Nobody Knows – Towards Operationalization of Strategic Dilemmas of Coopetitors

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Abstract

Purpose: This paper presents an operationalization framework that merges the concepts of coopetition and open strategy through the lenses of managerial dilemmas. Although both merged concepts have gained recent and increasing attention, they need sound operationalization, including operationalization when being blended. Therefore, the paper focuses on operationalizing and measuring strategic dilemmas of coopetition implemented as an open strategy. By doing so, the paper addresses the needs for developing measures and scales to allow for more detailed investigation and verification of the conceptual foundations of open strategy dimensions and accompanying tensions and paradoxes of coopetition.

Design/methodology/approach: This paper is conceptual. Our proposition for operationalization builds on previously developed conceptualizations of strategic dilemmas and strategic choices considered.

Findings: As the main contribution, this paper offers comprehensive operationalizations for seven strategic dilemmas faced by coopetitors following an open approach to strategy implementation.

Research limitations/implications: The paper draws managers' attention to the multidimensional perception of strategic dilemmas faced when cooperating with competitors and provides a way to analyze the profile of openness, which can be used to evaluate a firm's openness as well as to predict coopetition longevity. Originality/value: The contribution of our conceptual framework is twofold as we advance the concept of merging coopetition with an open strategy using the lenses of managerial dilemmas that are commonly faced in both conceptions.

Keywords: operationalization, measurement, coopetition, open strategy, scale development.

JEL: L21. L14. M2

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Nierozpoznana perspektywa koopetycji – w kierunku operacjonalizacji strategicznych dylematów koopetytorów

Streszczenie

Cel: niniejszy artykuł przedstawia ramy operacjonalizacji, które łączą koncepcje koopetycji i otwartej strategii, wykorzystując pryzmat dylematów menedżerskich. Chociaż obie połączone koncepcje zyskują coraz większą uwagę badaczy, brakuje im operacjonalizacji, a zwłaszcza operacjonalizacji spójnej z założeniami zarówno koncepcji koopetycji, jak i otwartych strategii. Stąd też artykuł koncentruje się na operacjonalizacji i pomiarze strategicznych dylematów koopetycji wdrażanej jako strategia otwarta. W ten sposób odnosi się do eksponowanych w literaturze potrzeb opracowania miar i skal, które pozwolą na bardziej szczegółowe badanie, ale także weryfikację konceptualnych podstaw wymiarów otwartej strategii oraz towarzyszących im napięć i paradoksów koopetycji.

Metodologia: artykuł ma charakter koncepcyjny. Przedstawiona w nim propozycja operacjonalizacji opiera się na łącznym uwzględnieniu wcześniej opracowanych konceptualizacji dylematów strategicznych i rozważanych wyborów strategicznych.

Wyniki: artykuł oferuje kompleksowe operacjonalizacje siedmiu dylematów strategicznych, przed którymi stoją koopetytorzy stosujący otwarte podejście do wdrażania strategii.

Ograniczenia/implikacje badawcze: artykuł zwraca uwagę menedżerów na wielowymiarowe postrzeganie dylematów strategicznych napotykanych podczas współpracy z konkurentami i proponuje sposób analizy profilu otwartości, który może być wykorzystany do oceny otwartości firmy, a także do przewidywania trwałości koopetycji.

Oryginalność/wartość: zaproponowane ramy koncepcyjne przyczyniają się do rozwinięcia koncepcji połączenia koopetycji ze strategią otwartą, wykorzystując perspektywę dylematów menedżerskich powszechnie spotykanych w obu koncepcjach.

Słowa kluczowe: operacjonalizacja, pomiar, koopetycja, strategia otwarta, tworzenie skali.

1. Introduction

Several types of pressures that we witness today bring the growing interest in the development of open initiatives (Devece et al., 2019; Adobor, 2021; Belmondo & Sargis-Roussel, 2022; Splitter et al., 2021; Stadler et al., 2023) and even position openness as an organizing principle (Splitter et al., 2023). The organizational tensions that arise are rooted in growing trends of openness in the field of open data government (Gao et al., 2021), open (big) data management (Morton et al., 2019), open science (Vicente-Saez & Martinez-Fuentes, 2018), open economy (Geerken et al., 2019) but also in increasing megatrends favoring openness like social entrepreneurship and social innovation (Pittz et al., 2017), circular economy (Köhler et al., 2022), and a wide range of ecosystems (Rohrbeck et al., 2009). As a result, organizations are shifting towards open forms of strategy-making (Hautz et al., 2017; Goulart Heinzen & Lavarda, 2021; Stjerne et al., 2022). However, recently, scholars go even beyond those assumptions and argue that, in fact, many strategic processes may be favorable for injecting openness, and various contexts should be considered (Bellucci et al., 2022; Stadler et al., 2023).

