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Alliance orientation and firm financial performance: industry-specific and crisis effects. Implications for coopetition dynamics

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Abstract

Purpose – This study examines how firms' alliance orientation impacts firm financial performance, varying across manufacturing and retail service industries and during the COVID-19 Crisis. Coopetition requires simultaneous competition and cooperation, sometimes competition-based coopetition, other times cooperation-based coopetition. In this study, alliance orientation was used as the observable construct, enabling us to interpret its implications within the broader literature on coopetition dynamics.

Design/methodology/approach – We used a sample of 330 Portuguese and Spanish firms across different industries and employed an Ordinary Least Squares model. The study spans 2013–2022, encompassing pre-COVID-19 and during COVID-19 pandemic periods.

Findings – Results show that alliance orientation positively influences financial performance in the retail services industry, particularly during COVID-19, where alliances mitigated the negative effects of firm age, sales growth opportunities and asset tangibility. No significant effect was observed in manufacturing firms, highlighting industry-specific dynamics.

Originality/value – The study offers threefold novelties. First, it assesses the impact of strategic alliance engagement on financial performance through an econometric model that considers the effect of strategic alliances on return on assets and includes control variables to express organizational complexity. Second, it highlights that the benefits of alliance strategies, which can enable coopetition dynamics, vary across industries.

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Third, it provides evidence that alliance orientation can be a strategic risk and crisis management mechanism, particularly during disruptive events such as the COVID-19 pandemic.

Keywords Alliance orientation, Coopetition, Financial performance, Crisis environment, Manufacturing firms, Retailing firms

Paper type Research article

1. Introduction

Alliances represent a strategic approach associated with coopetition dynamics wherein firms simultaneously cooperate and compete within a business ecosystem to sustain and enhance profitability (Czakon and Mucha-Kuś, 2014; Elias and Farah, 2021; Monticelli *et al.*, 2022; Zulu-Chisanga *et al.*, 2025). The concept of coopetition initially emerged to describe collaboration between competitors (Zhang and Li, 2024), but has since evolved into a broader strategic paradigm. Since the seminal work by Brandenburger and Nalebuff (1996), coopetition has been conceptualized as a subarea of strategy encompassing diverse types of alliances – not only among competitors, but also suppliers, substitutes, complementary firms and clients – within organizational ecosystems. These networks include alliances among competitors, suppliers, substitutes, complementary firms and even clients (Brandenburger and Nalebuff, 1996). Depending on their composition, strategic alliances may foster collective value creation aligned to network goals while firms simultaneously compete to appropriate that value (Klimas *et al.*, 2025; Ritala and Hurmelinna-Laukkanen, 2009).

Prior research on coopetition largely follows an antecedents-process-outcome framework. Dorn *et al.* (2016) categorized it into relationship nature, governance and management, and outcomes, while Gernsheimer *et al.* (2021) expanded this to antecedents, execution, interaction, outcomes and levels of coopetition. Despite different categorizations, two main streams emerge. The first conceptualizes coopetition as a strategic process, identifying its theoretical roots and advancing it as a paradigm within strategic management (Yami *et al.*, 2010; Klimas *et al.*, 2023), alongside factors influencing coopetition network efficiency (Bouncken and Fredrich, 2016). The second centers on coopetition's outcomes, assessing its impact on firm performance (Crick and Crick, 2021, 2025; Klimas *et al.*, 2025; Modi and Cantor, 2021; Oum *et al.*, 2004).

This second stream examines financial and non-financial outcomes, both positive and negative. Coopetition may reduce costs (Kavirathna *et al.*, 2019) or increase profitability through market expansion or productivity gains (Oum *et al.*, 2004). Nonfinancial gains, which may translate into financial gains, such as enhanced innovation capacity (Costa *et al.*, 2024; Elias and Farah, 2021) and improved access to knowledge and resources (Bacon *et al.*, 2020; Lagerström *et al.*, 2023), can also translate into financial advantages. However, coopetition can yield negative consequences, including opportunism, which may undermine financial performance (Gernsheimer *et al.*, 2021; Zulu-Chisanga *et al.*, 2025).

The growing body of literature on coopetition consolidates its role as a paradigm explaining contemporary markets (Elias and Farah, 2021; Minà and Dagnino, 2025; Rai *et al.*, 2023). Yet, its relationship with financial performance remains inconclusive (Xie *et al.*, 2023). While studies indicate positive associations with financial, market and innovation performance (e.g. Bouncken and Kraus, 2013; Crick and Crick, 2021; Xie *et al.*, 2023), or export performance (Crick and Crick, 2025; Monticelli *et al.*, 2020), findings diverge when analyzing the dynamics and complexity of business environments (Wu *et al.*, 2010).

While much of the literature explores coopetition conceptually or via case-based approaches, large-scale empirical studies often rely on proxies, such as alliance engagement, to infer coopetitive behavior, due to the absence of detailed data on partner identities.

Given coopetition's potential to influence financial performance positively or negatively (Modi and Cantor, 2021; Zulu-Chisanga *et al.*, 2025), it is imperative to deepen the understanding of its effects. Existing studies remain limited, particularly in accounting for industry-specific and crisis-related variations in coopetition dynamics.

This study addresses these gaps by examining the impact of firms' alliance orientation on financial performance [1]. Specifically, we investigate three research questions:

RQ1. Does alliance orientation positively affect firm financial performance?;

RQ2. Do these effects differ between manufacturing and retail service industries?

RQ3. Does alliance orientation contribute to sustaining financial performance during crises?

