

Sailing towards uncertainty: coopetitive strategy and effectual logic to achieve entrepreneurial project success

Pierre-Louis Meuric (Ph.D)

Assistant Professor

pierrelouis.meuric@idrac-bs.fr

IDRAC Business School

47 Rue du Sergent Michel Berthet,
69009 Lyon

Résumé

La littérature sur la coopétition s'est principalement concentrée sur les grandes organisations, en explorant des résultats tels que l'amélioration de l'innovation, de la performance et de l'apprentissage organisationnel, tout en abordant les tensions au sein des relations coopétitives. Toutefois, les études portant sur les PME et les entrepreneurs dans ce contexte demeurent limitées. Cette recherche examine la coopétition comme un processus entrepreneurial à travers le prisme de l'effectuation. En étudiant le pôle de course au large de Lorient, un écosystème coopétitif, cette étude apporte trois contributions à la littérature sur la coopétition: elle montre comment l'effectuation s'ancre dans les processus coopétitifs, met en évidence que les entrepreneurs privilégient la viabilité des projets plutôt que leur performance, et révèle que la coopétition évolue avec les projets entrepreneuriaux. Elle contribue également à la littérature sur l'effectuation en identifiant une hiérarchie entre ses principes, en soulignant son rôle dans la survie organisationnelle plutôt que dans la performance, et en explorant ses antécédents à travers les caractéristiques des entrepreneurs. Ces résultats permettent une meilleure compréhension des interactions entre effectuation et coopétition dans les écosystèmes entrepreneuriaux.

Mots-clés : Entrepreneuriat, Effectuation, Coopétition, Incertitude environnementale

Abstract

The literature on coopetition has focused largely on large organizations, exploring outcomes like enhanced innovation, performance, and organizational learning while addressing tensions within coopetitive relationships. However, studies on SMEs and entrepreneurs in this context remain limited. This research examines coopetition as an entrepreneurial process through the lens of effectuation. By studying the offshore racing hub in Lorient, a coopetitive ecosystem, this study makes three contributions to the coopetition literature: it demonstrates how effectuation anchors within coopetitive processes, shows that entrepreneurs prioritize project viability over performance, and reveals that coopetition evolves with entrepreneurial projects. Additionally, it contributes to the effectuation literature by identifying a hierarchy among its principles, emphasizing its role in organizational survival rather than performance, and exploring its antecedents through entrepreneur characteristics. These findings enhance understanding of the interplay between effectuation and coopetition in entrepreneurial ecosystems.

Key Words: Entrepreneurship, Effectuation, Coopetition, and Environmental Uncertainty

Introduction

The literature on coopetition has predominantly focused on large organizations (Corbo, Kraus, Vlačić, Dabić, Caputo, and Pellegrini, 2023), aiming to understand its outcomes by analyzing how these organizations enhance innovation, performance (Corbo et al., 2023), and organizational learning (Niesten and Stefan, 2019). It also examines the paradoxes and tensions within coopetitive relationships and how the organizations involved overcome these challenges (Ricciardi, Zardini, Czakon, Rossignoli, and Kraus, 2022). However, research on SMEs (Bouncken, Clauß, & Fredrich, 2016; Gast, Gundolf, Harms, & Matos Collado, 2019) and entrepreneurs, in the context of coopetition, remains scarce and fragmented (Galkina and Lundgren-Henriksson, 2017; McGrath, O'Toole, and Canning, 2019). Some authors thus encourage studying coopetition as an entrepreneurial process and within entrepreneurial spaces (Corbo et al., 2023). Such research could highlight the utility of coopetition for entrepreneurs and SMEs and ensure their success.

Therefore, to address this research gap, we examine this phenomenon through the lens of effectuation (Sarasvathy, 2001), defined as an entrepreneurial mode of action in uncertain environments (Sarasvathy, 2008), contrasting with the causal model (Racat, Ricard, and Mauer, 2024). Studies on effectuation have mainly focused on its impact on performance (Yu, Tao, Tao, Xia, and Li, 2018; Shirokova, Morris, Laskovaia, and Micelotta, 2021), internationalization (Prashantham, Kumar, Bhagavatula, and Sarasvathy, 2019; Karami, Wooliscroft, and McNeill, 2020), innovation, creativity, and resilience. Yet, questions persist regarding the antecedents of effectual action and its individual anchoring (Grégoire and Cherchem, 2020). This raises the following research question: **How does effectuation as an entrepreneurial mode of action anchor within a coopetitive process?** Exploring this question is crucial as it sheds light on the dynamics between entrepreneurial decision-making

and coopetitive strategies, which can help enhance the understanding of resource-sharing and innovation in uncertain environments.

To explore this question, we conducted a single case study of the offshore racing hub in Lorient, a coopetitive ecosystem highly specialized in the offshore racing industry. This research makes three significant contributions to the coopetition literature: First, it illustrates how effectuation as an entrepreneurial mode of action anchors within a coopetitive process. Second, it shows that entrepreneurs leverage coopetition to ensure project viability rather than performance. Finally, it reveals that coopetition evolves alongside the entrepreneurial project, without consistently targeting the same resources and competencies. Additionally, this research contributes to the effectuation literature by demonstrating a hierarchy among its principles, showing that effectuation prioritizes organizational survival over performance in entrepreneurial projects, and exploring its antecedents by analyzing entrepreneurs' characteristics.

1. Literature Review

This section first aims to consider coopetition as an entrepreneurial process and then present the effectuation approach as a mode of action.

1.1. Considering coopetition as an entrepreneurial process

Coopetition has been defined as a situation where companies are simultaneously engaged in both cooperation and competition (Nalebuff and Brandenburger, 1996). This situation arises when organizations lack the necessary knowledge for innovation and therefore must acquire it by collaborating with other organizations within the same industry, through inter-organizational contracts or partnerships (Feranita, Koltar, and De Massis, 2017). These collaborations between competing companies aim to standardize existing solutions or develop new ones, with both parties sharing the costs of research and development (Corbo et al., 2023). This thus generates

a number of challenges for the various actors involved (Ricciardi et al., 2022). Numerous examples of coopetition are well-known. For example, Sony and Samsung Electronics pooled their resources to develop the LCD screen (Gnyawali and Charleton, 2018). More recently, we can also mention the partnership between Renault-Nissan and Daimler for the development of electric vehicles and batteries (Ayadi, Tabourot, and Khrifech, 2024).