One of the contexts in which strategic openness perfectly fits is coopetition (Bouncken et al., 2015), as some shared cognitive roots for these two may be identified (Klimas & Radomska, 2022). Nonetheless, although they share common conceptual roots and seem cognitively convergent, they still remain usually considered in other research streams (Le Roy & Chesbrough, 2018). Indeed, Klimas and Radomska (2022) show that open strategy has not been applied as a theoretical frame in the coopetition research.

Blending up coopetition and open strategy concepts creates valuable opportunities to develop both those concepts and a more comprehensive strategic approach adopting a relational view and exploiting syncretic relational rent (Dyer & Singh, 1998).

First, the adoption of an open strategy view on coopetition may strengthen its theoretical foundations shown as requiring conceptual deepening (Bouncken et al., 2015; Gnyawali & Song, 2016) but also may help to better handle tensions (Bouncken et al., 2018a; Jakobsen et al., 2020; Geurts et al., 2022) and paradoxes (Bouncken et al., 2015; Gernsheimer et al., 2021) being inseparable from coopetition strategies while so far being narrowed to managerial, knowledge-, and value-related choices.

Second, adopting a coopetitive view on open strategies may strengthen the arguments on the necessity to extend recent research on open strategy (Cai & Canales, 2022) previously being more focused on the internal perspective (Dobusch et al., 2017; Seidl & Werle, 2018).

Third, it may bring a broader view by mixing up managerial tensions (Bouncken et al., 2018b; Jakobsen, 2020) with strategic dilemmas (Hautz et al., 2017), thus allowing us to understand open strategizing processes – the coopetitive ones in particular – better (Le Roy & Chesbrough, 2018; Klimas & Radomska). Therefore, further discussion on joint concepts of open strategy and coopetition is essential, as it may reveal various research avenues. Given the above, we further explore the strategic dilemmas notion recognized as crucial in open strategizing (Hautz et al., 2017; Goulart Heinzen & Lavarda, 2021) and address the complexity and contradictory nature of coopetition (Bouncken et al., 2018a; Raza-Ullah, 2020).

Given the blended view on coopetition and open strategy, one may notice shared challenges or limitations. On the one hand, there is a need to consider completing theoretical assumptions, adopted operationalizations, and the measurement scales used (Gnyawali & Song, 2016; Gnyawali & Charleton, 2018; Crick & Crick, 2019; Garri, 2021; Köseoğlu et al., 2019) to make coopetition more compact and coopetition research more comparable. On the other hand, in the same vein, in open strategy literature, it is emphasized that as the conceptual ground is quite well refined, we should switch into consideration of operationalizations and measurements useful when investigating open strategies, the level of openness, and efficiency of strategizing processes (Cai & Canales, 2022; Splitter et al., 2023; Stadler et al., 2023).

Therefore, we extend the framework of common roots and shared strategic dilemmas (Klimas & Radomska, 2022) by bringing insights into operationalization and measurement of seven dilemmas faced by a coopetitor developing an open strategy: (1) dilemma of process, (2) dilemma of commitment, (3) dilemma of disclosure, (4) dilemma of scope, (5) dilemma of resources, (6) dilemma of value, and (7) dilemma of mutual investments.

2. Operationalization - Conceptual Framework

Open strategies are conceptualized through two dimensions (inclusiveness and transparency – Whittington et al., 2011) and five strategic dilemmas (dilemma of process, commitment, disclosure, empowerment, and escalation - Hautz et al., 2017). Regarding open strategies of coopetitiors, the number and meaning of those strategic dilemmas are higher than in general open strategies, covering both internal and external inclusiveness and transparency. In that case, in which the perspective is limited to an external view and partners are limited to competitors, the list of paradoxical choices covers seven dilemmas (Klimas & Radomska, 2022): the dilemma of process, commitment, disclosure, scope, resources, value, and mutual investments. In general, those dilemmas may be understood in terms of strategic choices faced by coopetitors adopting an open approach to strategic management (see Table 1 in Klimas & Radomska, 2022, pp. 206–207). For instance, when considering the dilemma of disclosure, coopetitiors should decide 'to what extent (if at all) to disseminate strategic information' among cooperating rivals but also 'how to transparently communicate under coopetition agreements' with them. The decisions made regarding particular strategic choices determine the real level of a coopetitor's openness. The question is, however: how to measure those reflections of openness under certain strategic dilemmas, thus how to transpose the decisions made under the specific strategic choices into the evaluation of a coopetitor's real openness?