To answer these research questions, a quantitative methodology employing ordinary least squares (OLS) regression was used on a sample of 330 Portuguese and Spanish firms across manufacturing, retail services and other sectors. The analysis spans the 2013–2022 period and uses the number of strategic alliances reported in the Orbis Europe database as a proxy for alliance orientation. While this variable does not allow direct identification of alliances between competitors, it is situated within the broader theoretical framing of coopetition as a network-based strategic resource. The crisis scenario is assessed by comparing the alliance orientation's impact on financial performance before and during the COVID-19 pandemic.

This study provides new insights into the performance implications of alliance orientation, interpreted within the coopetition framework, across different industries and economic conditions, particularly concerning crisis resilience and risk management. Two key contributions emerge. First, we evaluate the impact of alliance orientation on financial performance through an econometric model that assesses the effect of strategic alliances on return on assets (ROA), incorporating control variables for firm complexity, namely firm size, business cycle, levels of indebtedness, tangibility and growth opportunities. This industry-specific analysis supports the premise that alliance orientation benefits are not universal across economic sectors. Second, this study highlights how alliance-based strategies may help firms maintain financial stability during periods of crisis, highlighting their importance as a core business strategy for risk management and resilience.

2. Theoretical background

2.1 Coopetition dynamics as a strategic relational resource

Early coopetition research focused on cooperation between competitors (Bengtsson and Kock, 2000). However, broader approaches emerged from Brandenburger and Nalebuff's (1996) value network framework, which incorporates the relationships among competitors, suppliers, substitute firms and customers. This shift redefined coopetition as a network of alliances involving diverse stakeholders.

The concept of coopetition was amplified to be considered as "*a hybrid behavior resulting from the cooperation-competition that occurs between networks, organizations, or within organizations, including relationships between competitors, suppliers, complementary businesses, government agencies, local population, and customers as a result of joint actions to achieve a common goal despite individual interests, thus generating co-production*" (Chim-Miki and Batista-Canino, 2018, p. 79).

Nowadays, coopetition is understood as a paradoxical relationship involving simultaneous cooperative and competitive interactions between two or more actors, regardless of their position in the value chain (Bengtsson and Kock, 2014; Costa *et al.*, 2024). This perspective shifts the focus from competing with rivals to competing with any partner for different benefits, i.e. a broader set of interdependent relationships that shape strategic alliances inside the ecosystem (Minà and Dagnino, 2025). Zulu-Chisanga *et al.* (2025) claim that coopetition implies organizations working together, creating benefits for themselves and their partners, being a more realistic way to explain the win-win market game. In this framework, a strategic alliance may serve as a driver for coopetition since it is situated within the broader theoretical framing of coopetition as a network-based strategic resource (Bouncken and Fredrich, 2016; Devece *et al.*, 2019).

This expanded view of coopetition is consistent with the theoretical assumption that inter-organizational cooperation arises when firms form alliances to pursue shared objectives. Such arrangements enable access to partners' knowledge, resources and capabilities, foundational elements common to both strategic alliances and coopetition networks, as emphasized by Brandenburger and Nalebuff (1996) and Chim-Miki and Batista-Canino (2018, 2024).

Alliance orientation and network size enhance knowledge leveraging, fostering improved performance (Bouncken and Fredrich, 2016). The centrality and positioning of firms within alliance networks influence interdependencies and collaborative expansion (Bolivar *et al.*, 2023). Although firms engage in multiple alliances, network positioning shapes coopetition dynamics and consequently affects performance outcomes.

Costa *et al.* (2024) proposed and tested a taxonomy of coopetition based on five strategic alliance compositions: (1) pure coopetition, alliances with firms of the same group and competitors; (2) vertical coopetition, alliances with suppliers; (3) supportive coopetition, alliances with consulting firms, labs, universities and/or public research institutes; (4) hybrid coopetition, alliances with at least two different types of stakeholders; (5) co-creation coopetition, alliances with public–private client sand nongovernmental organizations (NGOs). In the context analyzed, they found different effects from each type of coopetition typology. Costa *et al.* (2024) also showed that alliances with direct competitors are not the most effective strategy to leverage innovative performance in knowledge-intensive business services (KIBS), reaffirming the broad view of the coopetition perspective as no longer a simple concept of simultaneous cooperation and competition with direct competitors.

As a relational resource, alliance orientation enables firms to combine complementary assets to improve performance (Crick and Crick, 2023; Klimas *et al.*, 2025). Several theoretical roots of coopetition were previously defined in the literature, among which the resource dependence theory and the resource-based view (RBV) stand out (Klimas *et al.*, 2023). RBV Theory highlights resources and capabilities as sources of competitive advantage under the VRIN framework (Barney, 1991). A relational perspective was incorporated into the Expanded RBV Theory to integrate alliances, networks, and relationships as valuable strategic assets (Barney, 2018). In this sense, coopetition fosters synergies by facilitating resource access, knowledge sharing, and innovation. However, its inherent tensions limit its viability, as sustaining alliances requires strategic alignment, trust and long-term commitment (Klimas *et al.*, 2025). When effectively managed, coopetition and alliance orientation become embedded in organizational strategy and culture, generating advantages that persist even during crises, making it a sustainable competitive resource (Crick, 2021).

Following Brandenburger and Nalebuff (1996) and Bengtsson and Kock (2000), alliances and coopetition are distinct: alliances may involve cooperation only, while coopetition requires simultaneous cooperation and competition. Our use of alliance orientation is not intended to redefine coopetition, but to serve as an empirically observable construct that may facilitate coopetition dynamics. We build on Costa *et al*. (2024) and Czakon and Czernek-Marszałek (2025), who propose taxonomies of coopetition actions, to argue that alliances provide one pathway through which coopetition can emerge.