Coopetition has been studied from various perspectives (Gernsheimer, Kanbach, and Gast, 2021). Indeed, the literature on coopetition has focused both on the antecedents of this phenomenon, analyzing the motivations of companies to collaborate despite their rivalry (Kraus, Klimas, Gast, and Stephan, 2019; Czakon, Klimas, and Mariani, 2020). We also have literature on the execution of coopetition, which aims to better understand the inherent process of coopetition and the different stages characterizing this process (Crick and Crick, 2020). Another strand of literature focuses on the various relationships within the context of a coopetition relationship (Gnyawali and Charleton, 2018). These studies seek to better understand the paradoxes and tensions that may emerge within this type of collaboration, such as: equity and opportunism, sharing and control, as well as rivalry and commitment (Ricciardi et al., 2022). Finally, we also have a significant number of articles aiming to understand the outcomes of coopetition, particularly by analyzing how these organizations manage to derive greater innovation capacity and performance (Corbo et al., 2023), as well as better organizational learning (Niesten and Stefan, 2019).

Among these various topics, one is of particular interest to us: the execution of coopetition (Crick and Crick, 2020). So far, this topic has been little studied, despite being at the heart of the coopetition process (Gernsheimer et al., 2021). Thus, in the stages that compose coopetition, we can first identify the **(1) *selection of partners***, which corresponds to the search for rival

companies that share the same interests and meet specific attributes (Ferreira, Coelho, and Moutinho, 2021). The second stage concerns the **(2) *collaboration model***. Indeed, once the partners are selected, it is necessary to agree on the areas, resources, and competencies to be shared and connected between them (Basterretxea, Charterina, and Landeta, 2019). The third stage focuses on the **(3) *governance model***, i.e., how the various actors manage to create value and rules around their collaborations (Bouncken et al., 2016). The next stage addresses **(4) *knowledge sharing and intellectual property management***. This step is central to the coopetition process because it aims to define which knowledge these actors transmit and which ones they decide to keep for themselves (Gast, Gundolf, Harms, and Collado, 2019). Finally, the last stage concerns **(5) *value creation***, which represents the goal of the coopetition process (Gernsheimer et al., 2021). This stage is particularly demanding because the actors must establish the right dynamics to fully leverage the knowledge of each participant in the coopetition (Gnyawali and Charleton, 2018).

However, today, although coopetition has been analyzed from different angles and we have a general understanding of this phenomenon (Gernsheimer, Kanbach, and Gast, 2021), it is notable that the main analyses focus on large companies and mostly concern the industrial sector (Corbo et al., 2023). Thus, there is a gap in the literature regarding the entrepreneurial process and its integration into this coopetition logic (Galkina and Lundgren-Henriksson, 2017). Indeed, although the literature addresses coopetition from the perspective of SMEs (Bouncken et al., 2016; Gast et al., 2019) or entrepreneurs (Galkina and Lundgren-Henriksson, 2017; McGrath et al., 2019), until now, almost no study has used entrepreneurial theories to better understand how the coopetition process can develop (Galkina and Lundgren-Henriksson, 2017). We therefore wish to follow the recommendations of Corbo et al. (2023, p. 11), who encourage considering coopetition as an entrepreneurial process and exploring the links

between effectuation-based modes of action and coopetition. We also wish to deepen this research avenue to *'explore coopetition in "entrepreneurial spaces" by using contexts where coopetition dynamics are present.'* From a practical point of view, studying coopetition through the effectuation approach could help better ensure the performance of small and medium-sized enterprises, particularly by fostering their innovations.

1.2 Effectuation as a Mode of Entrepreneurial Action

In order to study coopetition within the framework of entrepreneurial spaces and consider it as an entrepreneurial process (Corbo et al., 2023), we have chosen to analyze this phenomenon through the effectuation approach (Sarasvathy, 2001). The effectuation approach is interesting as it represents a specific and new approach in entrepreneurship which is representative of the nowadays economic challenges (Grégoire and Cherchem, 2020).

Effectuation, as a mode of action, was introduced in 2001 by Saras Sarasvathy. This mode of action contrasts with the causation model, which had predominated in the entrepreneurial literature until then (Chandler, DeTienne, McKelvie, and Mumford, 2011; Racat et al., 2024). Indeed, the causation approach views the entrepreneur as a rational actor who defines objectives and then identifies the resources and competencies needed to achieve the project (Fisher, 2012; Grégoire and Cherchem, 2020). In this perspective, entrepreneurship is seen as a linear process in which the entrepreneur decides and plans the management of activities (Perry, Chandler, and Markova, 2012). This logic is particularly suited to a stable and predictable environment where resources are abundant (Chandler et al., 2011; Grégoire and Cherchem, 2020). However, in a context where the environment is unstable, where uncertainty is high, and resources are scarce, a different logic must be adopted (Sarasvathy, 2008; Racat et al., 2024). It is in this framework that the effectuation approach was born. In the effectual logic, the entrepreneur no longer

reasons in terms of predefined objectives but rather based on available resources. They gradually adjust their objectives as well as the means to achieve them (Grégoire and Cherchem, 2020). The entrepreneur then relies on the opportunities offered by their environment and mobilizes a network of actors they can count on (Alvarez and Barney, 2007). Consequently, in the effectual logic, the target customer is defined only after the entrepreneurial process (Sarasvathy, 2001). Thus, effectuation can be described as '*a logic of entrepreneurial expertise, a dynamic and interactive process of creating new artifacts in the world*' (Sarasvathy, 2008, p 71).

Thus, in her model, Sarasvathy (2001) identifies five decision-making principles present within the logic of effectuation. The first principle, or **(1) *bird in hand***, focuses on the means available to the entrepreneur: who they are, what they know, and who they know. This first principle therefore concentrates on the intrinsic qualities of the entrepreneur. The second principle, or **(2) *crazy quilt***, concerns the entrepreneur's network and how they gain support from potential partners to carry out their entrepreneurial project. The third principle, **(3) *affordable loss***, shows that entrepreneurs following the logic of effectuation think in terms of acceptable losses rather than future returns. Consequently, these entrepreneurs use their resources sparingly and only employ what is strictly necessary. The fourth principle, **(4) *lemonade***, concerns the ability of these entrepreneurs to react to unexpected events and seize opportunities from a specific context. Indeed, the logic of effectuation favors processes of iteration and continuous adaptation. Finally, the last principle, **(5) *pilot in the plane***, emphasizes the importance of control, co-creation, and shaping the future in uncertain entrepreneurial environments. Thus, these different decision-making principles guide the behavior of the entrepreneur in an uncertain environment and define their overall strategy (Racat et al., 2024).

