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From rivals to allies: Building and benefiting from coopetition capability

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Abstract

Cooperating with competing firms, a phenomenon also known as coopetition is increasingly seen as a viable resource-pooling strategy that enhances competitiveness and growth. The role of coopetition is particularly important to small and medium-sized enterprises (SMEs) in developing economies given the resource limitations of SMEs, the weaknesses in institutional structures, and the rapidly changing business and marketing environment in those regions. It is increasingly evident, however, that to effectively manage coopetition, firms must treat coopetition as a foundational strategic asset. Drawing insights from the resource-based view and the dynamic capability perspective, this study develops a model to conceptualize coopetition capability and examine its drivers and outcomes. Findings from an empirical study of 224 SMEs in Zambia reveal that corporate support and ability are conducive to the deployment of a coopetition capability. Surprisingly, institutional support is doing more harm than good given the negative relationship uncovered with coopetition capability. Furthermore, we show that organizations with increased levels of coopetition capability are more confident and optimistic about their future financial results and anticipate higher earnings. Intriguingly, the positive financial outcomes of coopetition capability diminish in significance when managers possess stronger ties and networks within their respective industries.

Keywords

Coopetition, coopetition capability, managerial ties, performance, institutional support, RBV, dynamic capabilities.

From rivals to allies: Building and benefiting from coopetition capability

Highlights

- Cooperating with competing firms is beneficial for SMEs
- Coopetition capability enhances financial performance expectations
- Coopetition capability is a multidimensional concept
- Corporate support and ability are conducive to coopetition capability
- Institutional support is negatively linked with coopetition capability

From rivals to allies: Building and benefiting from coopetition capability

Introduction

The growing dynamism and complexity of the global business environment is compelling an increasing number of firms to turn to coopetitive relationships, which involve the simultaneous pursuit of cooperation and competition, as a viable and attractive strategic approach to enhance performance (Bouncken et al., 2015; Crick, 2020; Crick and Crick, 2021a). Coopetition is particularly important to developing economy small and medium-sized enterprises (SMEs) given their resource limitations and home market institutional weaknesses (Kedia et al., 2016). The logic driving the growing use of coopetitive relationship in low resource environments is that because competitors in such markets face similar home market institutional weaknesses and inefficiencies, it becomes more beneficial for competitors to share their diverse resources and capabilities with each other. While it holds a strategic significance for firms, some argue that coopetition could undermine a firm's financial sustainability due to concerns regarding divergent strategic goals, opportunistic behavior, and appropriation risks (e.g., Efrat et al., 2022; Razah-Ullah et al, 2014).

Studies recently concluded that to leverage coopetition strategically, companies must develop coopetition as a dynamic capability to effectively navigate the opportunities and challenges that come with collaborating with competitors (e.g., Rai, Gnyawali, and Bhat, 2023; Zulu-Chisanga et al., 2023). Given that interfirm relationships come with both benefits and costs, the literature shows that firms with interfirm relationship management capabilities and competences are more likely to maximize the benefits of interfirm relationships while containing the costs involved (Crick, Friske, and Morgan, 2024). For example, the strategic alliance management literature provides evidence of how alliance management capability enables firms to deal with the opportunities and challenges of strategic alliances towards alliance success (e.g., Kale, Singh, and Raman, 2009; Schilke and Goerzen, 2010).

Recognizing the challenges associated with cooperating with competitors, coopetition scholars have drawn attention to how coopetition capability may benefit coopeting firms (e.g., Bengtsson, Raza-Ullah, and Vanyushyn, 2016; Gnyawali et al., 2016; Zulu-Chisanga et al., 2023). Thus, while studies have considered the importance of coopetition capability in market value creation (e.g., Bengtsson et al., 2016; Rai et al., 2023), there is limited theoretical specification and empirical examination of how firms develop, and leverage financial benefits from, coopetition capability. More importantly, limited attention is given to explaining how coopetitive arrangements operate in SMEs, particularly those operating in environments where access to critical resources is limited. Against these backdrops, this study draws insights from the resource-based view (RBV) (Barney, 1991; Penrose, 2009) and dynamic capability perspective (Teece, Pisano, and Shuen, 1997; Katkalo, Pitelis, and Teece, 2010) to develop a model of the drivers, boundary conditions and performance outcomes of coopetition capability.

Our research makes three contributions to knowledge in this increasingly important research domain. *First*, drawing on the dynamic capability perspective, we conceptualize coopetition as a dynamic capability comprising of five interrelated dimensions. Together, these dimensions enable firms to continuously pursue new opportunities, mitigate emerging threats arising in the business environment, and offer novel solutions to customer problems. This is one of the first efforts to empirically consider coopetition as a dynamic capability in this domain, moving away from static or process-based views, and advancing theoretical understanding of how firms can strategically integrate competitive and cooperative actions to enhance their adaptive capacity and ensure a sustainable competitive advantage. *Second*, utilizing the RBV, we provide a theoretical foundation for understanding how firms develop coopetition capabilities through key internal resources and firm-specific assets, thus advancing knowledge of how resource commitment in such capabilities can influence a firm's

ability to benefit from coopetition. In addition, taking into consideration the nuanced role of managerial ties in facilitating or inhibiting coopetition capability outcomes, our study shows how managerial characteristics can influence organizational-level outcomes. *Third*, focusing on a sample of SMEs in Zambia, we provide idiosyncratic insights of the importance of coopetition capability in a resource-constrained environment. Recently, Zulu-Chisanga et al., (2023), highlighted the significance of coopetition capability for SMEs in sub-Saharan Africa (SSA), emphasizing the complexities, uncertainties, and challenges inherent in such relationships within developing economies. Although their case study approach offered valuable insights, it left gaps in understanding the drivers and financial benefits of coopetition capability among SSA SMEs. Our study builds on and extends these findings by providing empirical evidence of the critical role of coopetition capability in these contexts, offering a deeper more generalizable understanding of its drivers and financial implications.

Pertinent literature

Historically, business studies have treated competition and cooperation as separate opposing forces (Barney, 2001a; Porter, 1980). Often, one is seen as harming the other since competition assumes that companies have different goals, leading them to act in their own self-interest. This "win-lose" perspective means for one to succeed, the other must fail. On the other hand, cooperation focuses on working together with other firms, not against them. In this way, companies can improve their performance by sharing resources and skills with each other (Child and Faulkner, 1998). Challenging these traditional views, research emerged in the past two decades suggesting that companies can compete and cooperate at the same time. This means that even rivals can work together if there is a shared understanding that there are benefits from such activities (Bengtsson and Kock, 1999). As a result, the 'coopetition' concept has now been added to the mainstream business and marketing strategy

literature. Coopetition implies companies working together to compete, creating benefits for both themselves and the partnership. It is essentially the simultaneous pursuit of competition and cooperation (Raza-Ullah et al., 2014), offering a more realistic “win-win” view of how companies interact.

Coopetition offers significant advantages for SMEs in developing economies, as these businesses, often constrained by limited resources and institutional shortcomings, rely on collaborations with a variety of market actors (including competitors) to pool resources and to overcome market weaknesses. For example, in Zambia, a developing Sub-Saharan African country, SMEs have been able to overcome market weaknesses ranging from limited infrastructure and resources to inefficient institutional support through cooperating with competitors (CICM, 2023). A case in point is Zamtouch Zambia, a small digital technology company, which, through coopetition, has been able to bridge the gap between global innovations and local execution thereby ensuring that clients benefit from both cutting-edge technology and regionally relevant strategies. Through partnering with competitors, the firm has been able to access advanced platforms, cutting-edge programming languages and a wealth of experience from international competitors while providing them with information on the behavior of Zambian consumers and regulatory frameworks, in exchange (ZamTouch, 2024).

One of the first things initially considered by researchers was whether coopetition has indeed an impact on performance (Bengtsson and Kock, 2000). They looked at companies in Sweeden and Finland and found that working together with competitors can lead to benefits like lower development costs, better skills, faster product launches, and deeper market knowledge. However, there is also a risk of giving away your unique advantages to competitors, especially when dealing with those close to your customers. Building on this idea, Luo (2007), studied how Multinational Corporations (MNCs) use coopetition and

argues that coopetition is beneficial for the organizations involved due to the improvement of learning, reduction of costs, and mitigation of risks.

There are studies, however, that find contradicting results with regard to the relationship between coopetition and performance. For instance, Oum et al. (2004) find that while coopetition has a positive effect on firm productivity, it has no impact on firm profitability, while Gnyawali and Park (2001) reveal the challenges of coopetition in terms of tension build-up, conflict, and risk of losing knowhow to competitors who are also partners. To address this research problem, more recent studies on the topic (e.g., Bouncken et al., 2018; Ritala, 2012) answered research calls (see Bouncken et al., 2015) looking at whether there are context-specific factors (e.g., environmental conditions, firm characteristics) that can explain the lack of consistency in research findings in the area. Other studies also begun exploring the effects of coopetition on additional dependent variables such as product development, R&D, and innovation (for a review see Corbo et al. 2023). For instance, Ritala (2012) finds that coopetition can trigger radical innovation but can also harm revolutionary innovation, while Guo, Yin, and Liu (2023) find that coopetition positively affects innovation performance in digital new ventures.