This distinction is important: alliance orientation has been used as a driver of coopetition in prior studies (Bouncken and Fredrich, 2016), but not as a one-to-one proxy. In our study, alliance orientation is operationalized empirically, while coopetition remains the broader theoretical frame. We therefore do not claim that all alliances in our dataset are coopetitive, but that alliance orientation increases the likelihood of firms engaging in coopetitive interactions.

2.2 Alliance orientation and firm performance

Organizations often establish cooperative relationships through alliances to achieve common goals among diverse partners across the supply chain. This forms the dynamics of coopetition, which is understood as cooperation in networks of allied companies interacting in an ecosystem while competing to obtain benefits. Prior research documents that these alliances can generate many benefits, directly or indirectly affecting firm performance (Costa *et al.*, 2024; Crick and Crick, 2025; Klimas *et al.*, 2025). A meta-analysis identified four primary performance measures in coopetition research (Xie *et al.*, 2023): financial, market, innovation and customer performance. Partnerships can reduce costs, increasing profit margins (Combs and Ketchen, 1999).

Competitive advantages arising from alliances can enhance market competitive positioning, positively impacting firm performance (e.g. Arend and Amit, 2005; Hung *et al.*, 2015; Klimas *et al.*, 2025; Ritala, 2012). However, this link between competitive advantage and financial performance remains uncertain, as increased innovation capacity (Cho and Lee, 2019; Fernandes *et al.*, 2019; Ritala, 2012) does not always translate into financial gains. Additionally, coopetition's positive effect on return on equity is beneficial up to a certain limit (Luo *et al.*, 2007). This non-linear relationship between competitive advantage and firm performance underscores the need to investigate whether alliance orientation consistently translates to positive financial performance (H1), addressing RQ1.

H1. A firm's alliance orientation positively affects financial performance.

The performance implications of alliance orientation depend on management strategies. An effective balance between cooperation and competition maximizes financial and innovation benefits, while mismanagement can lead to opportunistic behavior and knowledge spillovers, negating financial gains (Bouncken and Fredrich, 2012). Recent findings distinguish between short- and long-term effects, demonstrating that while coopetition improves market positioning and efficiency in the short term, sustained financial performance requires strategic alignment and dynamic capabilities (Ricciardi *et al.*, 2022). Adaptive governance mechanisms are necessary to ensure short-term gains do not compromise long-term stability.

Contextual factors further complicate the alliance orientation-performance relationship. A non-linear (quadratic) relationship accounts for firm size, age, competitive intensity, and export activity as moderating variables, suggesting excessive coopetition may harm financial performance (Crick and Crick, 2021). In the export context, financial performance measured by profitability, sales volume and growth (Zou *et al.*, 1998) indicates a positive relationship between coopetition and financial outcomes when mediated by export agents (Monticelli *et al.*, 2022). Performance has been conceptualized through various indicators, including competitive advantage (Ritala, 2012) and crisis survival (Crick and Crick, 2020; Katsikeas *et al.*, 2016), while financial metrics such as stock market performance, market capitalization and earnings have also been widely used (Bolton, 2004; Rao *et al.*, 2004; Srinivasan *et al.*, 2009).

The impact of alliances on productivity and profitability remains contingent on cooperation intensity. Financial measures estimating productivity and profitability show that horizontal strategic alliances contribute to productivity gains, though profitability depends on achieving high-level cooperation among competitors (Oum *et al.*, 2004).

Incorporating early and recent studies, such as those by Bouncken and Fredrich (2012) and Ricciardi *et al.* (2022), strengthens the argument that coopetition has complex, evolving effects on firm performance. While early research underscores managerial coordination as key to leveraging coopetition benefits, recent findings highlight strategic adaptability as essential for sustaining long-term performance advantages.

2.3 Alliance orientation and industry-based strategic fit

Miná and Dagnino (2025) highlighted that interorganizational alliances function not solely as a defense mechanism against competitive pressures but also as instruments to exert greater competitive force on rivals. In this sense, firms engage in a pursuit of alliances as they recognize their potential to enhance survival probabilities and attract a greater number of strategically valuable cooperators. However, the differences found in studies on coopetition and financial performance highlight the need for strategic alignment among partners (Czakon and Mucha-Kuś, 2014; Oum *et al.*, 2004). Feela (2020) corroborates this, demonstrating a positive impact of coopetitive alignment on financial performance. Several factors influence business alliance performance, including network dynamics and configuration, shaped by the type and number of participants (Bouncken and Fredrich, 2016). Bengtsson and Kock (2000) argue that cooperation and competition vary based on firms' position in the value chain *vis-à-vis* to clients. Closer proximity to clients intensifies competition while reducing cooperation.

Prior research documents various conditions affecting coopetition outcomes, including market commonality (Wu and He, 2022), network typology (Costa *et al.*, 2024), whether horizontal, vertical or mixed (Chim-Miki and Batista-Canino, 2017), type of industry (Xie *et al.*, 2023), number of participants (Bouncken and Fredrich, 2016), and degree of complementarity and interdependence among partners (Elias and Farah, 2021; Ritala, 2012) among others. These contingencies influence cooperation levels and, therefore, their financial performance (Oum *et al.*, 2004).