The effectuation approach has been used to analyze various phenomena (Grégoire and Cherchem, 2020). First, many studies have focused on the effect of the effectuation logic on company performance. These studies show that this logic appears to help organizations achieve better performance, particularly in uncertain environments (Yu et al., 2018; Shirokova et al., 2021). Furthermore, several studies have also explored the impact of the effectual approach on the internationalization of small and medium-sized enterprises. As with performance, it appears that effectuation has a positive effect on the internationalization efforts of these organizations (Prashantham et al., 2019; Karami et al., 2020). Finally, some research focuses on the effect of effectuation on innovation and creativity (Grégoire and Cherchem, 2020). In addition to demonstrating that effectuation fosters innovation and creativity, these studies delve into the effectuation process by highlighting the attitudes, orientations, and preferences that underpin this effect (Lingelbach, Sriram, Mersha, and Saffu, 2015; Guo, 2019).

Today, although many studies have explored the effects of the effectuation logic on organizations, we still know very little about the antecedents of this logic and why entrepreneurs adopt it (Grégoire and Cherchem, 2020). Indeed, very few studies have examined this topic, analyzing at the individual level the factors that lead entrepreneurs to use the effectuation approach. Early research suggests that these antecedents include both personal attributes and contextual elements (Villani, Linder, and Grimaldi, 2018; Scazziota, Serra, Sarkar, and Guerrazzi, 2023). Therefore, through this article, we also wish to follow the recommendations of Grégoire and Cherchem (2020, p. 614), who encourage: *'Developing strong and convincing theoretical explanations to explain why a particular antecedent variable fosters the mobilization of an effectual mode of action, the reason why effectuation can provide a particular advantage in terms of performance improvement, and/or why a moderating or mediating variable may accelerate/enables this particular advantage.'*

2. Research Context

In order to answer our research question, we decided to focus our study on a specific industry sector: offshore racing, with a particular focus on the Lorient Grand Large hub.

2.1. The Offshore Racing Industry

Offshore racing is a sports discipline that can be seen as a sub-discipline of sailing. Indeed, it involves races over long distances (for example, crossing the Atlantic, circumnavigation), often in the open sea, which can be solo, duo, or crewed. Some of these races are legendary, such as the Vendée Globe, the Route du Rhum, the Transat Jacques Vabre, or the Volvo Ocean Race (The Ocean Race). This sports discipline is interesting for several reasons. First, from a human perspective, offshore racing is based on values such as performance, resilience, and the ability to navigate in extreme environments. Indeed, the central figure, the skipper, must cover long distances with limited resources, most of the time without assistance, and face significant uncertainties related to their environment. Secondly, offshore racing represents an interesting field of study because it catalyzes numerous technological innovations. This mechanical sport relies on innovations such as the foil, advanced materials like composites, or onboard technologies like satellite communication tools and routing software. Furthermore, from an entrepreneurial perspective, the offshore racing sector represents a unique field of study. Indeed, each skipper is their own business leader and runs their own entrepreneurial project. However, the specificity of this sector is that it relies primarily on sponsorship. Thus, the skipper must succeed in completing expensive projects – ranging from 200,000 euros to several million – with very limited financial resources. Therefore, in addition to sporting performance, the skipper must also achieve entrepreneurial performance by bringing their project to fruition through the mobilization of external resources.

2.2. The Lorient Grand Large Hub

As its name indicates, the Lorient Grand Large hub is located in Lorient, Brittany, in the department of Morbihan. This hub was created in 1996 at the initiative of Jean-Yves Le Drian, former mayor of the city, to rehabilitate an old military base that housed submarines during World War II. The hub's goal was to welcome skippers for their preparation for various races. Today, 27 years later, the hub has gained international recognition, not only thanks to the skippers it hosts but also due to a rich ecosystem of companies specialized in offshore racing. Indeed, Lorient La Base is the nerve center of the "Sailing Valley," a unique ecosystem stretching across Southern Brittany (from La Trinité to Port-La-Forêt), and it is the main European hub related to the offshore racing industry. Today, Lorient La Base is managed by four main organizations. The first is Lorient Grand Large, which provides technical support and training for the different skippers. Lorient Grand Large also organizes and hosts sporting events. The second is Audélor, the urban planning agency of Lorient, which is responsible for economic development across the entire region. The third is Sellor, the agency responsible for managing the Lorient port. The fourth is Bretagne Développement Innovation, an organization supporting technological development and innovative projects. Lorient La Base currently hosts over a hundred skippers across various categories. Indeed, this hub welcomes both semi-professional categories (Class Mini 6.50) and much more experienced categories at the top level of competition (Class Imoca, Class Ultim). Therefore, Lorient La Base exhibits particular dynamism in the various competitions. For example, at the start of the Vendée Globe, one of the major international offshore races, 18 of the skippers were based in the Lorient area.

3. Methodology

To analyze how effectuation, as an entrepreneurial mode of action, is embedded in a cooperative process, we opted for a single case study approach. This method is particularly relevant for addressing our research question, as it allows for the exploration of a complex phenomenon in which hypotheses are difficult to formulate before data collection. It also effectively answers a 'how' type of question (Yin, 2003). Furthermore, single case studies are well-suited and offer opportunities for atypical research, enabling the '*exploration of interesting phenomena that occur in rare, unique, and extreme circumstances*' (De Massis and Kotlar, 2014, p. 18).

3.1. Data Collection

Our data collection began in August 2024. That summer, we had the opportunity to access this research field through Lorient Grand Large, which initially agreed to participate in an exploratory interview. At that time, our research objective was focused on studying organizational slack in offshore racing projects. However, we quickly realized that this avenue had little chance of leading to substantial results, while another intriguing phenomenon seemed to emerge. Indeed, the ecosystem of skippers affiliated with Lorient Grand Large appeared to operate in a logic of cooptation. These skippers seemed to maintain close collaborative ties with each other through training and educational activities, while still remaining competitors in regular races. Since, to our knowledge, very few studies had explored this subject in the field of entrepreneurship, we decided, after a quick review of the literature, to follow this new research direction. To do this, we contacted the skippers affiliated with Lorient Grand Large. We specifically targeted three racing categories: Class Mini 6.50, Class 40, and Class IMOCA. These categories were chosen due to the particular freedom they offer in terms of project development and innovation. Indeed, the skippers have the possibility to interact with and modify their boats, within relatively wide limits.