Our proposition for operationalization builds on previously developed conceptualizations of strategic dilemmas and strategic choices considered.

Firstly, for all the strategic choices identifiable under particular dilemmas, it offers contradictory reference points referring to high openness and intense coopetition and low openness and non-intense coopetition. Those reference points, always two per strategic choice, present two opposite strategic options available under the open strategy approach. For instance, under the commitment dilemma, a coopetitior has to decide if the coopetition strategy will be based only on formal relationships. Here, the options are either only formal contracts, relationships, and contacts or combining both formal contracts, contacts, and social relationships. Moreover, we provide a more detailed description of those reference points regarding the dilemma they address and propose several questions that serve as hints to analyze and evaluate each dilemma separately.

Secondly, for all of the strategic choices identifiable under particular dilemmas, sets of measurement scales are offered that could be used to evaluate the level of tension and address strategic challenges. Following a cumulative approach to knowledge creation, the proposed scales are already in use and were tested and validated in previous studies (see the references used in Table 1). Therefore, we believe that they will allow researchers or managers to accurately measure the level of openness in a specific area – Table 1.

In the first *dilemma of process*, the general question covers the inquiry about the actors involved in strategizing (i.e., their role, number, skills) and how the process is designed and executed. Thus, two extremes answer the questions of how broad and differentiated audience (if any) is to invite and how to shape the process. In the first option, where high openness is desired, the engagement of heterogeneous partners and adjusted/advanced coordination mechanisms are proposed. On the contrary, there is a homogenous partner and a simple coordination mechanism. To address the inquiry described, several scales could be used: homogeneity and number of actors (Geurts et al., 2022), management practices while applying open innovation (Crema et al., 2014), as well as the use of contracts regulating behaviors of partners and defining their obligations (Kam & Lai, 2018).

Regarding the specific question on coopetition, two issues should be considered to determine the complexity and intensity of coopetition. First, coopetition intensity is considered as the simultaneous intensity of cooperation and competition under a coopetitive arrangement as proposed in the scale developed and validated by Rai et al. (2022). Indeed, coopetition intensity is acknowledged as interlinked with tensions, thus making coopetition more challenging. Second, the complexity of coopetition may be measured using the reverse scale suggested by Petter et al. (2014) for managing conflicts, incompatibilities, and different expectations of coopetitors. It is so, as the development of rules, principles, and governance mechanisms make the execution of coopetition smoother (Dorn et al., 2016; Devece et al., 2019). Regarding the dilemma of the process, it should be emphasized that the more competitors engaged in a coopetition agreement (i.e., if it is dyadic, triadic, or network coopetition), the more difficult and prone for managerial tensions its execution is (Bengtsson et al., 2010; Dorn et al., 2016). Therefore, the evaluation of intensity and complexity using the above-mentioned scales should be weighed by the type of coopetition in terms of the number of coopetitors engaged.

The second type of dilemma – the *dilemma of commitment* relates to resolving the issue of readiness and will to include the actors in the strategizing process by answering the question of how (if at all) to engage actors in strategy development. On the one hand, there is an option to focus on the collective goals through a committed attitude, and on the other hand, we may outline the focus on individual goals and neutrality. We propose that

Table 1 Conceptual Framework

High openness and intense coopetition	Coopetition as an open strategy	Low openness and non-intense coopetition
Heterogenous partners and	Dilemma of process wide and how differentiated audience (if any) to invite? How to shape the process	Homogenous partner and simple
adjusted/advanced coordination mechanisms	Scale: homogeneity and number of actors (Geurts et al., 2022) & management practices (Crema et. al., 2014) & use of contracts (Kam & Lai, 2018)	coordination mechanism
Complex and intense	Coopetition in dyad, triad, or network?	Slightly absorbing and
coopetition	Scale: number of coopetitors; coopetition intensity (Rai et al., 2022) & managing conflicts and incompatibilities (Petter et al., 2014)	intense coopetition
Focus on collective	Dilemma of commitment How (if at all) to engage actors in strategy development?	Focus on individual
goals through committed attitude	Scale: leader inclusiveness (Nembhard & Edmondson, 2006) & commitment (Raza-Ullach, 2020)	goals and neutrality
Formal contract	Coopetition based only on formal relationships?	
and informal social relationships	Scale: contracts and formality (Bouncken et al., 2020), coopetition governance formality (Petter et al., 2014) & social networks and social support (SNSS – Abbott, 2009) & social bonds (Kam & Lai, 2018)	Formal contract