Cultural similarities among firms or homogeneous markets present dual effects on coopetition. Shared norms, co-location, values and business practices facilitate coopetition, whereas cultural differences, despite offering complementary capabilities and fostering innovation-driven coopetition, may act as barriers (Felzensztein *et al.*, 2019, Felzensztein and Deans, 2013). However, the country's economic development level does not determine engagement in coopetitive alliances (Felzensztein *et al.*, 2019). As industry and service sectors form different business ecosystem structures, both the drivers of strategic alliances formation and the outcomes of these partnerships differ. Examining the effect of alliance orientation on financial performance within manufacturing and services is essential, given their distinct structural characteristics and varying degrees of coopetitive alignment (Bengtsson and Kock, 2000; Nieto *et al.*, 2024). Based on these considerations, we address RQ2 and establish hypotheses 2a and 2b.

H2a. Alliance orientation positively impacts financial performance in retail service industries.

H2b. The financial performance benefits of alliance orientation are positive in manufacturing industries.

2.4 Alliance orientation and crisis environment

Coopetition serves both market share expansion and survival strategies (Chung and Cheng, 2019; Crick and Crick, 2020; Sabel *et al.*, 2024). Resource dependence theory offers a key explanation for the formation of strategic alliances, as firms seek access to resources, capabilities and opportunities beyond their individual reach (Crick and Crick, 2021, 2025; Klimas *et al.*, 2023; Ritala, 2012). Strategic alliances impact the business ecosystem in multifaceted ways, balancing potential risks of opportunism with overall positive outcomes (Chung and Cheng, 2019).

Periods of crisis, such as the COVID-19 pandemic, intensify the need for alliance orientation as firms recognize alliances as essential for risk and cost-sharing, aiding survival (Crick and Crick, 2020; Sabel *et al.*, 2024). Organizational learning was enhanced during the turbulent times of the COVID-19 crisis, emphasizing the need for alliance orientation as a strategy for socio-ecological value creation (Grant and Wunder, 2021). The COVID-19 pandemic undeniably accelerated the adoption of coopetition in business models (Arslanbaş *et al.*, 2020; Crick and Crick, 2020; Fortune, 2020), and it was considered a successful strategy for maintaining the firm's performance during the crisis (Sabel *et al.*, 2024). Therefore, to address RQ3, the following hypotheses are proposed:

H3a.i. Alliance orientation positively impacts financial performance in periods of crisis for retail service industries.

H3a.ii. Alliance orientation positively impacts financial performance in periods of pre-crisis for retail service industries.

H3b.i. Alliance orientation positively impacts financial performance in periods of crisis in manufacturing industries.

H3b.ii. Alliance orientation positively impacts financial performance in periods of pre-crisis in manufacturing industries.

The concept of "coopetition-driven change" highlights its transformative impact on business models. While coopetition enhances firm survival, its competitive advantages do not always guarantee financially positive results (Bonel and Rocco, 2007). Recent crises validated coopetition's role as a survival mechanism, with firms and governments forming alliances for critical supply chains and vaccine development (Arslanbaş *et al.*, 2020; Crick *et al.*, 2023; Ryu *et al.*, 2019; Sabel *et al.*, 2024). However, research on its effectiveness in mitigating financial instability remains underdeveloped (Crick and Crick, 2020; Castro and Moreira, 2024).

In addition to fostering resource complementarity (Arslanbaş *et al.*, 2020; Klimas *et al.*, 2023), strategic alliances provide crucial support for decision-makers with limited crisis management expertise (Chung and Cheng, 2019; Crick and Crick, 2020). The contemporary business landscape exposes firms to a growing number of unforeseen events, including pandemics, technological advancements, wars, global financial crises and climate deterioration, among others. This demands a stronger strategic orientation toward collaborative alliances as part of a firm's survival plan (Arslanbaş *et al.*, 2020) and an opportunity to improve a firm's resilience (Zhang and Li, 2024).

Figure 1 presents the conceptual model, proposing alliance orientation as a performance-enhancing strategy. The relationship is moderated by industry type (retail services *vs* manufacturing) and pre-crisis and crisis periods (COVID-19).

3. Data description, methodology and empirical specification

This research investigates the relationship between alliance orientation, proxied by a firm's reported strategic alliances, and financial performance in the manufacturing and service sectors during the COVID-19 pandemic. Within our sample, the alliances occur in environments marked by overlapping markets, resource interdependencies and shared strategic goals – elements that, based on the literature (e.g. Zulu-Chisanga *et al.*, 2025), indicate the presence of coopetitive dynamics. Empirical tests were conducted using a sample of firms that reported strategic alliances, drawn from the Bureau van Dijk's Orbis Europe