Thanks to the Lorient Grand Large website, we obtained a list of skippers' names, which we then contacted via LinkedIn. Regarding Class Mini 6.50, 10 skippers out of 38 accepted our interview request. For Class 40, 3 skippers out of 11 responded positively, and finally, we received a positive response from a Team Manager of Class IMOCA among the 7 skippers in this category. At the same time, we also reached out to institutional actors from the Lorient La Base cluster (Audélor, Bretagne Développement et Innovation, and Class Mini 6.50) as well as two companies from this ecosystem to ensure better external validity.

In total, we conducted 21 semi-structured interviews, with durations ranging from 20 minutes to 120 minutes. A summary of this data collection is presented in Table 1. These interviews covered several themes, such as: **1)** their career paths, **2)** their integration into Lorient Grand Large, **3)** the major stages of their entrepreneurial projects, **4)** the benefits they gained from their ecosystem (Lorient Grand Large), **5)** their interactions with competitors, **6)** the types of collaboration they engage in (material exchanges, knowledge sharing, skills transfers, etc.), **7)** the limits of these collaborations, and finally, **8)** the contributions of these collaborations to themselves and to the group as a whole.

Tableau 1 : Primary data collection

N°	Date	Interviewee	Organisation / Division	Length (min)
1	24/08/24	Logistics Coordinator	Lorient Grand Large	120
2	17/09/24	Training Coordinator	Lorient Grand Large	60
3	30/09/24	Communication manager	Mini 6.50 (orga)	20
4	09/10/24	Managers for businesses and innovation	Lorient technopole	44
5	26/09/24	Communication manager - Competitive Sailing	BDI ¹	50
6	08/10/24	Communication manager	Company 1	80
7	08/10/24	Chief Technological Officer	Company 2	50
8	29/11/24	Team Manager	Class IMOCA	45
9	09/10/24	Skipper 1	Class 40	60

¹ Bretagne Développement et Innovation

10	11/10/24	Skipper 2	Class 40	60
11	21/11/24	Skipper 3	Class 40	60
12	16/09/24	Skipper 1	Mini 6.50	35
13	17/09/24	Skipper 2	Mini 6.50	63
14	24/09/24	Skipper 3	Mini 6.50	43
15	25/09/24	Skipper 4	Mini 6.50	60
16	26/09/24	Skipper 5	Mini 6.50	50
17	18/10/24	Skipper 6	Mini 6.50	35
18	22/10/24	Skipper 7	Mini 6.50	34
19	06/11/24	Skipper 8	Mini 6.50	41
20	07/11/24	Skipper 9	Mini 6.50	42
21	13/11/24	Skipper 10	Mini 6.50	35

To enrich our analysis, we also decided to collect secondary data. First, we gathered a large amount of data on the skippers' project management through their social media networks (LinkedIn, Twitter, YouTube). Since these skippers must communicate extensively to attract sponsors, we were able to benefit from a significant amount of information on their collaborations. We also conducted four non-participant observations: first, by visiting the Lorient La Base site (twice) to take notes on the organization of the area and to locate the positions of the different actors.

3.2. Data Analysis

To analyze how effectuation encourages the development of coopetition relationships, we followed the principles of abductive research described by Dubois and Gadde (2002). Indeed, as we mentioned in the section on data collection, effectuation as a mode of action only emerged during the coding of the interviews. We present our data coding process in the following section.

First step: understand coopetitive interactions through the interactions of the skippers from Lorient Grand Large.

First, we analyzed the data collected through our interviews, documents, and non-participant observations using a qualitative method and a manual coding process. Initially, we adopted an inductive approach to categorize the different characteristics of the execution of a cooperative "collaboration," as outlined by Gernsheimer et al. (2021): (1) partner selection; (2) collaboration model; (3) governance model; (4) knowledge sharing and intellectual property management; (5) value creation. These characteristics were chosen because they represent the core of the cooperative process in its execution. We then performed manual coding using the Nvivo-14 software to classify these key concepts within our primary and secondary data sources. As we progressed, we reviewed and recoded the data to refine our understanding (Denzin & Lincoln, 2011).

Unexpected results: The emergence of the effectuation mode of action among the skippers.

During the coding process, we identified elements that resembled the effectual mode of action. Indeed, when discussing their journeys, it became clear that the entrepreneurs primarily made decisions based on the resources they had, rather than on general objectives. Moreover, the interviews revealed that these entrepreneurs were constantly seeking opportunities in their environment, particularly through their networks (Sarasvathy, 2001). In hindsight, the emergence of this mode of action in our interviews only partially surprised us. As mentioned earlier, these skippers operate in an unpredictable environment with limited resource management. This context therefore provides an ideal setting for the adoption of this type of mode of action (Grégoire and Cherchem, 2020). Furthermore, we found that these elements seemed to interact with the cooperation context in which they operated. Therefore, it seemed relevant to pursue this research avenue, given that very few studies have been conducted on this topic (Grégoire and Cherchem, 2020; Corbo et al., 2023), despite the importance of studying

the relationship between coopetition and effectuation in the entrepreneurial context, as their combination could enhance SME performance.

Second step: the influence of the effectual mode of action on the development of coopetition.

Thus, we initiated a second coding process. First, we analyzed the modes of action of effectuation through its characteristics described by Sarasvathy (2001): **(1)** *bird in hand* (means), **(2)** *crazy quilt* (strategic alliances), **(3)** *affordable loss* (acceptable losses), **(4)** *lemonade* (search for contingencies), and **(5)** *pilot in the plane* (control of an unpredictable future). Furthermore, after back-and-forth with the literature, we aimed to identify the antecedents of these modes of action in relation to the characteristics of the entrepreneurs, in accordance with the recommendations of Grégoire and Cherchem (2020). Subsequently, to better understand the influence of the effectual mode of action on the development of coopetition, we adopted a more deductive approach. Indeed, we used the co-occurrence table tool provided by Nvivo-14 to identify connections between these "variables" across all our data. This co-occurrence table allowed us to identify different clusters with varying effects and impacts. Finally, we attempted to link some of these variables to the value creation generated by these organizations, in order to also assess their impacts on the general environment.

