach, the research of Mahama (2006) alludes that the use of performance evaluation systems associated with the socialization process promotes cooperative social interaction. From this perspective, it is assumed that:

- **H₅:** There is a direct positive relationship between MCSs and cooperation in a franchising system.

Past research on hybrid organizational forms, mainly those developed through the lens of Transaction Cost Economics (TCE), offer generic explanations of the role of MCSs. This theory provides limited insights into the processes that lead to the adoption, use, and evolution of MCSs in hybrid relationships (Van Der Meer-Kooistra & Vosselman, 2000). Much research is necessary to improve the understanding of MCSs and their effects on the performance of hybrid organizations (Berry et al., 2009).

The TCE supports the understanding of the managerial challenges faced in inter-organizational cooperative relationships and their implications for the design and use of MCSs (Chua & Mahama, 2007), especially regarding the risks involved in the execution of contracts (Iwai, 2016), whether

due to opportunism or behavioral uncertainty of the partners (Anzilago & Beuren, 2022). However, TCE does not consider the potential of control structures and practices on information flows in inter-organizational relationships (Berry et al., 2009).

Emphasis on cooperation enables the highlighting of the cooperative nature of hybrid arrangements and understanding of the implications of power and the design and use of management systems in hybrid arrangements (Beuren & Dal Vesco, 2022). Information from MCSs on performance in inter-organizational relationships provides direction so that a common direction is created in order to improve collaboration and accountability for results (Mahama, 2006). Thus, it is predicted that:

- **H$_6$:** There is a mediating effect of cooperation in the franchising system on the relationship between MCSs and franchisee performance.

The results are expected to be similar to those found by Mahama (2006), in which MCSs positively influenced performance when mediated by interfirm cooperation.

2.3. COOPERATION AND PERFORMANCE

Cooperation is a term widely used in the management literature to elucidate the relationship between economic agents. Cooperation between formally independent firms allows them to build competencies, exploit complementary resources, and redesign strategies more quickly than individual firms could (Mouritsen & Thrane, 2006). These benefits improve the performance of firms, both financial and non-financial.

To presuppose a beneficial relationship of cooperation on performance in franchising systems, there must be performance improvement for both the franchisee and the franchisor (Tefera & Hunsaker, 2020). However, adverse effects of cooperation on performance can occur due to opportunistic behavior by partners (Das & Teng, 1998), non-learning among partners (Hamel, 1991), and information/knowledge leakage (Kale et al., 2000), aspects aggravated when the alliance partners are competitors.

Among the studies that investigated the relationship between cooperation with performance, Beuren and Dal Vesco (2022) and Mahama (2006) found a positive relationship between cooperation on performance. Nonetheless, other studies, such as by Hamel (1991) and Kale et al. (2000), found a negative effect of cooperation on performance. In turn, Bescorovaine and Beuren (2021) did not observe significance in this relationship, which presupposes that it is necessary to rethink cooperation between partners (Matthes et al., 2021; Yakimova et al., 2021). Despite the contradictory effects of cooperation on performance observed in previous research, which may stem from different purposes, it is postulated that:

- **H$_7$:** There is a direct positive and significant relationship between cooperation in a franchise system and franchisee performance.

The results are expected to be similar to those of Beuren and Dal Vesco (2022), Mahama (2006), and Mouritsen and Thrane (2006), who observed that cooperation positively influences firm performance.