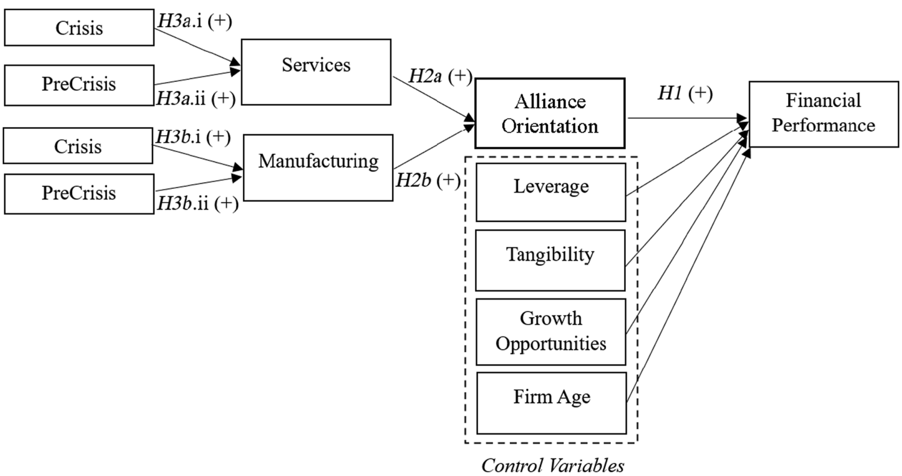

Figure 1. Conceptual model. Source: Authors' own elaboration

database, spanning 2013–2022. A limitation of the Orbis Europe database is that it does not specify whether alliances involve competitors. This means we cannot empirically verify that all alliances are coopetitive. Instead, we interpret the number of alliances as a measure of alliance orientation, which prior literature positions as an enabling factor for coopetition (Costa *et al*., 2024; Czakon and Czernek-Marszałek, 2025). Consequently, our results should be read as evidence on the financial performance implications of alliance orientation, with theoretical implications for coopetition dynamics, rather than a direct test of coopetition *per se*. The dataset includes 330 Spanish and Portuguese firms with 3,300 firm-year observations.

Following prior research (e.g. Crick and Crick, 2021; Oum *et al*., 2004; Ryu *et al*., 2019), an ordinary least squares (OLS) regression model was estimated with the following specifications:

$$Perf_{it} = \beta_0 + \beta_1 Alliance\_Orientation_{it} + \beta_2 ControlVariables_{it} + \varepsilon_{it}$$

where $Perf_{it}$ denotes firm performance, measured by the ratio of earnings before interest, tax, depreciation and amortization (EBITDA) to total net assets; $Alliance\_Orientation_{it}$ is proxied by the natural logarithm of number of strategic alliances reported by the firm; $ControlVariables_{it}$, a vector of i firm-level control variable, including, leverage, tangibility, sales growth and age; $Leverage_{it}$ is measured as the ratio of long-term and short-term debt to total net assets; $Tangibility_{it}$ is measured as the ratio of tangible fixed assets to total net assets; $GrowthOpport_{it}$ is proxied by the sales growth; Age_{it} is firm life cycle position, proxied by the natural logarithm of number of years since the incorporation of the firm; ε_{it} is the error term with zero mean and constant variance. Subscripts refer to firm i at time t. All variable distributions were winsorized at the top and bottom 5th percentile.

The conceptual model tested the alliance orientation-financial performance relationship using the COVID-19 pandemic as a crisis context. The model was run three times: for all firms, for services firms only and for manufacturing firms only.

4. Results and discussion

Table 1 presents the sample distribution by industry and country. The initial classification follows the primary sections of the NACE Rev. 2 system. Mota and Coutinho dos Santos

Table 1. Industry distribution

Panel A: Industry distribution Industry	N° of firms	%
Manufacturing	50	15.15
Wholesale and retail trade	100	30.30
Others (Agriculture, forestry and fishing; Information and communication; Construction; Mining and Natural Resources; Electricity, gas, steam and air conditioning supply; Real state; Professional, scientific and technical activities; Water supply; sewerage, waste management and remediation activities; Accommodation and food service activities; Transportation and storage; Administrative and support service activities; Arts, entertainment and recreation)	180	54.55
	330	

Panel B: Country composition Country		
Spain	241	73.03
Portugal	89	26.97

Source(s): Authors' own elaboration

(2022) noted that the Orbis database primarily comprises firms from the wholesale and retail trade and manufacturing industries. Therefore, Panel A confirms that all major nonfinancial industries are represented, with a concentration in wholesale and retail trade (30.30%) and manufacturing (15.15%), collectively accounting for 45.45% of the sample.

Panel B documents Spain as the most represented country in the sample (73.03%), while Portugal accounts for 26.97%, reflecting the real distribution of firms between the two countries. To ensure a balanced panel dataset, only firms active throughout the full sampling period were included; those with incomplete historical financial data were excluded.

Table 2 summarizes the descriptive statistics of the variables analyzed. Panel A displays summary statistics for the full sample, including the mean, median, coefficient of variation (CV), minimum (Min) and maximum (Max). Panel B reports Wilcoxon-Mann-Whitney tests comparing medians between manufacturing and wholesale and retail trade firms (for simplicity reasons, from now on they are going to be considered as retail service firms). Pairwise comparisons in Panel B reveal statistically significant differences at the 1 and 10% levels in the medians of alliance orientation, age, tangibility, and leverage between retail service and manufacturing firms. Conversely, medians for performance and growth opportunities do not differ significantly between the two groups at conventional significance levels. These findings support the assumption that retail service firms engage in a higher level of strategic alliances than manufacturing firms, potentially indicating a wider range of risk management options.