4. Findings

This section aims to demonstrate how effectuation, as a mode of action, is embedded within a coopetitive process. **(4.1)** First, we show that the characteristic bird in hand (means) of effectuation is the trigger for the coopetitive process, and that value creation can be considered

as the outcome of this phenomenon (4.2). Next, we demonstrate the link between the characteristic crazy quilt (strategic alliances) and affordable loss with partner selection and the governance model inherent in the execution of coopetition (4.3). Third, we show the connection between the characteristic lemonade (search for contingencies) of effectuation and the exchange of knowledge and intellectual property, as well as the collaboration model (4.4). Finally, we explain how the characteristic pilot in the plane (control of an unpredictable future) conditions the entire phenomenon (4.5).

4.1. Bird in hand (means) as a trigger, value creation as the outcome

Initially, we observed through our interviews and secondary data that the skippers were moving towards a process of coopetition due to the fundamental nature of their projects and the resources available to them (Bird in hand). Indeed, as we mentioned in the methodology section, these projects must be carried out with scarce resources that are not necessarily immediately available. Furthermore, most of them do not have specific knowledge and skills in all areas of offshore racing. In addition, they are aware that their network is limited, despite the fact that it is a crucial success factor for their projects. Finally, despite all this, most of the skippers interviewed (around 80%) wanted to complete these projects primarily for athletic performance, and not solely for what they call an "adventure" project. For them, even if competition was not their main motivation, this project represented a real human challenge they felt compelled to take on.

As a result, we identified a number of quotes that describe the means and motivations of skippers at the start of any project:

"The complexity of the Mini class is that these are projects; some people do it full-time, and many others work alongside it. It's true that it's quite time-consuming. We don't have a team

around us, so we take care of our own boat, we do the preparation, we find the budgets – it's a real issue, actually." - Skipper Class Mini #8

"I think I am quite competitive in life in general. I enjoy it, which is why I turned to this project" - Team Manager IMOCA #1

As a result, their relationship with limited resources and knowledge, their networks, and their motivations will encourage them to engage in a cooperative ecosystem to address these gaps. As we will explain in the following sections, for them, this will primarily allow them to benefit from specific learning, pool costs, and gain access to a network. Furthermore, we observed that their main objective is not to innovate or develop an advantage over their competitors, but rather to ensure the success of their projects. Thus, the value creation linked to this cooperative relationship is not solely related to their athletic performance but primarily to a guarantee related to the success of their project (Value creation).

"Clearly, this is what foreign skippers come looking for when they come to Lorient – this constant confrontation in training at the highest level, and you reach the highest level only through constant collaboration and confrontation." – Skipper Class 40 #1

"In fact, we know we need others in order to even start the race, so there are no secrets." – Skipper – Class Mini 6.50 #4

"On the other hand, I think all skippers understood several years ago that working collectively is necessary, even indispensable, for the success of each individual project." – Lorient Grand Large - Training Coordinator

4.2. The link between crazy quilt (strategic alliances), affordable loss, selection of partners, and governance model

Once the cooperation process is triggered, we can first observe the interaction between one characteristic of effectuation—crazy quilt (strategic alliances)—and two characteristics of the cooperative process—partner selection and governance model. Indeed, one of the main activities

for skippers is to form alliances and find as many partners as possible to successfully complete their project. It all starts with finding the right sponsors, which represents a significant challenge, followed by finding training partners, which immediately triggers a coopetition process. We can see that this partner selection process, related to coopetition, initially forms informally for skippers in the Class Mini 6.50 (the least professional category), and then becomes increasingly structured as we move toward the skippers of Class 40 and Class IMOCA. Indeed, the more professional the skipper becomes, the more calculated the partner selection process is, the services provided are contracted, and a healthy distance is established with the different partners. Thus, we can realize that the governance model evolves according to the nature and stakes of the projects. We were able to retain the following verbatim:

"What is interesting about offshore racing projects is that it's quite participatory and sharing. When you join a structure, for example in Mini, we were 10-12 projects labeled as performance, let's say, the best ones who trained in Lorient trained together, and we trained on the water together." - Skipper - Class 40 #3

"But on the technological side and everything, I don't think so. There's only one team that today offers these data. It's Malizia, Boris Herrmann's team (IMOCA team). It's the only one that broadcasts all the boat's data." - Skipper Class 40 #2

However, we also notice that this partner selection is also motivated by an 'affordable loss' logic. Indeed, given that the skippers' resources are limited and that finding new sources of income is complicated and time-consuming, every expense counts and is deducted from a global budget. Thus, the skippers seek to benefit from these relationships primarily in order to pool a number of expenses. A paradoxical relationship between competitors is therefore established because each participant enables significant savings for everyone. These savings particularly concern operational expenses such as logistics. The skippers can also negotiate together with their suppliers to obtain better prices for the 'boat consumables': ropes, safety equipment, food,

etc. Above all, through this logic, the skippers generate significant savings on specific skills and knowledge. Indeed, if they had to hire specialized service providers on this matter, the cost of their project would be much higher. We were able to gather these various testimonies on this subject:

"We trained and shared technical sponsors for the hull paint, for electronics. And we tried to pool a lot of things together." - Skipper Class Mini 6.50 #2

"You see, we hired a meteorologist we liked, and then we divided his service among us, and we did the training with him to go a bit further. A lot of things like that." - Skipper Class Mini #3

"So, we have several teams at the same time, and some teams even group together to pool certain tools, certain phases of design." - Chief Technological Officer – Company 2

4.3. The link between lemonade (research contingencies), knowledge exchange and intellectual property management, and the collaborative model

During our data analysis, we identified a link between the lemonade characteristic (research of contingencies) in effectuation and the knowledge exchange, intellectual property management, and collaborative model characteristics in coopetition. Indeed, the skipper is always looking to improve their sporting practice in order to be more competitive on the water. To do so, they are constantly on the lookout for valuable know-how from their partners. Moreover, through this coopetitive dynamic, they seek to benefit from skills they do not necessarily possess, which are specific and costly due to their rarity. This is particularly true for tasks like sailmaking or composite work, which are key strategic positions. These exchanges, therefore, take place in a highly collaborative manner, as we have already noted, with a genuine spirit of mutual aid within the different classes, even though this process tends to formalize depending on the level of professionalization of the skippers. Indeed, we observed that for the