A recent review of coopetition research concludes that while there are numerous outcomes associated with coopetition, its effects are not universally positive, and that a dark side also exists (see Gernsheimer, Kanbach, and Gast, 2021). This seems to be supported by research in the wine industry examining the non-linear effects of coopetition on performance (Crick and Crick, 2021a; b; Crick and Crick, 2024). The conflicting findings are further highlighted in our own review of the literature, as summarized in Table 1, which frequently presents antithetical results. Our review also shows that most research has examined coopetition from various perspectives, including strategy (e.g., Crick et al., 2024), corporate

mindset (e.g., Rajala and Tidström, 2022), and channel network behaviors (e.g., Zhang et al., 2024).

…Insert Table 1 about here…

It can be concluded that while the concept of coopetition has gained favor in academic literature, there is still a need for further exploration and understanding of this phenomenon. For instance, while experts agree that building capabilities in coopetition is important for success, there is very limited research on what these capabilities look like, how to develop them, or the results they bring (e.g., Zulu-Chisanga et al., 2023). The lack of extant insights might be attributed to the relatively novel nature of the topic and the evolving area of this research stream. In addition, scholars seem to converge that coopetition can be beneficial, but there's debate about *when* and *under what conditions* such an impact is present. Therefore, there is a need to consider additional factors driving and moderating coopetition and its outcomes to get a more complete picture. Another issue in the coopetition literature is that it mostly focuses on big firms in developed Western countries. While recent research has begun to address this gap (e.g., Crick and Crick, 2021a; Crick and Crick, 2023; Moticelli et al., 2021), there haven't been many studies on how smaller firms build and manage relationships with their competitors in emerging economy contexts. Therefore, this study aims to fill these gaps by investigating coopetition as a strategic capability within SMEs operating in such contexts.

Theoretical framework and hypotheses

This study draws from the RBV and dynamic capability perspective to understand the drivers and performance outcomes of coopetition capability. RBV theory provides a strategic lens through which firms can analyze and leverage their resources and capabilities in pursuit of competitive advantage (Barney, 1991). This bundle of internal resources and capabilities

should be effectively and efficiently combined so that a firm can enhance its performance, growth, and overall position (Penrose, 2009). Since resources and capabilities are heterogeneously distributed across firms and are imperfectly immobile, we expect a firm with resources and capabilities deployed in an appropriate environment to be able to develop coopetition capability (Barney, 1986; 1991; Peteraf, 1993). A central point is that these resources and capabilities may not only be found within the firm but also outside the boundaries of the firm, for which reason the RBV has been useful in providing a strong explanatory power of leveraging scarce firm-specific resources through interfirm relationships (Crick et al., 2024). More specifically, the study postulates institutional support, managerial support and firm resources as assets that influence the development of coopetition capability. Embracing the RBV, firms identify such resources (i.e., the firm's assets) and develop ordinary and/or dynamic capabilities which enable them to effectively deploy their resources.

Ordinary capabilities refer to the firm's abilities, such as routines, processes, and resource management, required to perform its day-to-day operations efficiently. These are usually static, replicable, and are focused on efficiency. Dynamic capabilities, as opposed to ordinary firm capabilities, refer to a firm's ability to integrate, build, and reconfigure internal and external competences and orchestrate activities and resources to address and adapt to rapidly changing environments (Teece, Pisano, and Shuen, 1997). These include specific organizational and strategic processes and enable organizations to achieve a competitive advantage based on their ability to utilize such dynamic capabilities to create, integrate, recombine, and release resources (Eisenhart and Martin, 2000). Dynamic capabilities allow firms to adapt to new opportunities and threats arising in the business environment, innovate, and sustain a competitive advantage over time (Katkalo, Pitelis, and Teece, 2010).

In this context, coopetition represents a sophisticated higher-order dynamic capability comprising multiple interconnected components: interfirm coopetition coordination, coopetition portfolio coordination, coopetition learning, coopetition proactiveness, and coopetition transformation (Schilke and Goerzen 2010; Zulu-Chisanga et al. 2023). *Interfirm coopetition coordination* captures the extent to which a focal firm coordinates its internal business activities with a coopeting partner while *coopetition portfolio coordination* relates to how a firm comprehensively synchronizes its entire pool of coopetitive relationships to avoid relationship overlaps, conflicts and duplication but also to be optimal in allocation of resources to coopetitive projects (Hoffmann, 2005; Zulu-Chisanga et al., 2023). *Coopetition learning* refers to a firm's ability to learn and assimilate knowledge from its coopeting partners. Through learning, firms are also able to identify opportunities for joint action (Schilke and Goerzen, 2010) as well as proactively adapt their coopetitive activities accordingly. *Coopetition proactiveness* is a market sensing mechanism which enables a firm to understand the market environment and identify new valuable coopetition opportunities (Sarkar et al., 2001). Finally, *coopetition transformation* pertains to a firm's willingness to modify its coopetitive relationships to conform to new environmental contingencies (Reuer and Zollo, 2000; Koval, 2021).

These components enable firms to integrate, synthesize, and transform internal resources and functional capabilities (Teece, Pisano, and Shuen, 1997), facilitating adaptation to dynamic market conditions and evolving requirements (Zulu-Chisanga et al., 2023). The dynamic nature of coopetition capability is evident in its ability to foster organizational learning and adaptation, through the absorption of knowledge and through managing coopetitive relationships, and its ability to enable firms gain broader strategic insights from their coopetitive partners. This learning process helps firms to sense and seize new opportunities, a key aspect of dynamic capabilities (Teece, 2007), and accordingly inform

appropriate strategic modifications (Heimeriks, Duysters, and Vanhaverbeke, 2004). Importantly, these processes are characterized by their rarity and complexity, making them difficult for competitors to replicate. The complex interplay of its five components creates a unique organizational process that is not easily imitated by competitors and allows firms to continuously modify their business strategies in response to changing competitive landscapes.

Based on insights from the literature (e.g., Zulu-Chisanga et al. 2023) coupled with material from our exploratory fieldwork interviews, we posit that coopetition capability is positively influenced by the availability of institutional support (i.e., the technical, financial, and operational assistance provided by the government and its agencies to conduct business), corporate support (i.e., the resources and support provided by the company to manage partnerships with competitors) and corporate ability (i.e., the level of expertise, knowledge, and skills within the organization). As a dynamic capability, coopetition capability can enhance expected financial performance, particularly in contexts whereby managers are well connected.

The model also depicts managerial ties, such as interpersonal relationships between managers and key stakeholders, as an important factor moderating the financial performance outcomes of coopetition capability. Looking at managerial ties with RBV lenses, these can be considered as intangible resources that contribute to a firm's resource base. Managerial ties can be valuable when they result in knowledge, information, and resources that can be critical for the achievement of a competitive advantage. Managerial ties are also rare as these depend on the network that managers are able to build or bring in their respective firms, which might be unique. In addition, managerial ties can be seen as a key component that enhances a firm's ability to sense and seize opportunities and reconfigure resources, which can amplify the effectiveness of organizational-level dynamic capabilities by providing managers better insights and decision-making conditions. Figure 1 presents the study's conceptual model.

…Insert Figure 1 about here…

Institutional support and coopetition capability

Institutional support captures the extent to which the government and its agencies provide business support mechanisms such as financial capital, loans, information, and regulation and productivity improvement assistance to firms (Li and Atuahene, 2001; Khoshmaram et al., 2020). It is now beyond debating that institutional arrangements, which include governmental legislations, regulatory requirements, enforcement mechanisms and incentive structures constrain or stimulate a firm's strategic action and behavior (North, 1990; Dunning and Lundan, 2008; Meyer et al., 2009; Peng, 2003; Hitt et al., 2004).

Given the underdeveloped market mechanisms in most developing economies, government institutions still play an important role in influencing SMEs' behaviors by increasing access to resources and shaping how SMEs respond to competitive and dynamic environments (Smallbone and Welter, 2001; Tambunan, 2008; Lu et al., 2010; Kang and Park, 2012). In the context of coopetition, institutional support plays a unique role by reducing the perceived risks associated with collaborating with competitors. Unlike general alliances, coopetition requires firms to simultaneously navigate trust and protect competitive advantage, making institutional support critical for nurturing trust and fostering legitimacy in these complex relationships. Accordingly, this study postulates that a firm may make a choice to develop coopetition capability on the basis of its perception and interpretation of the prevailing institutional structures, practices and requirements in as much as interfirm relationships are concerned. For example, if the institutional environment has rules or mechanisms that motivate a firm to cooperate with competitors, the firm will invest more in managing coopetitive relationships so as to benefit more from the relationships.

Furthermore, institutional support often includes incentives and mechanisms specifically designed to encourage competitor collaboration in resource-scarce environments,

such as grants tied to collaborative innovation or regulatory allowances for joint ventures. These mechanisms lower barriers to coopetition, making it a distinct strategic choice compared to other alliances. On the contrary, if the institutional environment discourages coopetition through restrictive policies or a lack of supportive measures, firms are unlikely to invest in the development of coopetition capabilities. Therefore, one would assume that increases in institutional support levels as demonstrated by business support provided by governmental agencies are associated with a greater firm propensity to develop coopetition capability. This expectation aligns with previous research indicating that institutional frameworks addressing competitive tension play a significant role in facilitating coopetitive behaviors (e.g., Cai, Jun, and Yang, 2010; Mariani, 2007; Zulu-Chisanga et al., 2023).