Table 3 presents correlation coefficients ranging from −0.1728 to 0.2280. The positive correlation between alliance orientation and performance is statistically significant at the 1% level ($\rho = 0.0708$), and in line with previous research (e.g. Oum *et al.*, 2004). The model's joint

Table 2. Summary statistics

Panel A

Variables	Full sample (3,300 firm-year obs.) Mean	Median	CV	Min	Max
Perf	0.05274	0.03932	1.54976	−0.13428	0.28189
Alliance_Orientation	1.26947	1.38629	0.81024	0.00000	4.07754
GrowthOpport	0.07025	0.04105	3.68486	−0.57201	1.16692
Leverage	0.55378	0.57165	0.47612	0.04504	0.99574
Age	3.13537	3.17805	0.16641	1.60944	4.09435
Tangibility	0.13177	0.06474	1.18113	0.00000	0.55050

Panel B

Variables	Retail services (1,000 firm-year obs.) vs manufacturing (500 firm-year obs.) Retail Median	Manufacturing	Wilcoxon–Mann–Whitney test
Perf	0.0403	0.0435	−0.162
Alliance_Orientation	1.7918	1.0986	−10.724***
GrowthOpport	0.0388	0.0467	0.183
Leverage	0.5695	0.5656	1.757*
Age	3.2581	3.3322	4.349***
Tangibility	0.0716	0.1610	9.770***

Note(s): *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

Source(s): Authors' own elaboration

Table 3. Correlations and VIF

	1 *Perf*	2 *Alliance_Orientation*	3 *GrowthOpport*	4 *Leverage*	5 *Age*	6 *Tangibility*
1	1.0000					
2	0.0708***	1.0000				
3	0.2280***	0.0432**	1.0000			
4	−0.1728***	0.0003	0.0462**	1.0000		
5	−0.1331***	−0.0321*	−0.1144***	−0.0499***	1.0000	
6	−0.0491***	−0.0274	−0.0318	0.0855***	0.1075***	1.0000
VIF	–	2.51	1.08	5.15	6.71	1.78
1/VIF	–	0.3981	0.9290	0.1941	0.1490	0.5607
Mean VIF	3.45					

Note(s): *, **, *** indicate significance at the 10, 5 and 1 percent level, respectively
Source(s): Authors' own elaboration

VIF is 3.45, well below the critical threshold value of 10, showing no potential multicollinearity problems.

Table 4, based on OLS estimators, reveals a positive and statistically significant relationship (1% level) between alliance orientation (0.52%) and financial performance via strategic alliances. These results support H1 and are in line with previous studies from Ritala and Hurmelinna-Laukkanen (2009) and Crick and Crick (2021), who documented that coopetition, often operationalized through strategic alliances, can lead to enhanced financial outcomes. This relationship stems from shared resources, increased market access, and the synergistic effects of collaboration and competition within the same network or ecosystem (Combs and Ketchen, 1999; Hung *et al.*, 2015; Zhang and Li, 2024).

Table 4. Alliance orientation and performance: services *vs* industry

Independent variables	OLS (1) All firms	OLS (2) Retail service firms	OLS (3) Manufacturing firms
Alliance_Orientation	0.0052***	0.0091***	−0.0061
	(3.48)	(4.24)	(-1.63)
GrowthOpport	0.0678***	0.0776***	0.0912***
	(11.45)	(7.83)	(5.75)
Leverage	−0.0720***	−0.0950***	−0.1428***
	(-12.40)	(-10.18)	(-9.26)
Age	−0.0264***	−0.0257***	−0.0549***
	(-8.46)	(-4.89)	(-6.87)
Tangibility	−0.0207**	−0.0604***	−0.0157
	(-2.10)	(-3.42)	(-0.80)
Constant	0.1560***	0.1754***	0.3144***
	(14.17)	(9.49)	(10.27)
Observations	2,655	850	424
R-squared	0.1358	0.2243	0.2943
Industry dummies	Yes		
Year dummies	Yes	Yes	Yes

Note(s):
1: *, **, *** indicate significance at the 10%, 5 and 1% level, respectively
2: Values enclosed in parentheses are the t-statistics for coefficients
Source(s): Authors' own elaboration

Table 4 further indicates several key aspects: (1) growth opportunities positively and significantly influence performance (1% level); and (2) firm age, financial leverage, and tangibility negatively impact profitability (1 and 5% levels, respectively). The inverse relationship between a firm's life cycle stage and financial performance is in line with previous studies. Growth opportunities correlate positively with firm performance, indicating potential for future expansion and increased earnings (e.g. Myers, 1977). Conversely, older firms, with potentially lower growth prospects, often exhibit lower profitability due to reduced growth prospects. High financial leverage can imply higher risk and interest obligations, negatively affecting profitability (Modigliani and Miller, 1958). Similarly, tangibility, which reflects a higher proportion of fixed assets, may constrain profitability, especially in fast-changing industries where flexibility and adaptability are crucial for success (Titman and Wessels, 1988).

Table 4 reveals a positive and statistically significant relationship (1% level) between alliance orientation (0.91%) and profitability for retail services firms, but not for the manufacturing industry, confirming H2a. Existing studies suggest industry-specific variations in alliance orientation's impact (Bouncken and Kraus, 2013; Costa *et al.*, 2024; Ritala, 2012). Retail services may derive greater benefits from alliance orientation due to the intrinsic reliance on relationships, networks and collaborative strategies. In contrast, the manufacturing industry, characterized by a stronger reliance on tangible assets and deep-rooted operational processes, exhibits a weaker association between alliance orientation and profitability.