Mini 6.50 class – the least professionalized class – the skippers were looking for both knowledge and skills. However, for more professionalized classes – such as IMOCA – this mainly involved knowledge. This is due to larger budgets, which allow for the integration of specific skills in-house. We were able to collect the following testimonies on this matter:

"For example, in May, I had a bit of a hole in my boat and I have no experience in repairs. Then, the guy I was competing against, the number one enemy, it's his job. And the guy went to his toolbox, grabbed everything he needed, and showed me how to fix my boat with me. That was pretty nice of him." - Skipper Class Mini #8

"The boats, several of them are based in Lorient, we train together, debrief together, we exchange a lot, whether it's on the docks or in the debrief room, etc., on issues like technical aspects, sail adjustments, hand adjustments, and this helps us learn faster and perform better."
- Skipper Class 40 #3

"The ULTIMs, we're really on a different level, they have a full staff. Honestly, we don't have much added value for the ULTIMs here at Lorient Grand Large. And the IMOCA, it all depends on the projects, it depends on the skipper. But yes, they participate up to the limit they have set for themselves, at least." - Lorient Grand Large - Training Coordinator

Furthermore, we can also observe that within this coopetition process, the effect of proximity enhances interactions between the skippers and between the classes. Indeed, even though Lorient Grand Large helps create general cohesion among the skippers through training, infrastructure, and available equipment, much of the interactions happen outside of this association, in informal places where skippers can exchange about their practices and the latest news in the industry. It is clear that the fact that all these competitors are located in the same place geographically allows for many more interactions between different people. Social media and digital tools can also play a significant role in facilitating connections and information exchanges.

"So, there is still a lot of information circulating, but I am convinced that there are some little secrets here and there. Because there may also be an effect of proximity, the fact that they are all gathered in the same place. As I said, it's one big family, so they take hits together in the evening, they see each other on the water, they might have worked together at a team two months ago, and well... of course, it's one big family. Everyone knows each other." - Communication manager - Competitive Sailing – BDI

"Afterward, there's a lot of talking. Then, I feel like it's a bit of an environment where there are a lot of young people who see each other a lot in the evening at the bar after the day. I think they exchange a lot of information." - Team Manager IMOCA #1

Moreover, we can also observe a specific phenomenon related to the management of intellectual property within this cooptation process. We noticed that none of the skippers implement a patent policy, despite the fact that for some skippers, particularly in Class 40 and IMOCA, innovations are key to performance improvement. We also observe that the absence of patents generates a certain "emulsion" among these cooptitors because each one is free to appropriate another's innovation for their own use. This encourages greater creativity and efficiency in the innovation process. Thus, while skippers try to hide certain information, they remain open to sharing. The following quotes illustrate this phenomenon:

"Finally, we, at the dock, spend our time looking at and taking photos of the other boats, you know. In fact, even when you... Generally, when you say, 'I changed something on my boat,' don't worry, the guys have already taken photos and seen that you've changed something on the boat three days ago. But actually, overall, it happens in a very good atmosphere." - Skipper Class 40 #2

"In the world of offshore racing, there are no patents because everything will eventually be known and improved. The idea is really to build the technology together a bit. So we can clearly see the boats that perform the best. So people have concluded, it's probably thanks to their foils, their rudder, their mast. And so, they learn from that and improve." - Skipper Class Mini #1

4.4. The underlying role of "Pilot in the Plane" (control of an unpredictable future)

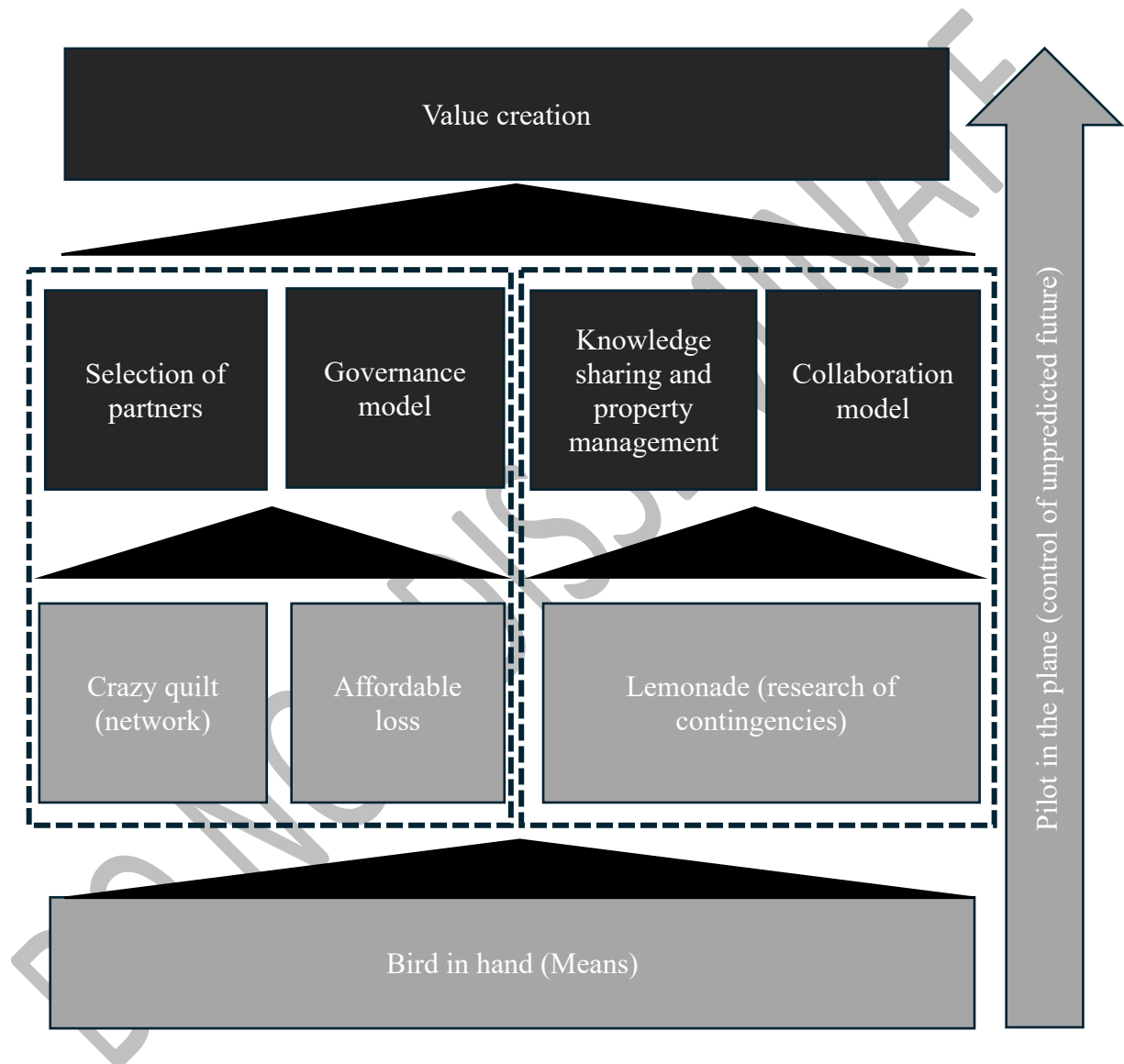
Regarding the characteristic "Pilot in the Plane" (control of an unpredictable future), we observed that it influences and underpins the overall process of coopetition, while also guiding the skipper in their effectual mode of action. Indeed, throughout their project, the skipper plans certain actions, but always keeps in mind that these are conditioned by exogenous factors beyond their control. In our interviews, we observed that although skippers adopt an effectual mode of action to interact with the coopetition process, they are still aware that, ultimately, it is their intuition at a given moment that determines their sports performance during a race. Thus, the future of their projects remains always unpredictable. This phenomenon is rooted in the skipper's personality and reflects both the specificities of their sport and the very essence of their profession. At sea, the skipper must juggle technical reconfigurations required during maneuvers and the consideration of a range of changing and unpredictable weather variables. This mindset is also transferable to their project management on land and guides the management of the coopetition process.