Unlike general alliances, which typically involve partners with complementary objectives, coopetition brings together firms that must simultaneously cooperate and compete. This dual dynamic creates unique complexities in managing knowledge flow, balancing trust with competitive risk, and ensuring fair resource sharing. Consequently, institutional support becomes particularly important for safeguarding the interests of direct competitors–an aspect less crucial in conventional alliances, where partners are not vying for the same market share. Hence, we expect that institutional support provided by government and its agencies, such as tax allowances, grants, and financial capital enhances coopetition capability. As such, it is hypothesized that:

H_1: *Institutional support is positively related to coopetition capability.*

Corporate support and coopetition capability

The extent to which firms develop the ability to effectively cooperate with competitors can to some extent be explained by the way in which the firm and its management encourage and support the development of relationships with other firms. In particular, the decision on when

and how to invest in the management of coopetitive relationships depends on management's support, availability of structures and processes that support the development, matching up and integration of relevant resources and capabilities with competitors (Borah et al., 2022). Such support mechanisms enable firms to be more innovative and proactive in initiating coopetitive relationships and also coordinate and manage relationships with competitors more effectively (Schilke and Goerzen, 2010). Consequently, firms with strong corporate support are likely more effective at coordinating cooperative relations with competitors, more agile in identifying and exploiting coopetitive opportunities, and more adept at restructuring relationships when the need arises.

Nonetheless, coopetition can also introduce heightened risks of knowledge leakage and opportunism, given that partners are direct competitors (Bouncken and Kraus, 2013). Therefore, effective corporate support can help firms by going beyond relationship-building to include mechanisms for protecting sensitive information and clarifying intellectual property rights. In high corporate support environments this is achieved with robust governance structures, strict non-disclosure provisions, and clear guidelines specifying which resources can be shared (e.g., Bouncken and Fredrich, 2012; Dorn, Schweiger, and Albers, 2016). This helps mitigate the potential for unintended knowledge appropriation and facilitate the effective management of tensions. High corporate support can also help firms embed risk assessment and control processes into every stage of coopetitive engagement so that collaborative benefits can be achieved without sacrificing significant competitive advantages. Hence, corporate support functions not only as an enabler of cooperative activities but also as protection against risks associated with coopetition. Consequently, we hypothesize that:

H_2: *Corporate support is positively related to coopetition capability.*

Corporate ability and coopetition capability

The RBV postulates that a firm with resources that are rare, valuable, inimitable, and non-substitutable (Barney, 1991) are more likely to conceive of and implement strategies that improve its efficiency and effectiveness. However, a firm with ample resources may still lack specialized and complementary assets required to succeed in dynamic markets (Dyer and Singh, 1998), particularly markets with inefficient structures and institutions. In the case of SMEs in resource-constrained environments, possession of lots of unique resources and capabilities may not be sufficient to operate effectively. Under such conditions, coopetitive relationships may help bridge potential resource and capability gaps by providing access to unique partner resources, knowledge, and market positions that might be unavailable internally, regardless of how extensive a firm's own resource pool may be.

We contend that internal resource possession may help a firm develop internal firm-specific capabilities, for example, by facilitating development of new relationships to generate complementary external resources (Ahuja, 2000). However, internal resource abundance may also increase the risk of a firm pursuing suboptimal business models and undermine the capacity of managers to see growth opportunities beyond the corridors of the firm (Andren, Magnusson, and Solander, 2003). Thus, although prior research has traditionally viewed resource scarcity as a primary driver of interfirm collaboration, we argue that internally resource-rich firms may pursue external partnerships to enhance innovation prospects, accelerate market learning and diversify risk. Our contention is that sufficient internal resources may allow firms to be more proactive and strategic in their coopetitive engagements. For instance, such firms often have both operational and strategic flexibility to invest in sophisticated governance and risk management mechanisms to benefit from coopetitive relationships. This ensures that the management of coopetition can be looked as an important strategic capability within the firm.

The value of this capability becomes particularly evident when firms combine complementary resources and capabilities in pursuit of synergistic outcomes. Firms with substantial resource endowments can more effectively integrate their capabilities with partner's unique competencies, creating in this way competitive advantages it could not achieve alone. Consequently, such firms are more likely to pursue coopetitive relationships, investing in relationship management mechanisms, and derive greater benefits from these partnerships. Hence:

H_3: *Corporate ability is positively related to coopetition capability.*

Coopetition capability and expected financial performance

While the literature (e.g., Bouncken et al., 2015) has highlighted the key challenges associated with coopetitive relationship (e.g., misunderstandings, loss of control, opportunism), this study views coopetition capability as a relationship management capability that enables a firm to efficiently and effectively execute coopetitive tasks to its benefit (Schilke and Goerzen, 2010; Zulu-Chisanga et al., 2023). We expect a firm with high levels of coopetition capability to be more proactive and responsive in both identifying and exploiting partnering opportunities, and as such to be more likely to initiate pre-emptive actions in response to identified opportunities faster than a firm with low levels, and thus improve performance.[1]

[1] Evidence (e.g., Wu, Choi, and Rungtusanatham, 2010; Yang and Zhang, 2022) suggests that coopetition might negatively affect performance. This is because coopeting firms might be giving away unique resources and knowledge base to opponents, might be forced to invest financial resources in establishing and maintaining coopetition processes, or might end up facing tensions with increased friction costs. Research (e.g., Crick and Crick, 2021a;b; Crick and Crick, 2024) also shows that managers might also experience the non-linear effects of coopetition. Specifically, excessive coopetition might lead to free-riding, opportunistic behavior, and conflict, while minimal coopetition can elicit partner responses that fail to ensure commitment and adequate resource investment. However, our focus on the RBV leads us to hypothesize a positive, as opposed to a negative or non-linear link between coopetition capability and expected financial performance. We therefore treat the potential for a negative or curvilinear link as an empirical question.

This is particularly true in Sub-Saharan African countries, where SMEs often face resource constraints, including limited access to finance, technology, and skilled labor (Endris and Kassegn, 2022). In these contexts, the inherent risks of coopetition–such as misunderstandings, conflicts, or opportunism–can be mitigated by the shared goals of survival and mutual benefit among resource-constrained firms. Coopetition capability helps local SMEs collaborate with competitors to access new markets, expand their innovation activities, and grow their customer bases. It also provides access to advanced technologies and business practices that can improve their financial bottom line. Coopetition aligns well with the *Ubuntu* philosophy ("I am because we are"), which is prevalent in many SSA countries and promotes collaboration within across organizations and communities (Darley and Blankson, 2008). Therefore, coopetition capability is especially well-suited for these contexts given the preference for cooperation, consultation and consensus when engaging in business relationships with partners. Moreover, local networks and community structures in SSA environments often serve as vital support systems, providing informal monitoring and dispute-resolution mechanisms that help prevent opportunistic behavior. These community ties foster a sense of accountability among individuals as people are more likely to act in good faith when they know their actions are being observed by neighbors and peers. This intimate environment not only helps lower the perceived risks of engaging in cooptative relationships but also strengthens community bonds and collaboration.

Firms with high coopetition capability are not only far more quickly able to identify appropriate coopeting partners, engage in and manage coopetitive relationships in a way that benefits it but also possibly adjust or terminate unprofitable relationships that could damage performance (Schilke and Goerzen, 2010; Yu and White, 2015). This adaptability is crucial in environments where resources are scarce, allowing firms to focus on strategic partnerships that yield the highest potential returns. Following these insights, we argue that because

coopetition capability is difficult to obtain and imitate and it allows firms in SSA contexts to exploit coopetitive relationships fully by anticipating problems, mobilizing resources, mitigating inherent risks, and seeking synergies, it has the potential to enhance a firm's performance as perceived and anticipated by managers.[2] Therefore:

H_4: *Coopetition capability is positively related to expected financial performance.*

The moderating role of managerial ties

This study draws insights from the RBV to argue that the association between coopetition capability and firm performance is contingent on the varying degrees of managerial ties available within the firm. Managerial ties, defined as a manager's social relations and networks with managers in other business entities and ties to leaders in governmental, non-governmental and key industry stakeholders (Peng and Luo, 2000), are valuable complementary resources that may help amplify the financial benefits of coopetition capability. Managerial ties can be viewed as a complementary resource that facilitates learning and development of expertise and skills including management and exploitation of coopetitive relationships. Managers with robust external ties are proficient in building and maintaining relationships, fostering trust, and facilitating effective collaboration with competitors. Their networks enable better negotiation terms and provide access to crucial industry insights and resources that can amplify the success of coopetition efforts.

In developing nations, such as those in Sub-Sahara Africa, firms often face challenges related to inadequate market infrastructure, weak legal and regulatory frameworks, and

[2] This study focused on expected financial performance. Relying on managerial expectations of financial performance provides a forward-looking estimate of how current activities are unfolding and how they are expected to conclude. It also helps assess the projected impact and offers an early indicator of performance from the managerial perspective. This insight is crucial for understanding the strategic value of coopetition capability within the management mindset. Managerial expectations often incorporate internal information and industry trends not fully reflected in current financial statements, particularly for SMEs in SSA contexts. Consequently, these expectations can be more relevant for strategic decision-making, resource allocation, and operational adjustments than historical data.

financial resource and human capital constraints. A firm with strong ties with managers of other non-competing firms is more likely to easily leverage from its ability to effectively manage connections with competitors and navigate such institutional voids, overcome regulatory hurdles, and seize market opportunities that would otherwise be inaccessible (Bashir, Alfalih, and Pradhan 2023). In addition, strong managerial ties can foster trust and reciprocity, which helps mitigate the knowledge-leakage risks inherent in cooperating with competitors, thereby enhancing the effectiveness of coopetitive arrangements. Moreover, the interactions facilitated by strong managerial ties not only aid in understanding interfirm relationship processes, including relationships with competitors, but also enable firms to identify and capture valuable business opportunities that arise from such interactions. Thus, in such contexts, managerial ties act as a complementary resource that enhances the effectiveness of coopetition capabilities, leading to improved financial performance. Hence:

H_5: *Managerial ties positively moderate the coopetition capability–expected financial performance relationship.*

Methodology

While prior coopetition research has occurred largely in developed economy settings where institutions are efficient and favorable (e.g., Rai et al., 2023), the focus of this study on SMEs in developing economies. This provides a unique and under-researched context to study the coopetition phenomenon in institutional environments that tend to be inefficient and unfriendly (Monticelli et al., 2023). We collected data from Zambia, a developing SSA. While the country ranks among the top ten SSA economies in the World Bank's Ease of Doing Business survey in 2020, Zambia is described as one of the most unequal societies in SSA which has initiated several large-scale infrastructure investments yet faces resources constraints, huge debt burden and poverty levels remain high (Kragelund, 2017). Zambia has

been promoting the growth of the private sector since the 1990s and competitiveness of SMEs is priority on the economic development agenda of the country (Tang and Konde, 2021). Most of the SMEs in Zambia belong to the informal sector, which accounts for 38.8% of the Zambia's economy but employs 90% of the labor force (Quarterly Informal Economy Survey, 2024). SMEs in the country account for less than 20% of gross domestic product (GDP) as the majority of these firms, like in many other developing economies, are weak and stay small due to lack of appropriate resources and capabilities (Moder and Zingel, 2022; Mudenda et al. 2021; Tadesse, 2014).