Given the above, Figure 1 presents the hypotheses formulated from the theoretical framework and the theoretical model of the research.
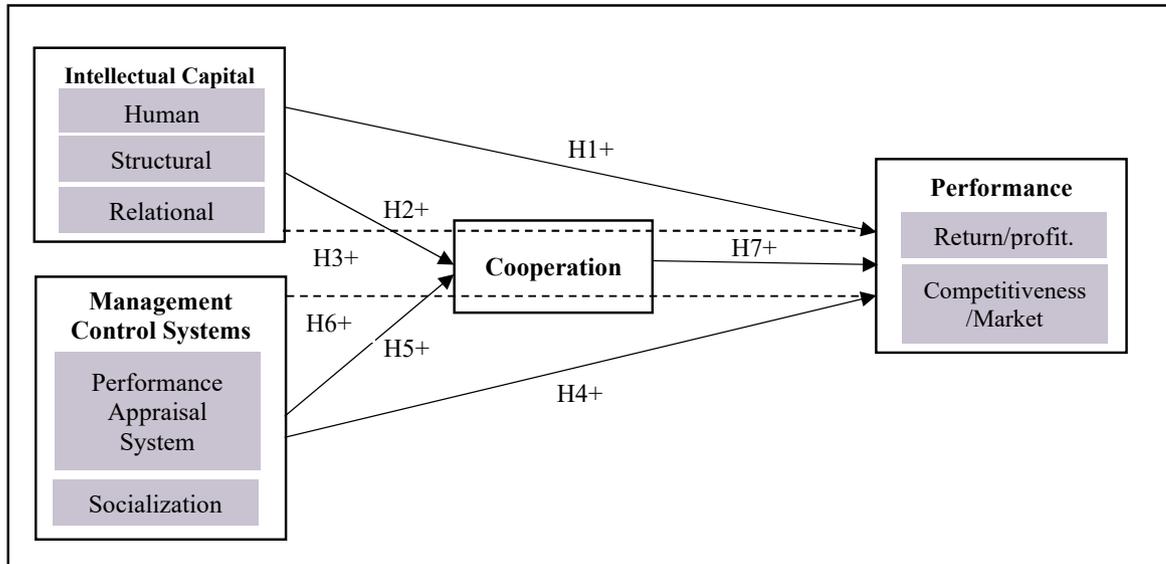
Figure 1. Theoretical Research Model
Source: elaborated by the authors.

3. METHODOLOGICAL PROCEDURES

The theoretical model of the research was empirically tested in a franchising system for the fuel resale sector. The research population comprised 1,277 branded fuel retail stations affiliated with the Sindicombustíveis do Paraná fuel union. Next, the sample size was determined, with a significance level of 5%, totaling 296 fuel retailer stations, to which e-mails were forwarded, and telephone contact was made in order to send the questionnaire. Of the 296 retailers selected, a return of 37.84% was obtained, totaling 112 respondents.

The selection criterion for the sample was stratified random sampling. For the sample size, the statistical power - *A Posteriori* Power - was calculated in the G*Power program, in which a statistical power of 0.863 was obtained, with an effect size of 0.15 (medium) and a significance level of 5%. The effect size helps to determine statistical significance; that is, for a large enough sample size, it is possible to show that there is a statistically significant difference. Hence, the average effect was used, achieving explanatory power for the model, not by the strength of the sample size. This criterion is a differentiator used to ensure that model and hypothesis confirmations are not determined by the effect generated by sample size.

The questionnaire was developed in line with the constructs of the theoretical model of the research, measured based on the study of Bontis (1998) for Intellectual Capital, Mahama (2006) for MCS, Heide and Miner (1992) for Cooperation (information sharing, restriction on the use of power, joint problem solving, and flexibility), and Bisbe and Otley (2004) for Performance. The questionnaire was structured with closed-ended questions on seven-point scales, with 1 = strongly disagree and 7 = strongly agree. Before sending the questionnaire to the respondents, an interview was conducted with the manager of a leading fuel distributor and with two retailers to analyze the evidence of content validity. Some adjustments were necessary for a better understanding of the respondents and consistency with the terms used by the industry.

Descriptive analysis techniques were applied to the demographic data of the research participants. The analysis of the questionnaire data was performed using the structural equation modeling technique (Partial Least Squares - PLS), which is based on components that simultaneously

analyze the theory (structural model) and indicators (measurement model). Its use is justified because it is not necessary to confirm the hypothesis of normal distribution and is useful in the treatment of studies involving more flexibility of the requirements of the theory, a more exploratory context (Hair Jr. et al., 2017). The constructs were validated by factor analysis on the indicators, performed by the extraction method and Varimax rotation method with Kaiser normalization, and estimating significance calculations by a bootstrapping simulation. The indirect effect was through path analysis and the constructs were considered second-order.

The use of PLS-SEM is indicated for the present study primarily because it does not require normality of the data, has suitability for relatively small sample sizes, enables the conduct of mediation tests, and allows for complex modeling involving 2nd order constructs (Hair Jr. et al., 2017). PLS-SEM allows simultaneous modeling of all variables in the model, including 2nd-order variables that have a higher degree of abstraction (Sarstedt et al., 2019). Here, the 2nd order variables are intellectual capital (1st order dimensions: human, structural, and relational); MCS (1st order dimensions: performance evaluation system and socialization); and performance (1st order dimensions: return/profitability and competitiveness/market).