High openness and intense coopetition Coopetition as an open strategy Low openness and non-intense coopetition and intense coopetition To what extent (if at all) to disseminate strategic information? Limited and selective coopetitions. Open access to all strategic strategic decisions, projects, activities projects, activities activities and transparency of relationship atmosphere – Su et al., 2013) Limited and selective decisions, projects, activities projects, activities communication quality (Claycomb & Frankwick, 2010) & information quality (Claycomb & Frankwick, 2010) & information quality (Claycomb & Frankwick, 2010) Limited and selective decisions, projects, activities activities and transparency (Hanisch & Wald, 2014) Full transparency in coopetitive relationship transparenty communicate under coopetition strategy levels (i.e. corporate) Month transparency (Hanisch & Wald, 2014) Limited and selective transparency in coopetitive strategic areas (if any) to open up and when? Diamens at all primers and transparency in coopetition (Crick & Crick, 2019) (i.e. corporate, business, and functional) Acre we interested in inter-organizational coopetition only? Pocus on intra-firm coopetition (Crick & Crick, 2019) Focus on inter-organizational coopetition (Crick & Crick, 2019) Ecoperative nontal coopetition (Crick & Crick, 2019)	Table 1 – continued		
Dilemma of disclosure To what extent (if at all) to disseminate strategic information? Scale: intellectual capital transparency (i.e., transparency of important business characteristics and transparency of relationship atmosphere – Su et al., 2013) & communication quality (Claycomb & Frankwick, 2010) & information quality (Kam & Lai, 2018) How to transparently communicate under coopetition agreements? Scale: relationship transparency (Hanisch & Wald, 2014) & explicit contracts (Jap & Ganesan, 2000) Dilemma of scope Which strategic areas (if any) to open up and when? Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	High openness and intense coopetition	Coopetition as an open strategy	Low openness and non-intense coopetition
Scale: intellectual capital transparency (i.e., transparency of important business characteristics and transparency of relationship atmosphere – Su et al., 2013) & communication quality (Claycomb & Frankwick, 2010) & information quality (Kam & Lai, 2018) How to transparently communicate under coopetition agreements? Scale: relationship transparency (Hanisch & Wald, 2014) & explicit contracts (Jap & Ganesan, 2000) Which strategic areas (if any) to open up and when? Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	Open access to all	Dilemma of disclosure To what extent (if at all) to disseminate strategic information?	Limited and selective access to all strategic
How to transparently communicate under coopetition agreements? Scale: relationship transparency (Hanisch & Wald, 2014) & explicit contracts (Jap & Ganesan, 2000) Which strategic areas (if any) to open up and when? Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	strategic decisions, projects, activities	Scale: intellectual capital transparency (i.e., transparency of important business characteristics and transparency of relationship atmosphere – Su et al., 2013) & communication quality (Claycomb & Frankwick, 2010) & information quality (Kam & Lai, 2018)	decisions, projects, activities
Scale: relationship transparency (Hanisch & Wald, 2014) & explicit contracts (Jap & Ganesan, 2000) **Dilemma of scape** Which strategic areas (if any) to open up and when? Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	Full transparency	How to transparently communicate under coopetition agreements?	Limited and selective transparency
Which strategic areas (if any) to open up and when? Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	ın coopetitive relationship	Scale: relationship transparency (Hanisch & Wald, 2014) & explicit contracts (Jap & Ganesan, 2000)	in coopetitive relationship
Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018) Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	Openness at all strategy levels	Dilemma of scope Which strategic areas (if any) to open up and when?	Openness at purposefully
Are we interested in inter-organizational coopetition only? Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	(i.e. corporate, business, and functional)	Scale: openness between partners in exchanging information of relevance for the relationship (Xie & Haugland, 2016) & relational norms (Jap & Ganesan, 2000) & cooperative norms (Kam & Lai, 2018)	chosen stategy level (i.e., corporate, business, or functional)
Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	Focus on inter-	Are we interested in inter-organizational coopetition only?	Focus on intra-firm
	organizational coopetition	Scale: multilevel coopetition (Crick & Crick, 2019) & vertical and horizontal coopetition (Le Roy et al., 2022)	coopetition