Acknowledging the vital role of SMEs, yet meagre contribution, in economic development, Zambia has not only implemented numerous development and support programs but also encourages firms to pool resources and work together to boost performance (Tang and Konde, 2021; Zulu-Chisanga, Chabala, Mandawa-Bray, 2021). The adoption of coopetition has expanded to many sectors of the country's economy and is considered as strategic route for achieving the UN Millennium Development Goals #8 and #17, Global Partnerships for Development and Partnerships for Sustainable Development, respectively (Nyemba, Mbohwa, and Carter, 2021). Unfortunately, while government support and coopetition take on instrumental relevance for improving SME performance in Zambia not much has been done to examine efficiencies and importantly, outcomes of these pursuits.

Thus, studying the coopetition phenomenon in such a low resource context provides an opportunity to draw on empirical evidence from an overlooked and previously under-researched context to broaden scholarly perspective on how the coopetition capability is developed and used in environments where access to essential resources and capabilities are acutely limited. Further, because of the presence of strong collectivistic culture in Zambia, generating competitive advantage on the basis of relational based capabilities is an important focus of firms in these economies (Acquaah, 2007; Tang and Konde, 2021). In sum,

analyzing coopetition which is a complex, dynamic and context dependent strategy in a developing economy such as Zambia with weak institutions and strong collectivist culture provides an intriguing and representative context to derive relevant insights and responds well to calls for more of such studies by coopetition scholars (e.g., Monticelli et al., 2023).

In line with past research in Zambia and the wider Sub-Sahara Africa context, we define SMEs as businesses that employ at least 10 and a maximum of 250 full-time employees (e.g., Choongo, 2017; Zulu-Chisanga et al. 2023). Firms with fewer than 10 employees often face very different challenges compared to those with up to 250 employees. For this reason, it is important to distinguish between micro-enterprises and SMEs when conducting research, as their needs and constraints can vary significantly.

To get a better understanding of the topic, explore contextual idiosyncrasies, and verify the plausibility of our conceptual model, we conducted exploratory pre-study interviews with 15 managers in Zambia, lasting between 60 to 90 minutes. These interviews had a semi-structured format to ensure accuracy and consistency. Information redundancy was the criterion for concluding the process and finalizing the interview sample. An interview guide was carefully developed by the research team and closely followed by the principal researcher during the field study. The interviews began with an introduction to the study, detailing its objectives, scope, and significance. This introduction aimed to create awareness about the study and address any potential concerns regarding the information being sought from the respondents. Subsequently, informants were asked to describe how they managed their firms' relationships with competitors, the motivating factors behind these efforts, and the outcomes achieved. It was important that the informants had a comprehensive understanding of their firm's interfirm arrangements and were responsible for managing coopetitive relationships. The key informants interviewed included chief executive officers, key account managers, key account coordinators, and corporate relations managers.

Insights from these interviews served as input to the second phase of the study with the finalization of the conceptual model and the development of the survey instrument. The interviews were transcribed and analyzed to identify commonalities and generate themes emerging from the content. These interviews helped us narrow down coopetition capability to five themes, namely interfirm coopetition coordination, coopetition portfolio coordination, coopetition learning, coopetition proactiveness, and coopetition transformation in line with the dynamic capability view adopted by Schilke and Goerzen (2010). They also emphasized how SMEs can benefit from coopetition by sharing costs and risks, accessing the skills, knowledge, and resources of their coopetitive partners, and gaining opportunities to enter protected markets. Key informants identified both external and internal factors that motivated their firms to pursue coopetition. External factors included regulations and institutional support mechanisms, while internal factors encompassed corporate capabilities and internal support systems that enabled firms to engage in coopetition.

Moving to the second phase of the project, we conducted a large-scale quantitative study. Developing a sampling frame in Zambia is an issue given the lack of reliable databases. Hence, we developed our sampling frame from multiple data sources, including the Zambia Chamber of Commerce, Zambia Development Agency, Zambia Chamber of Small and Medium Enterprise Association and the Patents and Companies Registration Agency. We obtained initial SME contact information and accordingly contacted these firms and used snowballing techniques. Specifically, we obtained information about additional firms and key contacts that can be included in our sample, defined as those SMEs who are both knowledgeable of coopetition and are willing to report on the phenomenon.

A structured questionnaire was systematically developed and distributed to key informants who were willing to participate in the study and met the following criteria: (1) were working for independent entities and not part of any company group or chain; (2) their

firms had operations in Zambia; and (3) working in companies that employed up to 250 full-time employees. Prior to launching the study, the questionnaire was pre-tested with academics and managers prior to full-scale administration.[3] To enhance response rate, we relied on door-to-door face-to-face administration and collection of the questionnaire for a period of two and a half months. A total of 750 questionnaires were distributed, of which 506 agreed and participated in our study. This resulted in an overall response rate of 67.5%. From these, 221 indicated that their companies did not engage in coopetition or provided data that fell outside the SME scope, 31 provided responses with excessive missing data, and 30 respondents indicated a lower level of knowledgeability with the issues covered in the questionnaire and confidence in providing reliable responses ($\bar{x} < 4$). After dropping these questionnaires, 224 usable responses were retained for data analysis purposes.

The study constructs were operationalized based on scales derived from the pertinent literature as follows: *institutional support* from Li and Atuahene-Gima (2001); *corporate support* based on Schilke and Goerzen (2010); *corporate ability* from Wiklund and Shepherd (2005); and *managerial ties* based on Boso, Story, and Cadogan (2013). To capture *coopetition capability*, we relied on Zulu-Chisanga et al.'s (2023) qualitative findings and adapted measures from Schilke and Goerzen (2010), which originally focused on strategic alliances and comprised the following dimensions: *interfirm coordination*, *portfolio coordination*, *learning*, *proactiveness*, and *transformation*. Because we wanted to see the expected effects of coopetition capability on financial performance (Olabode et al., 2022), we focused on financial performance over the next financial year with five items adopted from Vorhies and Morgan (2005). We used different anchors to introduce response format diversity

[3] Specifically, three principal research advisors with expertise in survey development and three senior PhD students provided feedback on clarity and format. Additionally, two academic researchers in Zambia, where the study was conducted, evaluated the questionnaire's quality and clarity. Based on their insightful suggestions, necessary modifications were made. The revised version was then pilot tested with ten SME managers in Zambia to assess clarity, flow, and readability.

in the questionnaire. Specifically, institutional and corporate support, along with coopetition capability were measured on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), corporate ability and managerial ties based on a 7-point scale (1 = not at all, 4 = to a moderate extent, 7 = to an extreme extent), and financial performance based on 7-point scale (1 = much lower than target, 7 = much higher than target).

Additionally, the study controlled for firm size (e.g., number of employees), firm experience (e.g., years of operation), and firm coopetition experience. These variables were logarithmically transformed to ensure standardization of results while variables used for interaction effects were mean centered for the same reasons. Further, we controlled for industrial categories given the potential coopetition-related differences in each industry and included a measure of coopetition knowledge codification (1 = strongly disagree, 7 = strongly agree) to capture the importance of documentation and codification of existing knowledge which can be a useful resource when managing coopetitive relationships and making decisions on coopetitive-related tasks (Kale and Singh, 2007; Zulu-Chisanga et al., 2023).

To minimize the possibility of common method variance (CMV), we assured the anonymity of respondents and the confidentiality of their answers. We gave them instructions to provide truthful, honest, and accurate information and reminded them that there were no right or wrong answers. In addition, we checked for the potential of CMV in the dataset with a post hoc test. Specifically, we selected the second smallest (r_{M2}) correlation (in the dataset (Malhotra, Kim, and Patil, 2006) as a marker variable (Lindell and Whitney, 2001) and adjusted the correlation matrix accordingly. There were no major statistically significant differences in CMV-adjusted correlations (r_A) compared to the original correlations. In other words, the originally significant correlations remained significant even after accounting for CMV. This indicates that the extent of method bias in the data is so small that its effect on the estimated correlations is negligible (Malhotra et al., 2006).