4. RESULT ANALYSIS

4.1. DEMOGRAPHICS

The demographic data identified in the survey, referring to the profile of the respondents, showed that 65% were male, 50% had a graduate degree, and 16% had a post-graduate degree(*lato sensu* and *stricto sensu*), which indicates the qualification of the sector as 47% of the respondents occupy the position of partner-owner, 36% general manager, and 9% financial manager.

Ipiranga (39.3%) was the retailer with the highest number of respondents, followed by Petrobrás (30.3%). Most of the retailers, approximately 57%, own their own property. As for the management of the resellers, 70% are managed by the owners and 17% by a family member; only 13% entrust the management of the franchise to a professional. Approximately 26% of the resellers invoice between 101 and 150 thousand liters per month, and only 2.7% of the resellers invoice below 100 thousand liters. Still, regarding size, 70% of the franchises operate with up to 15 employees.

4.2. PLS-SEM ANALYSIS

The literature already indicated content validity according to the proposed theoretical model: intellectual capital (Bontis, 1998), MCS (Mahama, 2006), cooperation (Heide & Miner, 1992), and performance (Bisbe & Otley, 2004). Since there were adaptations and the research instrument collected data on four different and complementary contents, the results of the correlation of each indicator were evaluated, and, after these results, the model was built as being of 2nd order, as shown in Table 1.

The initial model resulted in four latent variables, five direct and two indirect interactions, and *a priori* 11 first-order indicators, which, *a posteriori*, resulted in 10 indicators. After testing the indicators, the measurement model was evaluated through convergent validity, discriminant validity, and reliability. In the first-order model, it was observed that the composite reliability of the use of power was not reasonable, which indicates that the franchisees, when asked about the restricted use of power by the distributors, indicated low and almost no such restriction, that is, they perceived the distributor's non-collaborative act when facing power. Since cooperation

between the franchisee and franchisor could be affected by this practice, the decision was to remove this construct to meet the model's quality.

The results show that the structural relationships of the variables are adequate in terms of convergent validity, discriminant validity, and reliability. Regarding structural validity and model quality, the R2 and adjusted R2, as well as the variance inflation factor (VIF) and the model fit indicators (standardized root mean residual - SRMR and Chi-square) were satisfactory.

It is observed that the proposed theoretical model is suitable to evaluate the MCS, circumscribed to the performance evaluation system and socialization, in cooperation and how this influences performance in the franchising system. Thus, it is validated that the dimensions of information sharing can constitute cooperation, problem-solving, adapting to change, and restricting the use of power (Mahama, 2006). The structure of the relationships constituting the model was significant, confirming the direction of the predicted relationships. Table 2 presents the results of the effects on the theoretical model.

Table 1
Statistical Tests and Discriminant Validity – 2ⁿᵈ Order Model

2ⁿᵈ **Order LV Model**	**Intellectual_C**	**Cooperation**	**Performance**	**MCS**
Intellectual_C	**0.893**			
Cooperation	0.770	**0.876**		
Performance	0.846	0.685	**0.940**	
MCS	0.552	0.580	0.552	**0.889**
Cronbach's Alpha	0.874	0.847	0.868	0.735
Composite Reliability	0.922	0.908	0.938	0.883
Average Variance Extracted (AVE)	0.798	0.767	0.883	0.791

Source: Research data.

Table 2
Results of effects and hypotheses

	Hypotheses	**C. Beta**	**Est. T (|O/STDEV|)**	**p-value**	
H1	Intellectual_C → Performance	0.779	15.712	0.000	Sig***
H2	Intellectual_C → Cooperation	0.648	8.935	0.000	Sig***
H3	Intellectual_C → Cooperation → Performance	0.025	0.395	0.693	n.s
H4	MCS → Performance	0.121	1.958	0.051	Sig**
H5	MCS → Cooperation	0.222	2.697	0.007	Sig***
H6	MCS → Cooperation → Performance	0.009	0.380	0.704	n.s
H7	Cooperation → Performance	0.038	0.406	0.685	n.s

Note: Significant at *p<0.001; **p<0.05; ***p<0.10.
Source: Research data.

The results indicated statistical significance for H1, H2, H4, and H5; therefore, these hypotheses of direct relations are confirmed. In turn, hypotheses H3 and H6, which predicted the mediating effect of cooperation in a franchising system on the relationships of intellectual capital and MCS on performance, and H7 were rejected for not presenting statistical significance.

Notably, 78% of intellectual capital promotes performance in the dimensions of return/profitability and competitiveness/market; 65% of intellectual capital and 22% of MCS promote cooperation between franchisee and franchisor in the fuel sector researched. Finally, only 12% of MCS promotes performance in the dimensions of return/profitability and competitiveness/market.