High openness and intense coopetition Coopetition as an open strategy Low openness and non-intense coopetition Openness in sharing strategic (i.e. VRIS) and core ones strategic (i.e. VRIS) and core ones strategic (i.e. VRIS) and core ones Which (if any) resources to make available under open strategy? Scale: resource complementarity (Zhiang et al., 2009) Sharing resources concesting strategic investments (Claycomb, Frankwick, 2010) Scale: resource complementarity (Zhiang et al., 2009) Acciding strategic incertage concessured incertage concessured concessured strategic investments (Claycomb, Frankwick, 2010) Scale: resource complementarity (Zhiang et al., 2009) Protecting resources concessured conc	Table 1 - continued		
Which (if any) resources to make available under open strategy? Scale: resource complementarity (Zhiang et al., 2009) & relationship specific investments (Claycomb, Frankwick, 2010) How to balance between sharing and protection of resources under coopetition? Scale: internal sharing mechanisms and formal protection mechanisms (Estrada et al., 2016) Dilemma of value To what extent (if at all) to share the value co-created through open strategizing? Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	High openness and intense coopetition	Coopetition as an open strategy	Low openness and non-intense coopetition
How to balance between sharing and protection of resources under coopetition? Scale: internal sharing mechanisms and formal protection mechanisms (Estrada et al., 2016) Dilemma of value To what extent (if at all) to share the value co-created through open strategizing? Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation under coopetition? Scale: tensions of value creation and appropriation (Yolschenk et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	Openness in sharing	Dilemna of resources Which (if any) resources to make available under open strategy?	Sharing resources excluding strategic
How to balance between sharing and protection of resources under coopetition? Scale: internal sharing mechanisms and formal protection mechanisms (Estrada et al., 2016) Dilemna of value To what extent (if at all) to share the value co-created through open strategizing? Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation under coopetition? Scale: tensions of value creation and appropriation (Volschenk et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	strategic (i.e. VRIS) and core ones	Scale: resource complementarity (Zhiang et al., 2009) & relationship specific investments (Claycomb, Frankwick, 2010)	(i.e., VRIS) and core ones
Scale: internal sharing mechanisms and formal protection mechanisms (Estrada et al., 2016) Dilemna of value To what extent (if at all) to share the value co-created through open strategizing? Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation under coopetition? Scale: tensions of value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	Sharing resources	How to balance between sharing and protection of resources under coopetition?	Protecting resources
Dilemma of value To what extent (if at all) to share the value co-created through open strategizing? Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation under coopetition? Scale: tensions of value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	over protecting resources	Scale: internal sharing mechanisms and formal protection mechanisms (Estrada et al., 2016)	over sharing resources
Scale: fair value distribution (Provan, Sydow, 2008) & relational equality (Scheer et al., 2003) How to balance between value creation and appropriation under coopetition? Scale: tensions of value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	Fair distribution	Dilemma of value To what extent (if at all) to share the value co-created through open strategizing?	Appropriation
How to balance between value creation and appropriation under coopetition? Cale: tensions of value creation and appropriation (Yolschenk et al., 2018b) & dynamics of value creation and appropriation (Yolschenk et al., 2016)	of co-created value	!	of co-created value
Scale: tensions of value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	Focus on value	How to balance between value creation and appropriation under coopetition?	Focus on value creation and
	creation without value appropriation	Scale: tensions of value creation and appropriation (Bouncken et al., 2018b) & dynamics of value creation and appropriation (Volschenk et al., 2016)	(if possible) limited value appropriation

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Table

Low openness and non-intense coopetition	ment Closed strategizing processes in the strategy development and execution Focus on maintaining status quo or limiting coopetition
Coopetition as an open strategy	Dilemma of mutual investments To what extent (if at all) is it worth for our partners to engage in strategy development and execution? A cooperation intensity (Rimas, Stańczyk et al., 2023) & long-term orientation (Kam, Lai, 2018) Should we convince our cooperating competitors to intensify cooperation under the coopetition agreement? Scope: coopetition duration (Bouncken et al., 2018b) Eocus on mastatus quo or coopetition intensity (Rai et al., 2022) & competition intensity (Rai et al., 2022)
High openness and intense coopetition	Co-strategizing processes in the strategy development and execution Focus on coopetition intensification

such a dilemma could be tackled by measuring the leader's inclusiveness (Nembhard & Edmondson, 2006), defined as a focus on a specific strategy of openness and promoting diversity of opinions in the context of collective team goals (Mitchell et al., 2015) and commitment measured through the frequency of provided information (Raza-Ullah, 2020). It should be noted that the latter not only reflects the committed attitude of the coopetitor but also sheds light on the coopetitor's transparency, so crucial for an efficient open strategizing process (Hautz et al., 2017; Stadler et al., 2023).

Regarding coopetition formality and informality, three aspects should be considered. First, the level of formality of a coopetition strategy is dependent on clear contracts describing targets and coopetitive activities, appropriate internal structures for managing coopetition, and fair distribution of knowledge about coopetition inside the firm (Bouncken et al., 2020). Second, the formality of coopetition governance includes formal management of external relationships (Petter et al., 2014). One should bear in mind that the first two scales should be measured in reverse as they originally took the perspective of factors protecting coopetitors rather than the propensity for openness. Third, the interpersonal and social facets should be considered using, for instance, the evaluation of individual social bonds (Kam & Lai, 2018) and social networks and support (Abbott, 2009).