We also addressed the potential of non-response bias in two ways. First, we followed up on non-respondents to encourage them to complete the questionnaire and identify the reasons for their unwillingness to take part. Some respondents cited reasons such as questionnaire length, lack of time, company policy for no participation in surveys. Given the response similarity of non-respondents with late respondents (Armstrong and Overton, 1977), we compared the mean responses of key study variables between early and late respondents to ascertain whether there were statistically significant differences. Given the lack of statistically significant differences ($p < 0.05$), it can be concluded that non-response bias is not a serious issue of concern in this study.

Data analysis and results

We used Confirmatory Factor Analysis in EQS 6.4 to confirm the psychometric properties of the study variables. The model produced satisfactory fit to the data observed: $\chi^2_{(639)} = 1287.29$, $p = 0.000$; normed chi-square (χ^2/df) = 2.01; non-normed fit index (NNFI) = 0.91; comparative fit index (CFI) = 0.92; standardized root mean square residual (SRMR) = 0.085; root mean square error of approximation (RMSEA) = 0.067; and average off-diagonal absolute standardized residual (AOASR) = 0.069. All scales exhibited satisfactory scale reliabilities ($\rho \geq 0.70$), individual standardized factor loadings ($b \geq 0.47$), and average variance extracted for each variable (AVE ≥ 0.50). The CFA also confirmed the factorial structure of coopetition capability, comprising the five dimensions. The constructs also showed high discriminant validity since the individual construct AVEs were high, any cross-loading between items and constructs was low, while the shared correlation between every pair of constructs was always lower than the AVE squared root for each respective construct (Fornell and Larcker, 1981). Table 2 presents the variable means, standard deviations, AVEs,

reliability scores, and correlations while Table 3 presents the questionnaire items and CFA results.

…Insert Table 2 about here…

…Insert Table 3 about here…

To examine the significance of the hypothesized relationships, we initially employed Seemingly Unrelated Regressions (SUR) in STATA which considers the contemporaneous correlation of errors across the different regression equations. Since the Bruesch-Pagan test of independence was non-significant ($p = 0.630$), we accordingly employed Ordinary Least Squares (OLS) linear regression (see Table 4). Results show that corporate ability (b = 0.177, t = 3.75, $p = 0.000$) and corporate support (b = 0.128, t = 2.16, $p = 0.032$) are significantly and positively associated with coopetition capability. This is in accord with our original hypotheses. Unexpectedly, we found that institutional support is associated with coopetition capability, albeit with a negative correlation (b = −0.084, t = −2.42, $p = 0.016$). This finding contradicts our initial hypothesis.

…Insert Table 4 about here…

Our study findings also show that coopetition capability is significantly and positively associated with expected financial performance (b = 0.190, t = 2.79, $p = 0.006$). In addition, though managerial ties appear to significantly moderate the coopetition capability–expected financial performance relationship, this interaction was found to be negative as opposed to positive (b = −0.111, t = −3.09, $p = 0.002$), leading us to reject our original hypothesis. Marginal effects analysis shows that when managerial ties are high (1 SD above the mean), a one-unit increase in coopetition capability provides a non-significant change in expected financial performance (b = −0.041, t = −0.42, $p = 0.674$). When managerial ties are low (1 SD below the mean), a one-unit increase in coopetition capability provides a statistically significant increase of 41% in expected financial performance (b = 0.405, t = 4.11, $p =$

0.000). In plotting the interaction and marginal effects of coopetition capability across the full range of managerial ties (see Figures 2 and 3), we find that the relationship between coopetition capability and expected financial performance is statistically significant between the minimum value of managerial ties of −2 and 0. Thus firms can expect better financial results from coopetition when managers have limited social ties in the market. Finally, given the recent findings in the coopetition literature about curvilinear effects (i.e., inverted U-shaped relationship) on firm performance outcomes (e.g., Crick, 2020; Crick and Crick, 2021a; Crick and Crick, 2024), we controlled for this possibility with no significant effects revealed (b = 0.018, t = 0.47, p = 0.641).

…Insert Figure 2 about here…

…Insert Figure 3 about here…

Discussion and conclusion

Findings from the study help advance the industrial marketing literature in several ways. First, we show that coopetition capability is a multi-faceted construct that enables firms to effectively navigate the intricate dynamics of coopetition, capitalize on the opportunities it provides, and ultimately help improve a firm's financial performance as per the expectations of managers. Coopetition represents a sophisticated higher-order dynamic capability comprising of several interrelated components, namely interfirm coopetition coordination, coopetition portfolio coordination, coopetition learning, coopetition proactiveness, and coopetition transformation. This capability allows the firm to integrate and synthesize resources and functional capabilities in a way to help them adapt to market dynamics and requirements. These five processes allow companies not only to absorb knowledge about managing coopetitive relationships but also to gain insights from their coopetitive partners in general (Heimeriks, Duysters, and Vanhaverbeke, 2004).

Second, the findings reveal the positive role of corporate support and ability for the development of coopetition capability within the firm. On the one hand, this shows the importance of having management that actively champions coopetitive relationships through the allocation of resources and the creation of an organizational culture that values collaboration alongside coopetition. On the other hand, the findings highlight the importance of a robust corporate ability, such as possession of excessive technical knowledge, expertise in acquiring market information, and skilled human capital, in developing a coopetition capability. This better equips firms to engage in, learn, and benefit from coopetitive interactions with other firms, better leverage what partners bring on the table, and manage the complexities involved (e.g., risk of knowledge appropriation).

Third, we show that organizations with increased levels of coopetition capability are more confident about their performance, seem to adopt a forward-looking perspective, and anticipate higher earnings and financial results. This is attributed to the plethora of benefits that a coopetition capability provides for SMEs, such as access to potentially valuable resources, identification of expanded market opportunities, and expertise in making the most from a partnership with a competitor. By embracing coopetition as a strategic capability and leveraging their collaborative networks, firms are better positioned to capitalize on emerging market trends, manage risks, and boost value creation, thus fueling managerial optimism about future financial results. While coopetitive arrangements present inherent risks and complexities (e.g., high failure rate) (Luo et al., 2007), companies with a coopetition capability are likely to have optimal gains and enhanced financial performance outcomes. These findings seem to be in line with recent research on the topic in developed economies (e.g., Crick et al., 2024; Rajala and Tidström, 2022).

The findings further reveal a detrimental role of institutional support in driving coopetition capability. This can be attributed to the distinctive institutional context and

relational challenges faced by firms operating in developing economies, such as those in Zambia. Notably, the pursuit of institutional support in such contexts may require significant time and financial resource commitment, potentially inhibiting a firm's ability to manage coopetitive relationships. More importantly, given that formal institutions that support business enterprises in Zambia may be inefficient in regulating marketplace behavior of business organizations (Boso et al., 2023; Parente et al., 2019), it may be counterproductive for smaller firms to rely on such institutions to leverage benefits from coopetitive relationships.

Prior research suggests that firms must look beyond formal institutions in such weak environments to simultaneously include institutional resources from both formal and informal institutional actors for protection from dysfunctional market behaviors such as opportunistic behavior of coopeting partners (e.g., Amankwah-Amoah, Boso, and Kutsoati, 2022). Besides, it could be argued that the informality of Zambian and other African economies may undermine the efficacy of formal institutional structures to serve as a lever to propel coopetition capabilities to financial benefits for SMEs. For example, the Quarterly Informal Economy Survey (2024) suggests that the informal sector is estimated to be 38.8% of the Zambian economy, and some other estimates suggest that, in terms of employment, the informal sector in Zambia employs approximately 90% of the country's labor force. Thus, under such market conditions, where formal institutions are unlikely to potent in regulating behavior market players, a different perspective of institutional structures may be required to facilitate the benefit of coopetition (Nason and Bothello, 2023). In such informal economies, Nason and Bothello (2023) suggest that financial health of SMEs may be a function of "bits and pieces" of resources derived from both market and nonmarket institutions (see suggestion by Boso et al., 2023 for a multiple resource configuration from a variety of institutional sources).

Similarly, the competing nature of managerial ties and the unique business context might have played a role in the negative moderating result concerning managerial ties. The findings indicate that coopetition capability and managerial ties might act as substitutes. This means that firms with strong managerial ties may rely less on developing and leveraging coopetition capabilities because they already access similar benefits through their personal managerial networks. Further, in comparison to forming coopetition capability, managerial ties might require less effort to form and maintain and can be considered as less risky. As a result, when managerial ties are present in this business context, managers tend to rely more on those ties to enhance the performance of their firm.

Furthermore, business relationships in Zambia often extend beyond formal channels and are deeply rooted in informal relationships and networks. While these close ties can be instrumental in securing and pursuing promising business opportunities, these ties can also exacerbate collusion and anti-competitive behavior and pressure firms to prioritize political over business objectives. In addition, excessive reliance on managerial ties can limit exposure to diverse perspectives and learning opportunities, inhibiting a firm's ability to fully utilize its coopetition-based capabilities. As a result, the credibility and effectiveness of coopetition activities can be undermined, trust can be eroded, and growth opportunities can diminish in both value and volume.

Managerial implications

The study demonstrates the need for firms to build competence in interfirm coopetition coordination, coopetition portfolio coordination, coopetition learning, coopetition proactiveness, and coopetition transformation. Managers are therefore advised to invest in these five organizational routines for them to effectively manage their coopetition arrangements towards successful outcomes. These routines serve as pillars for fostering

collaborative relationships, maximizing synergies, and leveraging competitive advantages. By developing competencies in these areas, firms can boost their ability to manage coopetitive relationships, navigate the associated complexities, and minimize potential risks.