4.3. DISCUSSIONS AND IMPLICATIONS

Descriptive analyses revealed that fuel retailers perceive intellectual capital formation in its three dimensions (human, structural, and relational). The results are similar to those of Bontis (1998), Bontis et al. (2000), Cabrita and Bontis (2008), Hsu and Fang (2009), and Tefera and Hunsaker (2022) that the multidimensionality of intellectual capital, which comprises human capital, structural capital, and relational capital, adds value to the firm. This denotes that talent (human capital) must be coordinated (structural capital) to gain more customers (relational capital) in order to create value.

In the hypotheses analysis, H1, which presupposed a direct positive and significant relationship between intellectual capital and performance, presented statistical significance, which supports its acceptance. This result is in line with what is recommended by Bontis et al. (2000), that an investment in human capital, coordinated through structural capital and used by managers for customer satisfaction (relational capital), results in positive effects on performance. This multidimensionality of intellectual capital seems essential in the franchising system to fill gaps in the franchisee's skills and resources (Cravens et al., 1993) since it crosses the organizational boundary and impacts performance.

The research results support their acceptance of the hypotheses that predicted a positive and significant relationship between intellectual capital (H2) and the MCS (H5) and cooperation. This indicates that the intellectual capital and resources coming from the MCS, in the perception of the franchisees, promote cooperation between the branded retailer (franchisee) and the fuel distributor (franchisor). This result is in line with the literature, which emphasizes that there are exchanges in inter-organizational cooperation systems, in which the sharing and transfer of knowledge between the parties are present, that add value to the company's intangible assets and produce improvements in the MCS.

Confirmation of H2 reinforces Tefera and Hunsaker's (2020) argument that strategies to maximize intangible assets produce strategic directions and approaches in order to produce a competitive advantage. Confirmation of H5 suggests that larger firms serve as drivers of improved managerial control and drive intellectual capital formation in small firms. These elements instigate promoting cooperation between the franchisee and franchisor. A possible justification for this pointed out by Bontis (1998), that shared actions are reflected in an increase in organizational knowledge and positively affect business performance.

The results support its acceptance in H5, which predicts a direct positive and significant relationship between the MCS and the franchisee's performance. These findings resemble those of Beuren and Dal Vesco (2022) and Mahama (2006) that performance evaluation and socialization systems in fuel franchising systems, which ensures exclusivity to operate a particular brand, provide superior performance in the return/profitability and competitiveness/market dimensions.

Restricting the scope of MCS to performance evaluation and socialization systems seems to have contributed to supporting the acceptance of the hypothesis, with a direct effect on performance.

No statistical support was found to accept the hypotheses in which a mediating effect was predicted. In H3, a mediating effect of cooperation was predicted in the relationship between intellectual capital and performance. In H6, the mediating effect of cooperation on the relationship between MCS and performance was predicted. From the rejection of both hypotheses, it cannot be said that cooperation, as measured by the dimensions of information sharing, power constraint, joint problem solving, and flexibility, mediates these relationships. These results diverge from those of Beuren and Dal Vesco (2022) and Mahama (2006), prompting further research.

There are possible explanations for the lack of any mediating effect by cooperation in both relationships. First, although cooperation through information sharing may improve performance, it also opens avenues for opportunistic behavior (Cannon & Perreault, 1999). In the investigated relationship, opportunistic behavior may stem from the power (Heide & Miner, 1992) of the fuel distributor over the branded gas stations. A second explanation is that the quality and relevance of the information shared result in better performance, not just the quantity of information shared (Maher et al., 1979). In this respect, the discussion does not seem to center on the quality and relevance of the information shared but on its absence. Third, this perception of branded dealers may stem from the fact that the long-term relationships of the franchising system seem uncertain and complex, depending on the contractual ties established (Anzilago & Beuren, 2022).

These assumptions are anchored in the participants' answers to the research instrument. When asked about the accessibility and ease of use of the MCSs implemented by the fuel distributor (franchisor), the branded retailers (franchisees) indicated they did not perceive them as accessible and of easy applicability. When asked about the performance in the dimension of return/profitability, the answers from the branded retailers were that operating free (disassociated) from the franchising system allows cost leadership. When asked about flexibility, the branded resellers signaled a low level of adjustment of contracts in unexpected situations.