Next, there is the *dilemma of disclosure* addressing the data protection issue. Here we have the main question on the extent (if at all) of disseminating strategic information. Open access to all strategic decisions, projects, and activities (full openness) or limited and selective access to such issues is possible. The possibilities of measurement are, in that case, very vast. We propose using the scales of intellectual capital transparency (i.e., transparency of important business characteristics and transparency of relationship atmosphere – Su et al., 2013), communication quality in terms of its timeliness, accuracy, and adequacy (Claycomb & Frankwick, 2010), but also information quality in terms of its completeness and reliability (Kam & Lai, 2018).

In the context of the disclosure dilemma faced by coopetitors, there is a need to evaluate the level of transparency within coopetitive relationships. On the one hand, the transparency of the relationships, which can be seen – to some extent – as a substitute for formal arrangements, should be measured through a clear and objective (as much as possible) assessment of coopetition results, contributions made by cooperating competitors, and general perception of transparency under coopetitive relationships (Hanisch & Wald, 2014). On the other hand, explicit contracts between or among coopetitors can be seen as a complement for relational norms considered under control mechanisms and refer to explicit and detailed communication, usually written, but not necessarily available outside coopetitive relationships (Jap & Ganesan, 2000).

Further, we outlined the *dilemma of scope*, which relates to wondering which strategic areas (if any) are to be opened up and when such a decision

should be taken. It could include openness at all strategy levels (i.e., corporate, business, and functional) or purposefully chosen levels. As this dilemma is essential, the measures that could be used may combine openness between partners in frequent exchange of information of relevance for the relationship (Xie & Haugland, 2016), relational norms regarding informal information exchange, solidarity and participation (Jap & Ganesan, 2000) or cooperative norms covering wide and honest sharing of ideas, initiatives, and all relevant information (Kam & Lai, 2018).

The specific dilemma of the scope of an open coopetition strategy refers to the potential willingness of the firm to focus on developing multiple and multilevel inter-organizational coopetition or turning the attention to the exploitation of internal forms of coopetition. Openness in this area may be evaluated through the scope of coopetition as suggested by Crick and Crick (2019), and measured by the level of local and national coopetition as well as the organizational one (coded in a reverse manner). To make the measurement of the scope dilemma more comprehensive, it is suggested to consider also the willingness to combine both vertical and horizontal coopetition strategies (Le Roy et al., 2022).

Inevitably intertwined with the previous *dilemmas* is the one *concerning resources*. The decision on which (if any) resources are made available under open strategy may bring long-term and significant consequences. Thus, there is an alternative of openness in sharing resources, including strategic (i.e., VRIS) and core ones, or the alternative of sharing resources excluding those strategic and core. The potential limitations may cover measuring resource complementarity used in the context of cooperation with other partners (Zhiang et al., 2009) and relationship-specific investments related to substantial engagement of time, money, and other resources but also focusing on the particular needs of a cooperating competitor (Claycomb & Frankwick, 2010).

One of the characteristics of a coopetition strategy is that there is a continuous balance between sharing and protecting resources (Gast et al., 2019). It is so as coopetition links business rivals, thus, the partnership is highly vulnerable to the risk of opportunistic behaviors (Chai et al., 2019). Therefore, when considering the resource dilemma, the choice between sharing or protecting the resource becomes crucial. Given the perspective of openness, the focus may be given to internal and formal mechanisms regarding sharing and protecting resources under coopetition (Estrada et al., 2016).

Afterward, we delineate *the dilemma of value* where the main concerns arise regarding the extent (if at all) of sharing the value co-created through open strategizing. Fair distribution of co-created value or the appropriation of co-created value is possible. To resolve this dilemma, the measurement of fair value distribution (Provan & Sydow, 2008) and relational equality in terms of comparable inputs and outputs of engaged coopetitors (Scheer et al., 2003) could be used.

The value dilemma is next to the dilemma of resources, particularly specific for coopetition strategies. Coopetition, acknowledged as a paradoxical phenomenon (Bouncken et al., 2015; Devece et al., 2019; Gernsheimer et al., 2021), refers to the continuous balancing between value creation and capture (Bouncken et al., 2020), but also the possible choice of focusing on value appropriation (Volschenk et al., 2016; Bouncken et al., 2018b; Garri et al., 2021; Rai et al., 2022). Given the perspective of openness, it is assumed that coopetitors are focused on value creation and fair capturing but are not interested in value appropriation as it can disrupt the use of coopetition strategy. To take a comprehensive picture of the approach adopted by a coopetitor under the dilemma of value, it is recommended to evaluate the tensions of value creation and mitigation of tensions related to value appropriation (Bouncken et al., 2018b) but also the dynamic between different contexts of value created and types of value appropriated (Volschent et al., 2016). It should be highlighted that, as proven by Bouncken et al. (2018b), the tension level and force are linked with the complexity of coopetition. It suggests that the value dilemma may be specifically linked to the dilemma of process, considering the intensity and complexity of coopetition.