"In the Southern seas, you never push your boat to 100% of its potential because it's tough down there, and you're afraid of breaking something, so you lower the overall intensity, and some still manage to come out on top. You always have navigational skills that can make a difference in technique and preparation beforehand." - Skipper Class 40 #3

"It's not just about strength in sailing. It's about success, but also luck. Unexpected things can happen. You could win every race, but then one time, you mess up because you fall into a calm zone, an area with no wind. And at that point, it's not your fault. Even if you're well-prepared and have excellent navigational skills, you might not be able to succeed in that race." - Skipper Class 40 #1

We represent how the effectuation as a mode of action is embedded into the coopetition execution along the **Figure 1**:

Figure 1: how the effectuation as a mode of action is embedded into the coopetition execution



5. Discussion

In this section, we first wish to discuss the literature on coopetition, followed by a discussion of the literature on effectuation as a mode of action.

5.1 Understanding coopetition through the entrepreneurial approach

During this research, we aimed to follow the recommendations of Corbo et al. (2023), who encouraged studying coopetition as an entrepreneurial process and through the "entrepreneurial space." Indeed, as they explain, the literature on coopetition has mainly focused on large companies (Gernsheimer et al., 2021), with a narrower focus on SMEs (Bouncken et al., 2016; Gast et al., 2019), and entrepreneurs (Galkina and Lundgren-Henriksson, 2017; McGrath et al., 2019). However, none of this research has truly used an entrepreneurial approach to study the coopetitive process (Galkina and Lundgren-Henriksson, 2017). Therefore, we conducted this work by showing how effectuation as an entrepreneurial mode of action is rooted in a coopetitive process. By addressing this research question, we demonstrate a direct link between coopetition and effectuation. We can notably observe a particular interaction between: partner selection; collaboration model; governance model; knowledge sharing and intellectual property management, and the crazy quilt (strategic alliance), affordable loss, lemonade (research of contingencies) related to effectuation.

Moreover, we provide theoretical insight into the literature on coopetition by showing the motivations of entrepreneurs to enter into this coopetitive process (Gernsheimer et al., 2021). Indeed, up until now, the literature on coopetition has primarily focused on innovation, which is considered the main reason for entering a coopetitive process (Corbo et al. 2023). The goal is, therefore, to generate additional performance by creating value with partners (Bouncken et al., 2016; Ferreira et al., 2021). However, when studying coopetition within an entrepreneurial approach, we notice that this is not entirely true. We observed that entrepreneurs enter into a coopetitive process first and foremost to overcome a lack of resources, particularly in terms of resources and skills (Barney, 1991). Thus, these businesses do not use coopetition with the aim of value creation but rather to ensure the success and viability of their projects (Lengnick-Hall and Beck, 2005). Finally, through our study, we discuss the literature on coopetition by offering

an evolving view of the coopetitive process over time. Indeed, today, the literature on the coopetition process remains relatively static and has predominantly concerned large organizations (Gernsheimer et al., 2021). Our work shows, through the different classes, that the coopetitive process will not be the same for a micro-enterprise as for an SME. We can thus assume that as it grows, the relationship between partners will evolve, becoming more contractual and entering into a specific strategy (Ricciardi et al., 2022). We can also affirm that at the creation of a business, the company will require all kinds of resources and use coopetition as a survival tool (Lengnick-Hall and Beck, 2005), and that gradually, as it grows and integrates skills, the organization will use coopetition to acquire knowledge and enter into an innovation process (Corbo et al., 2023).

5.2. Exploring Effectuation as a Mode of Action

Firstly, this research contributes to the literature on effectuation by exploring the links between effectuation and the process of coopetition (Corbo et al., 2023). Specifically, our research shows that the various principles guiding the logic of effectuation have different impacts and roles in their interactions with the coopetitive and entrepreneurial process. Indeed, some principles, such as crazy quilt (strategic alliance), affordable loss, and lemonade (research of contingencies), seem to directly affect the project and therefore have a direct impact. However, the principles of Bird in Hand (Means) and Pilot in the Plane (control of an unpredictable future) appear to condition the general phenomenon and are more representative of the entrepreneurial mindset than of a specific mode of action. As a result, we discuss previous literature regarding the principles linked to effectuation (Sarasvathy, 2001; Racat et al., 2024). We believe that, in addition to studying the processual nature of effectuation as Jiang and Rüling (2019) have done, it is necessary to analyze sequentially the hierarchy and importance of these principles in relation to one another in order to better define effectuation as a specific mode of

action (Grégoire and Cherchem, 2020). Therefore, we believe that employing a microfoundational approach (Felin and Foss, 2005) would be relevant for better positioning effectuation within the entrepreneurial phenomenon.