4.1 Alliance orientation and performance: a strategy for times of crisis

We tested the effect of alliance orientation on firm performance in a crisis context, using COVID-19 as an exogenous event. Table 5 documents a positive and significant relationship

Table 5. Alliance orientation and performance in times of crisis

Independent variables	OLS Performance Retail service firms Pre-COVID-19	OLS Performance Retail service firms during COVID-19	OLS Performance Manufacturing firms Pre-COVID-19	OLS Performance Manufacturing firms during COVID-19
Alliance_Orientation	0.0067***	0.0151***	−0.0114**	0.0093
	(2.62)	(3.28)	(−2.52)	(1.20)
GrowthOpport	0.0808***	0.0697***	0.0696***	0.1327***
	(6.52)	(3.62)	(3.39)	(4.57)
Leverage	−0.0779***	−0.1239***	−0.1457***	−0.1377***
	(−6.85)	(−6.43)	(−7.80)	(−4.57)
Age	−0.0257***	−0.0230*	−0.0617***	−0.0234
	(−4.33)	(−1.79)	(−6.73)	(−1.27)
Tangibility	−0.0623***	−0.0560	−0.0131	−0.0137
	(−2.97)	(−1.45)	(−0.55)	(−0.35)
Constant	0.1695***	0.1824***	0.3432***	0.1901***
	(8.19)	(3.97)	(9.89)	(2.65)
Observations	578	195	294	98
R-squared	0.2004	0.3013	0.3036	0.3163
Year dummies	Yes	Yes	Yes	Yes

Note(s):
1: *, **, *** indicate significance at the 10%, 5% and 1% level, respectively
2: Values enclosed in parentheses are the t-statistics for coefficients
3: 2013–2019 – pre-COVID-19 pandemic; 2021 during COVID-19 pandemic

Source(s): Authors' own work

between alliance orientation and profitability for retail service firms, both pre-COVID-19 (0.67%) and during the COVID-19 period (1.51%), while manufacturing firms exhibit a negative effect pre-COVID-19 and no significant effect during COVID-19. These results confirm H3a.i and H3a.ii. The increased benefit of alliance orientation for service firms during COVID-19 may stem from their greater reliance on flexible, network-based, and digital strategies in response to the crisis (Bouncken and Kraus, 2013; Ritala, 2012; Sabel *et al.*, 2024). Conversely, the negative pre-COVID-19 effect and lack of significant impact during COVID-19 for manufacturing firms may reflect the sector's reliance on physical assets and processes, which alliance orientation strategies may not effectively enhance.

The sector-specific impacts of alliance orientation strategies, with a positive effect in the retail services but not in manufacturing, highlight the role of industry characteristics in determining their efficacy. While previous studies indicate that coopetition serves as a survival strategy during crises (Chung and Cheng, 2019; Crick and Crick, 2023; Sabel *et al.*, 2024), our findings indicate that this can be true for the service sector but not necessarily for manufacturing.

The varying effects of alliance orientation across periods, particularly the positive impact for retail service firms during COVID-19, suggest that external factors such as market conditions and crises-generated instability shape the effectiveness of alliance orientation (Oum *et al.*, 2004; Sabel *et al.*, 2024). In contrast, the manufacturing industry's lesser responsiveness to alliance orientation may be attributed to its reliance on tangible assets and established operational processes, which are less amenable to the benefits of alliance orientation strategies.

As during crises, firms face increased financial constraints, market uncertainty, and resource scarcity, alliance orientation may provide strategic advantages that help firms navigate crises more effectively. Several key reasons may explain why alliance orientation works better during crises: resource pooling and cost efficiency; market stability and risk reduction; innovation and adaptability; access to new markets; and strengthening competitive position. By leveraging these benefits, firms engaged in alliance orientation may better sustain financial performance, recover faster from downturns and emerge stronger post-crisis. This collective response highlights alliance orientation's strategic importance as a crisis management tool, highlighting its role in enhancing financial resilience.

These findings reinforce that alliance orientation enhances financial performance in service sectors and during crises, but they do not imply that all alliances are coopetitive. Instead, our results indicate that alliances can serve as enabling mechanisms for coopetition by creating opportunities for both collaborative and competitive interactions.

5. Conclusions

This study investigates the impact of alliance orientation on firms' financial performance, addressing three research questions and contributing to the limited literature on this topic. Notably, it expands understanding of alliance orientation and coopetition dynamics in unstable contexts. We adopted strategic alliances as a driver of alliance orientation following the theoretical stream that Brandenburger and Nalebuff (1996) and Chim-Miki and Batista-Canino (2018) proposed, which means that coopetition extends beyond bilateral rivalries to encompass value networks comprising competitors, suppliers, institutional organizations, substitute firms and customers. This broadened paradigm repositions coopetition as a network-based phenomenon involving multiple stakeholders represented by strategic alliances.

To answer RQ1, OLS regression was employed using the entire sample, revealing a positive association between alliance orientation and financial performance. To address RQ2, the same model was applied separately to retail service and manufacturing firms, documenting industry-specific effects, with alliance orientation influencing financial performance differently across industries.

The results indicate that alliance orientation positively influences the financial performance of retail service firms but does not affect manufacturing firms. This finding complements prior results (Oum *et al.*, 2004) documenting coopetition's positive effect on productivity. However, our study extends this finding by suggesting that a high level of cooperation between competitors is crucial for a positive impact on profitability. To further emphasize profitability, firm performance was measured using the EBITDA-to-total-net-assets ratio, thereby focusing more on profitability.

Our findings deviate from theoretical assumptions, suggesting that alliance orientation's impact varies along the value chain. Bengtsson and Kock (2000) found that firms closer to the consumer tend to prioritize competition over cooperation, whereas the opposite holds for firms further upstream. Thus, strategic alliances were expected to have a weaker effect on retail service firms than on manufacturing firms. However, our results indicate otherwise.

It is important to note that Bengtsson and Kock (2000) assessed competitive advantages, such as cost reduction in new product development, shorter lead times, and shared core competencies, rather than financial performance. Our study complements the literature on coopetition by demonstrating that while coopetition fosters competitive advantages, these do not always translate into positive financial gains. This underscores the need for managers to carefully consider and appropriately implement coopetition strategies, ensuring alignment with the firm's goals and market dynamics.