Coopetition capability is likely to enhance SMEs' performance because SMEs involved in coopetition arrangements can reap a variety of benefits such as cost and risk sharing, access to a variety of coopeting partner's skills, knowledge, resources, and capabilities in various value chain activities. Thus, SME managers might consider coopetition as strategic pathway to bolster financial performance, particularly when confronted with resource constraints that directly threaten their firms' performance and growth ambitions. In essence, coopetition provides SMEs with access to critical competitors' resources and capabilities, learn from and leverage collaborative partnerships, and capitalize on opportunities, ultimately enhancing financial performance. Hence, firms might see value in investing in training programs that enhance the ability of employees to engage in coopetitive activities and encourage a culture that values and understands the benefits of coopetition. This might include training on negotiation skills, collaboration techniques, and conflict resolution strategies while also sharing success stories and best practices within the firm.

Policymakers, particularly in the SSA context, need to identify and implement appropriate policies aimed at enhancing the development of coopetition capability in SMEs. More specifically, the evidence that institutional support inhibits the development of coopetition capability raises important implications for policy. Considering this, government agencies are advised to evaluate their support programs and identify effective support mechanisms that do not impede coopetitive relationships. One way is to create targeted programs that help SMEs develop strong relationships with their other firms. This could involve training on collaboration and coordination, along with platforms for networking and knowledge sharing among SMEs. Additionally, encouraging the establishment of

collaborative ecosystems and fostering a culture of openness and cooperation within specific industries can help boost skills and competencies in effectively initiating and managing coopetitive relationships.

Finally, our findings indicate that managers should prioritize investing in developing coopetition capabilities. Given the minimal impact of coopetition capabilities on expected financial performance for firms with well-connected managers, it's imperative for them to utilize these ties to explore alternative collaborative opportunities to achieve their objectives that may fall outside the coopetition field. This could involve strategic alliances, joint ventures, or partnerships with firms in complementary industries. It might also mean direct access to political connections which can help their company advance its interests. However, it might be beneficial for managers to share these ties throughout the firm so that benefits for the firm can be maximized. Alternatively, if coopetition is the way forward for a particular firm, managers high in managerial ties might sabotage the whole process as these may prefer traditional methods of leveraging their networks, thus limiting the benefits of coopetition capabilities. In contrast, firms with managers with lower external ties might want to prioritize investing in developing coopetition capabilities through building relationships with competitors to share resources, knowledge, and risks. In this way, firms can hedge their risks by sharing the costs and potential downsides of ventures with their coopetitive partners, thus reducing the financial burden on any single firm.

Limitations and future research

We hope that this study will inspire more research in this increasingly important and managerially relevant stream of research. First, since this investigation focused on managerial interpretations of expected financial performance outcomes, future researchers can further investigate the role of coopetition capability on actual performance outcomes over a period of

time to ascertain the short-, medium-, and long-term effects of working with rivals on the firm's bottom line. Second, it would be interesting to investigate the performance outcomes of coopetition at the dyadic level. This is because firms have multiple coopetitive relationships at different phases of the lifecycle and aim at achieving different goals and with variations in their performance. Investigating, therefore, the performance of the relationships at the dyad may bring out issues that might not be captured by simply investigating a firm's coopetition portfolio. Third, given the lack of research on coopetition capability and performance outcomes in general–and in the Sub-Saharan African context in particular–there is a need for future studies to explore how cultural norms interact with other contextual factors (e.g., institutional support, managerial ties) to shape the efficacy of coopetition capability across different sectors and regions. Finally, a limitation of the current study is that this study looked into the effect of institutional support from a governmental perspective but has not examined cognitive or normative aspects. While the relationship in this context was found to be negative, cognitive, and normative institutional aspects might have a different impact on the development of coopetition capability which is something that future studies may examine.

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Table 1 Empirical investigations on coopetition and business performance

Author(s) (Year)	Methodology	Theory	Coopetition variable	Performance outcomes	Mediators/ Moderators	Key Findings
Morris, Kocak, and Özer (2007)	Turkey, 647 SMEs	-	▪ Coopetition (Mutual benefit, trust, commitment)	▪ Business performance	-	▪ Mutual benefit is *positively* related to performance. ▪ Trust is *not associated* with performance. ▪ Commitment is *positively* related to performance.
Wu, Choi, and Rungtusanatham (2010)	42 matching triads (buyer and two suppliers)	Game theory	▪ Supplier-Supplier coopetition	▪ Supplier performance	-	▪ There is a *negative* relationship between supplier-supplier coopetition and supplier performance.
Bouncken and Fredrich (2012)	Germany, 469 IT firms	Game theory, Resource-dependence theory	▪ Coopetition	▪ Competitive success	-	▪ There is a *positive* relationship between coopetition and competitive success.
Ritala (2012)	209 Medium and Large firms from Finland	Resource-based view and game theory	▪ Coopetition alignment	▪ Market performance	▪ Market uncertainty ▪ Network externalities ▪ Competition intensity	▪ Coopetition alignment is *beneficial* to a firm's market performance. ▪ Coopetition alignment is *beneficial* to a firm's market performance in conditions of high market uncertainty. ▪ Coopetition alignment is *beneficial* to a firm's market performance in conditions of high network externalities. ▪ Coopetition alignment is *beneficial* to market performance when the competitive intensity is low.
Crick and Crick (2021a)	New Zealand, 101 wine producers, SMEs	Resource-based view and relational view	▪ Coopetition	▪ Financial performance	▪ Export intensity ▪ Export geographical scope	▪ Coopetition has a *quadratic* association with financial performance (non-linear) ▪ Export intensity *positively* moderates the curvilinear effect of coopetition on financial performance. ▪ Export geographical scope *positively* moderates the curvilinear effect of coopetition on financial performance. ▪
Crick and Crick (2021b)	USA, 323 wine producers	Resource-based view and relational view	▪ Coopetition activities	▪ Company performance	▪ Business experience ▪ industry experience	▪ Coopetition activities have a *quadratic* association with company performance (non-linear) ▪ Business experience *negatively* moderates the curvilinear effect of coopetition activities on company performance. ▪ Industry experience *positively* moderates the curvilinear effect of coopetition activities on company performance.
Crick and Crick (2021c)	New Zealand, 101 wine producers	Resource-based view and relational view	▪ Coopetition	▪ Financial performance	▪ Competitive intensity ▪ Competitive aggressiveness	▪ Coopetition has a *positive* effect on financial performance. ▪ Competitive intensity *positively*, albeit weakly, moderates the linear effect of coopetition on financial performance. ▪ Competitive aggressiveness *negatively* moderates the linear effect of coopetition on financial performance.
Crick and Crick (2021d)	151 non-mainstream sporting clubs in New Zealand. SMEs	Resource-based view and relational view	▪ Coopetition	▪ Sales performance	▪ Inter-firm conflict ▪ Competitive intensity	▪ Coopetition has a *positive direct link* with sales performance. ▪ Inter-firm conflict *negatively* and competitive intensity *positively* moderates the coopetition-sales performance link.

Author(s) (Year)	Methodology	Theory	Coopetition variable	Performance outcomes	Mediators/ Moderators	Key Findings
Crick and Crick (2021e)	New Zealand, 101 internationalizing wine producers	Resource-based view and relational view	▪ Coopetition	▪ Market performance	▪ Competitive intensity	▪ Coopetition has *no direct effect* on market performance. ▪ There is an *inverted u-shaped relationship* between coopetition and market performance. ▪ Competitive intensity has a *negative moderating effect* on the non-linear relationship between coopetition and market performance.
Hani and Dagnino (2021)	576 global manufacturers (mostly automotive), Longitudinal	-	▪ Global network coopetition	▪ Firm performance	-	▪ There is a *positive* association between global network coopetition and firm performance
Yang, Zhang, and Li (2021)	Meta-analysis, 86374 firms nested in 49 independent samples	Knowledge-based theory	▪ Coopetition ▪ Coopetition intensity	▪ Performance ▪ Profit	▪ Industry	▪ Coopetition has a significant *positive* effect on performance. ▪ Coopetition intensity has *no effect* on performance. ▪ Industry is *not a significant moderator* in the coopetition-performance relationship.
Crick (2022)	New Zealand, 101 wine producers, SMEs	Resource-based view and relational view	▪ Coopetition	▪ Customer satisfaction performance	▪ Competitive aggressiveness	▪ Coopetition has a *positive* association with customer satisfaction performance. ▪ Competitive aggressiveness *negatively* moderates the linear effect of coopetition on customer satisfaction performance.
Moticelli et al. (2022)	166 Brazilian SMEs, Footwear, wine and IT industries	-	▪ Coopetition	▪ Export performance	-	▪ There is a *positive* association between coopetition and export performance
Rajala and Tidström (2022)	1005 SMEs from Finland	-	▪ Coopetitive mindset	▪ Performance	▪ Growth aspiration	▪ A coopetitive mindset is *positively* associated with SME performance. ▪ An SME's growth aspiration *negatively* moderates the relationship between a coopetitive mindset and performance
Riquelme-Medina et al. (2022)	215 firms from Spain	-	▪ Coopetition	▪ Firm performance	▪ Absorptive capacity ▪ Supply chain agility	▪ Coopetition is *not significantly* associated with firm performance in a business ecosystem-context. ▪ Coopetition *indirectly* influences firm performance through absorptive capacity in the context of business ecosystems. ▪ Coopetition *does not* indirectly influence firm performance through supply chain agility in the context of business ecosystems ▪ Coopetition *serially influences* firm performance through the *indirect effects* of both absorptive capacity and supply chain agility in the context of business ecosystems.
Yang and Zhang (2022)	371 Startups in China.	Resource-based view and Knowledge-based view.	▪ Coopetition	▪ Performance	▪ Social capital ▪ Exploitative learning ▪ Explorative learning	▪ Coopetition is negatively associated with performance. ▪ Coopetition has an *indirect relationship* with performance through exploitative learning and exploratory learning. ▪ Social capital *positively moderates* the relationship between coopetition and exploratory learning.