H7, which predicted a positive and significant relationship between cooperation and performance, did not find statistical support to accept it. This suggests that it is necessary to review the alignment of strategies regarding cooperation in the fuel franchising system. Matthes et al. (2021) warn that contrary effects may be anchored in possible strategic and operational incompatibilities among franchise partners. Yakimova et al. (2021) assert that a successful franchise requires a cohesive and cooperative network, which implies that franchisees and franchisors work together to achieve mutual goals.

These findings do not support the literature that encourages cooperation in inter-organizational relationships (Mouritsen & Thrane, 2006). Dant and Berger (1996) recognize that cooperation allows for the optimization of resources, as, generally, franchisees and franchisors make decisions cooperatively and interactively. The results also do not support the research that found a negative effect of cooperation on performance. Such negative effects include opportunistic behavior by partners (Das & Teng, 1998). Therefore, it is inferred that the characterizing elements of cooperation, information sharing, restriction on the use of power, joint problem solving, and flexibility (Heide & Miner, 1992) present little salient in the franchising system researched. This signals that there is a need for branded retailers and fuel distributors to interact and cooperate more with each other in order to add intangible value and improve the MCS in favor of the performance of the fuel franchise system as a whole.

5. CONCLUSION

The research results revealed that intellectual capital (human, structural, and relational) promotes improved performance and cooperation in the franchising system. Similarly, MCSs (performance evaluation system and socialization) translate into cooperation and performance. However, no mediating effect of cooperation was observed in the relationships of intellectual capital and MCSs with performance. Thus, it was concluded that cooperation did not enhance the effects of intellectual capital and MCS on the performance of the franchising system investigated.

The research results bring several theoretical implications. First, they contribute to the consolidation of the literature on the subject by presenting similarities with the results of Bontis (1998) and Cabrita and Bontis (2008) for intellectual capital and of Beuren and Dal Vesco (2022) and Mahama (2006) for MCS. Second, inconsistencies with previous literature, such as the absence of the mediating effect of cooperation in the relationships of intellectual capital and MCS with performance in the franchising system, instigate further research in order to find possible explanations for why Beuren and Dal Vesco (2022) and Mahama (2006) observed mediating effect of cooperation, while in the present research, the mediation was not confirmed. Third, in addition to bringing contributions to the theory of cooperation, we sought to advance the understanding and discussions about the social aspects (cooperation) that contribute to the improvement of the management of a franchising system, both for the formation of intellectual capital, the improvement of MCS and for more outstanding performance, to create value and obtain a competitive advantage for franchisees and franchisor.

Practical contributions can also be highlighted in the study, in the sense of evaluating the cooperation regarding the formation of intellectual capital and improvements in the MCS and the increase in performance provided by the contracts signed in the franchising system mode between the fuel distributor (franchisor) and the branded retailers (franchisees). It is conjectured that the constructs investigated, concatenated with some distinctive characteristics of the companies that compose the franchising system, provide elements to seek a greater collaborative alignment, such as the following: (i) management responsibility since fuel distributors propose a management with a verticalized hierarchical structure, but in most retailers this intellectual capital does not exist; (ii) size and size since larger companies can be propellants for the improvement of managerial control in small companies, but this is not observed in the improvement of managerial control; (iii) performance at the fuel distributors represents a continuous process, evaluated in general by the regional/sector coordinators and by means of goal reports, feedback, and surveys, while the retailers tend not to evaluate performance or do it by administrator observation, without any formality; (iv) financial and strategic resources, in which the cooperation contract can promote the optimization of financial resources in investments and innovations, optimal level of storage and logistics, employee training, comprehensive marketing, image and consolidated brand, however, in the resellers, there seems to be a prevalence of contractual impositions of the franchising system.

In analyzing the results, one must consider that they could be different if the respondents were from a single company, another industry, or applied in another strategic scenario. Therefore, future research can conduct case studies with fuel distributors (franchisors) and branded retailers (franchisees). The replication of this study in franchises from other sectors can bring contributions to improving the theoretical model. Indicators that may influence the latent variable were left out of the analysis. Thus, future research may consider other indicators and elements important to the franchisee-franchisor relationship, for example, the length of the relationship, which is decisive in controlling this relationship. Finally, other theoretical lenses can be adopted in future studies,

for example, the stewardship theory, widely used in social franchising studies and suggested by Dada and Watson (2012) for franchise relationship quality studies and even already considered as one of the phases of the franchisee-franchisor relationship (Schweiger et al., 2020).

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