To address RQ3, we ran the model considering different time periods to assess the effects of strategic alliances in unstable contexts, such as the COVID-19 pandemic. Our findings show that alliance orientation helped retail service firms maintain financial performance during the COVID-19 crisis. This reinforces the answer to RQ2, highlighting the sector-specific effects, even amid market turbulence, when network participation typically increases. For manufacturing firms, the impact of alliance orientation on performance was negative and not statistically significant. Our findings align with Bonel and Rocco (2007), who emphasize business model transformations driven by coopetition, and support Sabel *et al.*'s (2024) assertion regarding the critical role of coopetition in ensuring firm survival. However, they also stress that firms need to navigate the inherent risks associated with coopetition, as competitive advantage may not always yield financial gains. The overall findings hold both theoretical and empirical implications.

5.1 Research theoretical implications

This study provides two main valuable insights to the literature: empirical contribution, regarding alliance orientation and firm performance; theoretical contribution, regarding clarifying coopetition dynamics.

First, it provides evidence on the financial performance implications of alliance orientation. Using a panel of 330 Portuguese and Spanish firms across a ten-year period, we document that alliance orientation is positively associated with financial performance in retail services, particularly during the COVID-19 crisis, while no effect is observed in manufacturing. These findings extend alliance research by documenting industry-specific contingencies that shape the alliance–performance link and demonstrating the crisis management role of alliances in mitigating the negative effects of age and asset tangibility. This positions alliance orientation as a strategic capability that enhances resilience under turbulence, offering new insights into how alliances sustain firm performance beyond innovation or market expansion outcomes typically studied in the literature.

Secondly, although our empirical construct is alliance orientation, we interpreted the results within the coopetition literature. We explicitly distinguish between the two definitions, and we positioned alliance orientation as a driver and enabler of coopetition, rather than a direct proxy. By engaging in multiple alliances, firms expand their networks and increase the likelihood of encountering competitors, thereby creating conditions under which coopetition actions may emerge (Costa *et al*., 2024; Czakon and Czernek-Marszałek, 2025). This clarification contributes to theory by sharpening the conceptual boundary between alliances and coopetition, showing how alliances provide structural preconditions for coopetitive dynamics, and advancing coopetition research through quantitative evidence, complementing prior case-based approaches.

5.2 Research practical implications

The study offers valuable managerial and policy implications. For managers in retail services, the findings indicate that alliance orientation enhances financial performance, particularly during crises. Consequently, managers should view alliances not merely as tools for growth but also as resilience mechanisms that can mitigate the effects of market turbulence. In contrast, the results for manufacturing managers suggest that alliances may not yield immediate financial benefits. This implies that their pursuit of inter-firm partnerships should be guided by longer-term or innovation-oriented objectives.

For policymakers, the study underscores the importance of fostering an environment that supports cross-sector alliances. Such partnerships are crucial for maintaining economic resilience and competitiveness, especially during periods of uncertainty. By distinguishing between alliances and coopetition, this study cautions managers against the assumption that all alliances will inherently generate coopetitive benefits. Instead, managers should critically assess whether partnerships contain both cooperative and competitive elements and, based on this assessment, design appropriate governance mechanisms.

5.3 Research limitations and further avenues to coopetition studies

This study has certain limitations. The focus on specific sectors (services and manufacturing) and its regional scope limited to Portuguese and Spanish firms may limit the generalizability of the findings to other industries and geographical contexts. Additionally, reliance on financial performance as the sole measure of success may overlook other important outcomes of alliance orientation, such as innovation or market expansion. The study’s timeframe may not adequately capture the long-term effects of coopetitive strategies. There is limited analysis of industry differences, since we do not present data for firms not engaged in alliance orientation for different industries and time periods. Finally, the key limitation of this study is that our dataset does not allow identification of whether alliances involve direct competitors. As a result, while we interpret our results through the coopetition literature, we acknowledge that alliance orientation is not a direct measure of coopetition. Rather, it should be understood as a construct that enables coopetitive dynamics by expanding relational networks where cooperation and competition may coexist.

Future research should build on taxonomies such as Costa *et al*. (2024) or repertoires of coopetition actions (Czakon and Czernek-Marszałek, 2025) to more precisely classify alliance types and capture coopetition empirically. Finally, further research should explore alliance orientation across a wider range of industries and geographic contexts to gain a more comprehensive understanding of its impacts. Longitudinal research designs could provide valuable insights into the long-term effects of relational strategies. Examining nonfinancial outcomes, such as innovation, employee satisfaction or environmental impact, could offer a more holistic perspective of the benefits and drawbacks of relational strategies. Additionally, investigating the role of technology and digital transformation in facilitating coopetition, especially in the post-pandemic era, would also be valuable. Future research should also address tensions and internal instability within alliance orientation networks and their impact on financial performance, as well as explore moderating and mediating variables influencing the relationship between alliance orientation and firm performance.

Note

1. We explicitly recognize that while coopetition entails paradoxical relationships that combine cooperation and competition simultaneously (Bengtsson and Kock, 2000), alliance orientation reflects a firm's propensity to establish inter-organizational partnerships more broadly. Prior studies suggest that alliance orientation can be a driver of coopetition by enabling the conditions under which cooperative and competitive logics interact (Bouncken and Fredrich, 2016; Costa *et al*., 2024). Our study, therefore, interprets alliances as potential enablers of coopetition dynamics, while acknowledging that not all alliances are inherently coopetitive.

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