Finally, the last dilemma in our conceptual framework is the *dilemma* of mutual investments, where the issue of the extent (if at all) to which it is worth for our partners to engage in strategy development and execution. In this regard, co-strategizing or closed processes may be applied and measured by mutuality (Klimas, Stańczyk et al., 2023) or long-term orientation (Kam & Lai, 2018).

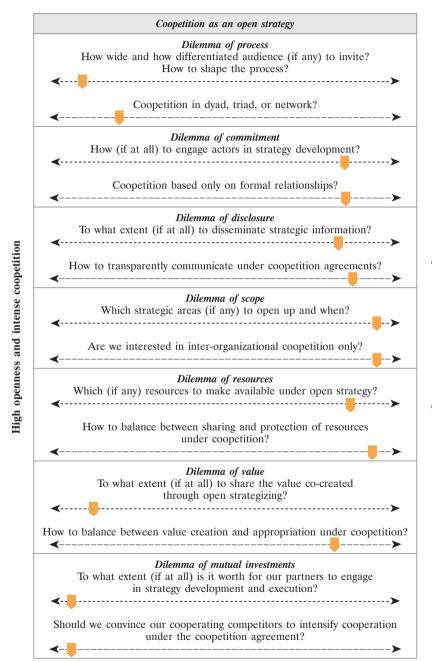
Concerning the dilemma of mutual investments, evaluating willingness to make coopetitive relationships even stronger in the future is essential. The willingness may depend on the duration of coopetition, as the longer coopetition is, the higher the willingness to maintain it (Bouncken et al., 2018b). Additionally, it would be recommended to consider both subscales evaluating coopetition intensity, namely cooperation intensity and competition intensity (Rai et al., 2020). However, intensity should be concerned with regard to the future and potential strategies for coopetition as the present perspective is evaluated within the dilemma of process.

Importantly, as strategic choices are not dichotomic, but there is a continuum between the identified extremes (reference points, opposite strategic options), the measurement scales proposed to address strategic choices, not particular (opposite) options of those choices. Depending on the measurement results, the researcher or manager can see "where" the firm is "in its openness" in a particular strategic dilemma of open strategy. To make it more transparent and convincing, adding sliders to enable the comparison and positioning of the tension observed for a specific case would be recommended. In our conceptual framework, one more general slider addresses the tensions recognized for an open strategy, and one more specific slider concerns the coopetition concept – Figure 1.

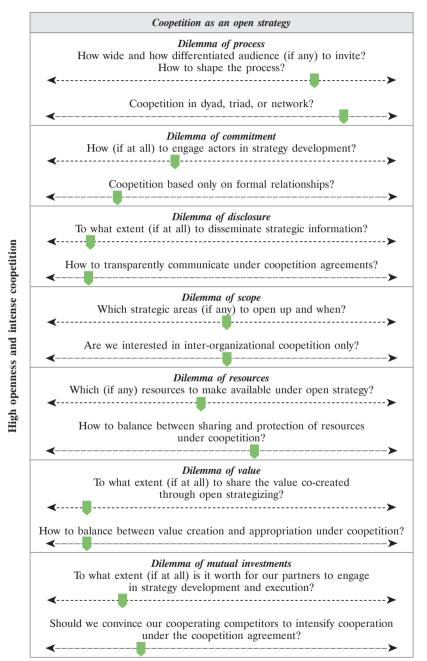
Figure 1

Exemplary Profiles of Openness of Coopetitors

Coopetition A: asymmetric-in-openness profile may suggest opportunistic behaviors



Coopetition B: promising newcomer in openness



3. Discussion and Conclusions

The contribution of our conceptual framework is twofold as we advance the concept of merging coopetition with an open strategy using the lenses of the managerial dilemmas that are commonly faced in both conceptions (Klimas & Radomska, 2022).