Author(s) (Year)	Methodology	Theory	Coopetition variable	Performance outcomes	Mediators/ Moderators	Key Findings
Crick and Crick (2023a)	Canada, 195 wine producers	Resource-based view	▪ Regional-level coopetition	▪ Company performance	▪ Regional-level rivalry ▪ Industry experience	▪ Regional-level coopetition has a *positive* effect on company performance. ▪ Regional-level rivalry *negatively* moderates the linear effect of regional-level coopetition on company performance. ▪ Industry experience *negatively* moderates the interaction effect of regional-level rivalry on the regional-level coopetition- company performance relationship.
Crick and Crick (2023b)	USA, 302 wine producers, SMEs	Resource-based view and VRN	▪ Coopetition	▪ Firm performance	▪ Entrepreneurial orientation	▪ Coopetition has a *positive* effect on firm performance. ▪ Entrepreneurial orientation has *negative* moderation effect on the relationship between coopetition and firm performance.
Mwesiumo, Harun, and Hogset (2023)	97 Norwegian fishing firms	Dynamic capability theory	▪ (Sustainability-related) Coopetition	▪ Firm's sustainability performance (economic, social, environmental)	▪ Sustainability awareness ▪ Dynamic capabilities	▪ There is a *positive* association between (sustainability-related) coopetition and a firm's sustainability performance. ▪ Sustainability awareness and dynamic capabilities *fully mediate* the coopetition-performance relationship.
Bimmermann et al. (2024)	1893 alliances across 143 U.S. firms	Game theory, Paradox theory, Dynamic capability theory	▪ Intensity of coopetition in alliances ▪ Coopetition occurrence	▪ Customer satisfaction	-	▪ The intensity of coopetition in alliances is *negatively* related to customer satisfaction. ▪ The occurrence of coopetition is *negatively* related to customer satisfaction.
Crick and Crick (2024)	107 small, and export-oriented, wine producers in South Africa	Resource-based theory	▪ Export coopetition activities	▪ Export sales performance	▪ Export geographical scope ▪ Export intensity ▪ Export geographical scope X Export intensity	▪ Export coopetition activities had a *non-linear (inverted U-shaped)* relationship with export sales performance ▪ Export geographical scope, export intensity, and the interaction between these forms of internationalization produced *non-significant results*.
Crick et al. (2024)	262 US B2B firms	Resource based theory	▪ Coopetition strategies	▪ Company performance	▪ Competitive intensity ▪ Market dynamism ▪ Technological turbulence	▪ Coopetition strategies relate *positively* to performance. ▪ The positive effect of coopetition strategies is further enhanced when competitive intensity and technological turbulence is high but not when market dynamism is high.

Note: Studies looking into innovation outcomes of coopetition were excluded from the above table.

Table 2 Means, standard deviations, AVEs, reliability scores, and correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Institutional support	-									
2. Corporate support	0.17	-								
3. Corporate ability	0.15	0.02	-							
4. Coopetition capability	−0.01	0.49	0.13	-						
5. Expected financial performance	0.02	0.09	0.24	0.20	-					
6. Managerial ties	0.18	0.24	0.22	0.19	0.27	-				
7. Coopetition knowledge codification	0.15	0.67	0.12	0.50	0.02	0.18	-			
8. Firm size [a]	−0.11	0.01	0.07	−0.01	0.12	0.04	0.02	-		
9. Firm experience [a]	−0.09	−0.01	0.03	0.03	0.09	0.07	0.07	0.50	-	
10. Firm coopetition experience [a]	0.02	0.18	0.04	0.22	0.07	0.04	0.17	0.20	0.42	-
Mean	3.16	3.95	6.02	4.56	6.03	5.03	4.11	1.54	1.03	0.74
SD	1.58	1.56	0.93	0.94	0.82	1.17	1.63	1.17	0.44	0.34
AVE	0.58	0.62	0.50	0.50	0.57	0.52	0.79	-	-	-
Cronbach's α	0.83	0.80	0.73	0.78	0.86	0.71	0.94	-	-	-
Composite reliability	0.83	0.86	0.75	0.82	0.87	0.75	0.94	-	-	-

[a] Logarithmic transformation. Notes: $n = 224$. Correlations with absolute values higher than 0.13 are significant at the 0.05 level (two-tailed).

Table 3 Questionnaire items and confirmatory factor analysis results

Main variables (source)	Stand. Loading (t-value)
Institutional support [a] – Adopted from Li and Atuahene-Gima (2001)	
In our industry, the government and its agencies provide needed technical support for companies.	0.71 [e]
In our industry, the government and its agencies play a significant role in providing financial support for companies.	0.88 (10.44)
In our industry, the government and its agencies help companies to obtain raw materials and equipment needed for their operations.	0.85 (10.31)
The government and its agencies sets aside government contracts for new and small businesses.	0.57 (7.07)
Corporate support [a] – Based on Schilke and Goerzen (2010)	
In our company, there is a great deal of support for the management of partnerships with competitors.	0.77 [e]
In our company, there are units primarily dedicated to the management of partnerships with competitors.	0.92 (13.02)
In our company, we have a porous organizational boundary that facilitates better communication with our competing partners.	0.63 (8.49)
In our company, there is (are) an employee(s) primarily dedicated to the management of partnerships with competitors.	0.80 (11.23)
Corporate ability [b] – Adopted from Wiklund and Shepherd (2005)	
In our company, we possess extensive technical knowledge.	0.68 [e]
In our company, we have the necessary skills to capture and acquire excellent market information.	0.79 (6.99)
In our company, our employees are experts in their particular jobs and functions.	0.63 (6.67)
Coopetition capability – Based on Schilke and Goerzen (2010)	
Interfirm coordination [a]	0.83 [e]
In our company, cooperative activities with our competing partners are well coordinated.	0.75 [e]
In our company, we ensure that joint work tasks with our competing partners fit very well.	0.90 (10.28)
In our company, we ensure that joint work with our competing partners is harmonized.	0.65 (8.39)
Portfolio coordination [a]	0.79 (6.32)
In our company, there is coordination among the cooperative activities of our different competing partners.	0.83 [e]
In our company, we determine areas of synergy with our competing partners.	0.83 (10.75)
In our company, we ensure that interdependencies between our competing partners are identified.	0.56 (7.38)
Learning [a]	0.60 (5.45)
In our company, we have the capability to learn from our competing partners.	0.83 [e]
In our company, we have the managerial competence to absorb new knowledge from our competing partners.	0.89 (12.10)
In our company, we integrate our existing knowledge with new information acquired from competing partners.	0.72 (10.15)
Proactiveness [a]	0.75 (5.79)
In our company, we pre-empt our competition by entering into partnership opportunities with our competitors.	0.69 [e]

Main variables (source)	Stand. Loading (t-value)
In our company, we often take the initiative in approaching competitors with partnership proposals.	0.92 (10.33)
In our company, we are proactive in finding and going after partnerships with competitors.	0.81 (9.74)
Transformation [a]	0.49 (4.55)
In our company, we are willing to put aside contractual terms to improve the outcome of our partnerships with competitors.	0.76 [e]
In our company, when an unexpected situation arises, we would rather modify a partnership agreement with our competitors than insist on the original terms.	0.71 (8.76)
In our company, we are willing to change our partnership with competitors in case of any change in the business environment.	0.84 (9.38)
Managerial ties [b] – Adopted from Boso, Story, and Cadogan (2013)	
As a person, I can obtain information about my industry faster than competitors.	0.75 [e]
As a person, I can obtain resources needed for business success faster than competitors.	0.88 (7.77)
As a person, I have a professional relationship with someone influential in my industry.	0.47 (5.78)
Expected financial performance [c] – Adopted from Vorhies and Morgan (2006)	
Profitability as a percentage of sales for the next year	0.81 [e]
Return on investment (ROI) for the next year	0.65 (8.89)
Profit growth for the next year	0.85 (12.17)
Reaching company financial goals for the next year	0.77 (10.89)
Return on assets (ROA) for the next year	0.66 (9.16)
Coopetition knowledge codification [a] – Adopted from Kale and Singh (2007)	
In our company, the manager follows a well-defined process to guide the formation or management of any partnership with competitors.	0.84 [e]
In our company, guidelines are developed and used to assist managerial decision making while forming or managing partnerships with competitors.	0.89 (15.39)
In our company, manuals (containing tools) are developed and used to assist managerial decision making while forming or managing partnerships with competitors.	0.91 (16.18)
We update the guidelines or manuals related to partnerships with competitors	0.92 (16.60)
Firm size [d] – Adopted from Boso, Story, Cadogan (2013)	
Number of full-time employees.	-
Firm experience [d] – Adopted from Boso, Story, Cadogan (2013)	
Number of years the company has been in business.	-
Firm coopetition experience [d]	
Number of years the company has been cooperating with competitors.	-
Fit statistics: $\chi^2_{(639)} = 1287.29$, $p = 0.000$; $\chi^2/df = 2.01$; NNFI = 0.91; CFI = 0.92; SRMR = 0.085; RMSEA = 0.067; AOASR = 0.069.	