First, we shed some light on measuring the open strategy. In fact, although that concept has recently gained much attention (Adobor, 2020; Stjerne et al., 2022), research on open strategy measurement is still scarce (Cai & Canales, 2022). Scholars have widely discussed it using two formative dimensions – transparency and inclusiveness (Appleyard & Chesbrough, 2017; Baptista et al., 2017; Dobusch et al., 2019; Gegenhuber & Dobusch, 2017), but their integrated measurement has not been proposed so far. We may find research addressing transparency constructs (ter Hoeven et al., 2021) or the inclusiveness domain (Chung et al., 2020) in various perspectives, such as supply chain (Awaysheh & Klassen, 2010; Caridi et al., 2010; Morgan et al., 2018; Wang & Wei, 2007; Williams et al., 2013), user involvement (Ramani & Kumar, 2008; Tacer et al., 2018) or stakeholder orientation (Dapko, 2012; Feng et al., 2010; Yau et al., 2007). However, previous research is more contextual and has not used open strategy lenses. Thus, there is a need to advance the open strategy theory by developing the measures and scales that would allow for more detailed investigation and verification of the conceptual foundations of both open strategy dimensions and accompanying dilemmas. That is the gap that we address with our conceptual framework.

Second, this conceptual paper addresses the need for focusing on detailing and clarifying the theoretical face of coopetition (Köseoğlu et al., 2019; Garri, 2021), hence not through recognition of the theoretical underpinning of coopetition as it has been done quite well (e.g. Bouncken et al., 2015; Dorn et al., 2016; Devece et al., 2019; Gernsheimer et al., 2021; Klimas, Ahmadian et al., 2023) but through consideration of applicable operationalizations and measurement scales for strategic dilemmas faced by coopetitors implementing a coopetition strategy in accordance with an open approach (Morton et al., 2019; Stjerne et al., 2022; Splitter et al., 2023; Stadler et al., 2023). In general, this paper addresses the pools of works, arguing that if we want the knowledge about coopetition to be complete, comprehensive and also robust, we need to focus on operationalization and measurement of its specific reflections (Gnyawali & Song, 2016; Gnyawali & Charleton, 2018; Crick & Crick, 2019). In particular, it contributes to the methodological debate in coopetition literature as it develops comprehensive operationalizations for seven strategic dilemmas faced by coopetitors following an open approach to strategy implementation. So far, the literature does not provide measurement scales either for all of the dilemmas or for their particular types (there are two exceptions, however: value creation

vs. value appropriation – Volschenk et al., 2016; Bouncken et al., 2018b; resource sharing vs. resource protection – Estrada et al., 2026; Gast et al., 2019). Therefore, it was reasoned to review previous coopetition research and identify the scales and sub-scales which, when combined, will likely provide proxies for assessing the openness in particular dilemmas. In the next step, testing and validating the measurement propositions is recommended.

Besides contributions resulting from recognizing and developing possible operationalizations for particular strategic dilemmas of coopetitors, this paper offers some managerial implications.

First, it draws managers' attention to the multidimensional perception of strategic dilemmas faced when cooperating with competitors. We see it as essential as, so far, the coopetition literature has paid attention to some of the tensions and paradoxes (mainly those related to information exchange, resource sharing, and value creation).

Second, as shown in Figure 1, the results of measurement may be used to analyze the profile of openness and see in which areas – depending on the dominant logic of the firm (Vargo & Lusch, 2014) – the firm should work on its higher openness and coopete more intensively (ref. to organizations willing to be fully opened – Hautz et al., 2017; Stadler et al., 2023) or become more conservative and protective to be less open and coopete less intensively (e.g., due to a high risk of opportunistic behaviors of coopetitor/s – Chai et al., 2019).

Moreover, the evaluation of the openness profile may be conducted for the firm's competitor/s to recognize its/their approach to a mutually executed coopetition strategy, thus predicting coopetition longevity.

As a conceptual paper, it may be claimed to provide only propositions based on the literature hence not tested in any field research. Therefore, future research should have an explorative nature to investigate our proposed dilemma operationalization concept deeper. First, it is necessary to understand whether we comprehensively addressed all relevant tensions for coopetion as an open strategy. Second, further analysis should concern the scales proposed and qualitatively verify their readability and adequacy to provide the potential refinement of the initial items. Finally, it would be necessary to check the usefulness of the proposed constructs and the relevance of their theoretical underpinnings for operationalizing coopetition as an open strategy using a full-scale validation procedure (Crick & Crick, 2019). Besides research focused on verification and testing of the proposed operationalization framework, we see some valuable options for a more in-depth study of the possible interlinks between the considered strategic dilemmas of coopetitors.

On the one hand, it would be interesting to find out, using sufficiency logic, if openness in a particular area impacts the remaining fields. The results of such investigation, when confronted with the profile of openness of a specific coopetitior, will reveal where to allocate resources to achieve

the desired level and structure of openness when cooperating with business rivals. On the other hand, it would be interesting to identify, using necessity logic (Dul, 2016), whether there are dilemmas necessary for boosting firm performance by a coopetitor. The results of such an investigation would show managers possible bottlenecks in the firm's openness.

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