Notes: [a] Based on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*); [b] Based on a 7-point scale (1 = not at all, 4 = to a moderate extent, 7 = to an extreme extent); [c] Based on a 7-point scale (1 = *much lower than target*, 7 = *much higher than target*); [d] Logarithmic transformation; [e] Loading fixed to set the scale.

Table 4 Results of regression estimations

Dependent variable		Model A						Model B					
		Coopetition capability			Coopetition capability			Expected financial performance			Expected financial performance		
	H	Coefficient (*t*-value)	*p*	Std. Err.	Coefficient (*t*-value)	*p*	Std. Err.	Coefficient (*t*-value)	*p*	Std. Err.	Coefficient (*t*-value)	*p*	Std. Err.
Constant		−1.000 (−2.85)	0.005	0.350	−1.671 (−3.64)	0.000	0.460	5.706 (16.61)	0.000	0.343	5.876 (17.41)	0.000	0.338
Main effects													
Institutional support	H1				−0.084 (−2.42)	0.016	0.035						
Corporate support	H2				0.177 (3.75)	0.000	0.047						
Corporate ability	H3				0.128 (2.16)	0.032	0.059						
Coopetition capability	H4										0.190 (2.79)	0.006	0.068
Interaction effects													
Coopetition capability × Managerial ties	H5										−0.111 (−3.09)	0.002	0.036
Control links													
Industry: Manufacturing		−0.099 (−0.39)	0.697	0.254	−0.270 (−1.08)	0.279	0.248	−0.025 (−0.10)	0.920	0.248	−0.051 (−0.21)	0.833	0.240
Industry: Transportation		−0.154 (−0.66)	0.507	0.231	−0.158 (−0.70)	0.483	0.225	0.085 (0.38)	0.705	0.225	0.058 (0.26)	0.792	0.219
Industry: Health		−0.169 (−0.72)	0.474	0.237	−0.285 (−1.23)	0.220	0.232	−0.337 (−1.45)	0.148	0.232	−0.307 (−1.37)	0.173	0.224
Industry: Retail		−0.385 (−1.79)	0.075	0.215	−0.412 (−1.97)	0.050	0.210	−0.082 (−0.39)	0.697	0.210	0.014 (0.07)	0.945	0.205
Industry: Construction		−0.142 (−0.63)	0.530	0.226	−0.186 (−0.85)	0.398	0.220	−0.400 (−1.82)	0.070	0.220	−0.422 (−1.98)	0.049	0.214
Industry: Education		−0.171 (−0.59)	0.557	0.290	−0.139 (−0.50)	0.619	0.280	−0.214 (−0.75)	0.451	0.284	−0.139 (−0.51)	0.613	0.274
Firm size		−0.080 (−0.55)	0.582	0.144	−0.136 (−0.98)	0.330	0.140	0.152 (1.08)	0.280	0.141	0.170 (1.25)	0.213	0.136
Firm experience		−0.156 (−0.77)	0.441	0.202	−0.084 (−0.43)	0.668	0.197	0.070 (0.36)	0.723	0.197	0.086 (0.45)	0.652	0.190
Firm coopetition experience		0.481 (2.25)	0.026	0.214	0.425 (2.05)	0.041	0.207	0.244 (1.17)	0.243	0.209	0.163 (0.80)	0.426	0.205
Coopetition knowledge codification		0.273 (7.71)	0.000	0.035	0.168 (3.71)	0.000	0.045	−0.008 (−0.22)	0.827	0.035	−0.048 (−1.27)	0.205	0.038
Managerial ties								0.208 (4.41)	0.000	0.047	0.154 (3.29)	0.001	0.047
Coopetition capability squared											0.018 (0.47)	0.641	0.038
F		(10, 213) 8.71	0.000		(13, 210) 8.82	0.000		(11, 212) 2.90	0.001		(14, 209) 3.77	0.000	
R^2		0.290			0.353			0.131			0.201		
Adjusted R^2		0.257			0.313			0.086			0.148		

Notes: n = 224. Two-tailed significance levels.

Figure 1 Conceptual model

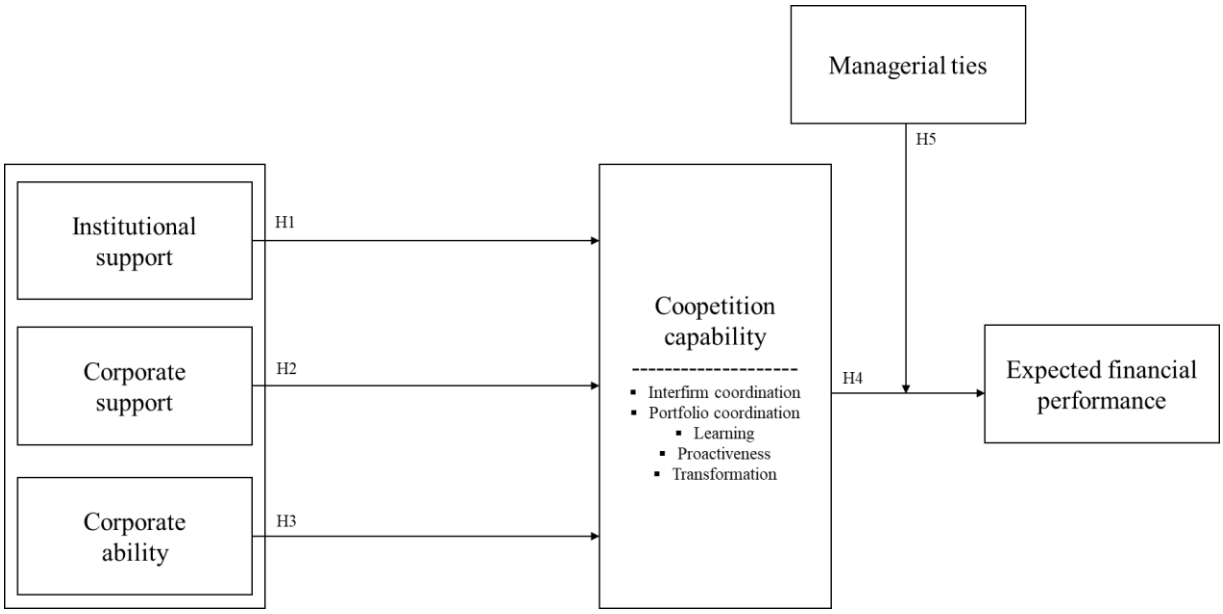

Figure 2 Marginal effects

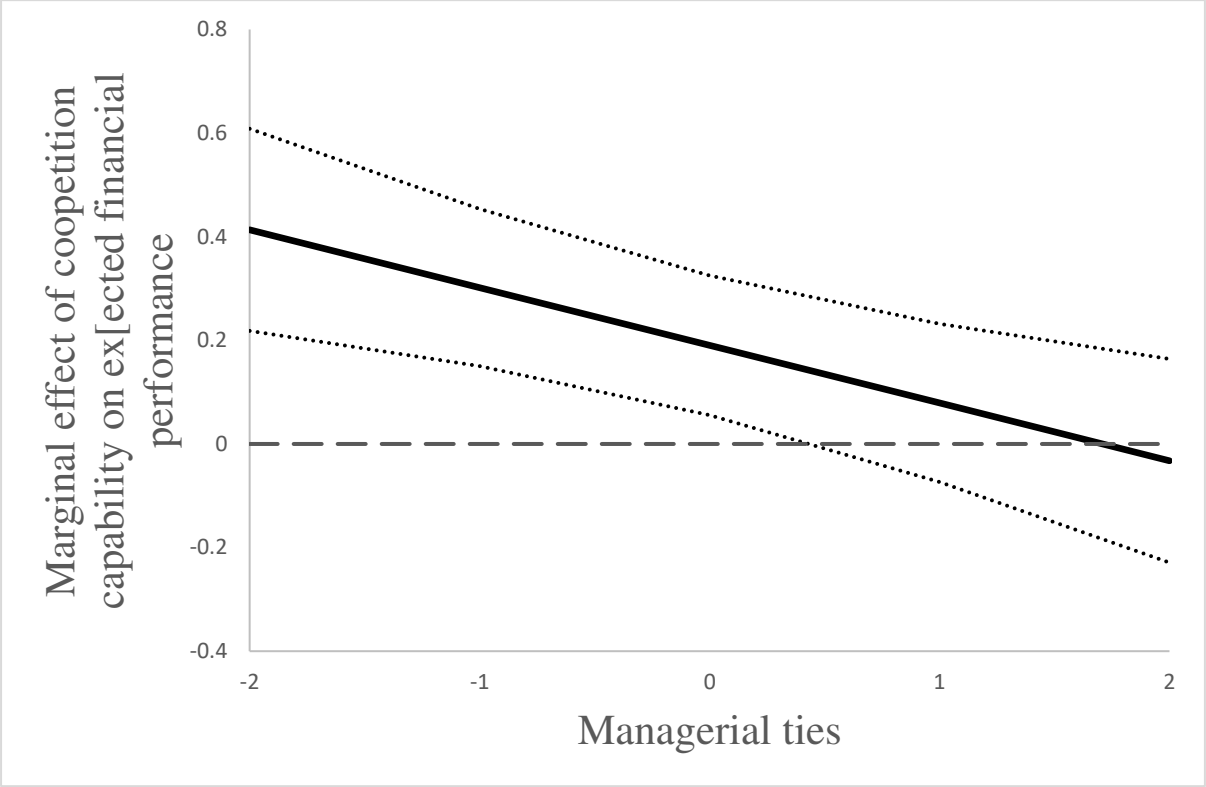

Figure 3 Interaction plot