Furthermore, through this article, we complement the literature on the impact of effectuation in various fields. Indeed, the literature indicates that effectuation can have a positive impact on both organizational performance (Yu et al., 2018; Shirokova et al., 2021), internationalization (Prashantham et al., 2019; Karami et al., 2020), creativity and innovation (Grégoire and Cherchem, 2020), or resilience in crisis contexts (d'Andria, Gabarret, and Vedel, 2018). However, through our work, we aim to show that effectuation, in the context of an entrepreneurial process, primarily impacts the survival of the project by mobilizing specific knowledge and skills (Barney, 1991). To date, few studies have specifically focused on this aspect of effectuation, or those that have are centered on crisis contexts (Osiyevskyy, Shirokova, and Ehsani, 2023), despite the fact that, empirically speaking, we know that at the start of an entrepreneurial project, survival is more of a priority than performance, innovation, or internationalization.

Finally, through this research work, we respond to the call of Grégoire and Cherchem (2020), who encourage a better definition of effectuation as a mode of action, and in particular, the analysis of its antecedents. Thus, we show that the antecedents linked to effectuation as a mode of action are not only related to the environment (Racat et al., 2024) but also to individual characteristics rooted in the specific profession of the entrepreneur. In our case, we observe that these characteristics are related to solo sailing, which conditions skippers to operate with limited resources in extreme and uncertain environments. Consequently, we hypothesize that effectuation is not necessarily a calculated mode of action chosen by entrepreneurs (Sarasvathy, 2001) but rather a mode of action deeply ingrained in entrepreneurial behavior.

6. Conclusion

Through this research, we aimed to explore how effectuation, as an entrepreneurial mode of action, is embedded in a coopetitive process. Based on our results, we can offer several avenues for future research. First, we encourage the scientific community to continue exploring the relationship between coopetition and the entrepreneurial process. We believe it is important to analyze longitudinally how an entrepreneurial project evolves in relation to coopetition. We think further reflection is needed to determine which resources will be exchanged, when, and under which conditions. In our view, this could contribute significantly to the literature on coopetitive mechanisms. Furthermore, concerning effectuation, we encourage further research employing a microfoundational approach (Felin and Foss, 2005). We also believe that examining the link between effectuation and the survival of entrepreneurial projects could be valuable. Finally, we urge researchers to further investigate the antecedents of effectuation as a mode of action (Grégoire and Cherchem, 2020). From a managerial perspective, we recommend that entrepreneurship support organizations establish structures where entrepreneurs, including direct competitors, can collaborate. We believe this could improve the survival rate of these entrepreneurial projects.

Références :

Alvarez, S. A., Barney, J. B., & Anderson, P. (2013). Forming and exploiting opportunities: The implications of discovery and creation processes for entrepreneurial and organizational research. *Organization science*, 24(1), 301-317.

Ayadi, S., Tabourot, L., & Khriech, L. (2024). Conceptual Framework of Coopetition: A Comparative Study of Coopetition Configurations in Multinational Companies and Large and Small and Medium Enterprises. *International Journal of Global Business and Competitiveness*, 19(2), 108-119.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.

Basterretxea, I., Charterina, J., & Landeta, J. (2019). Coopetition and innovation. Lessons from worker cooperatives in the Spanish machine tool industry. *Journal of Business & Industrial Marketing*, 34(6), 1223-1235.

Bouncken, R. B., Clauß, T., & Fredrich, V. (2016). Product innovation through coopetition in alliances: singular or plural governance?. *Industrial Marketing Management*, 53, 77-90.

Chandler, G. N., DeTienne, D. R., McKelvie, A., & Mumford, T. V. (2011). Causation and effectuation processes: A validation study. *Journal of business venturing*, 26(3), 375-390.

Corbo, L., Kraus, S., Vlačić, B., Dabić, M., Caputo, A., & Pellegrini, M. M. (2023).

Coopetition and innovation: A review and research agenda. *Technovation*, 122, 102624.

Crick, J. M., & Crick, D. (2020). Coopetition and COVID-19: Collaborative business-to-business marketing strategies in a pandemic crisis. *Industrial Marketing Management*, 88, 206-213.

Czakov, W., Klimas, P., & Mariani, M. (2020). Behavioral antecedents of coopetition: A synthesis and measurement scale. *Long Range Planning*, 53(1), 101875.

D'Andria, A., Gabarret, I., & Vedel, B. (2018). Resilience and effectuation for a successful business takeover. *International Journal of Entrepreneurial Behavior & Research*, 24(7), 1200-1221.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. sage.

De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of family business strategy*, 5(1), 15-29.

Dubois, A., & Gadde, L. E. (2002). Systematic combining: An abductive approach to case
Felin, T., & Foss, N. J. (2005). Strategic organization: A field in search of micro-foundations. *Strategic organization*, 3(4), 441-455.

Feranita, F., Kotlar, J., & De Massis, A. (2017). Collaborative innovation in family firms: Past research, current debates and agenda for future research. *Journal of Family Business Strategy*, 8(3), 137-156.

Ferreira, J., Coelho, A., & Moutinho, L. (2021). Strategic alliances, exploration and exploitation and their impact on innovation and new product development: the effect of knowledge sharing. *Management Decision*, 59(3), 524-567.

Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship theory and practice*, 36(5), 1019-1051.

Galkina, T., & Lundgren-Henriksson, E. L. (2017). Coopetition as an entrepreneurial process: Interplay of causation and effectuation. *Industrial Marketing Management*, 67, 158-173.

Gast, J., Gundolf, K., Harms, R., & Collado, E. M. (2019). Knowledge management and coopetition: how do cooperating competitors balance the needs to share and protect their knowledge?. *Industrial marketing management*, 77, 65-74.

Gernsheimer, O., Kanbach, D. K., & Gast, J. (2021). Coopetition research-A systematic literature review on recent accomplishments and trajectories. *Industrial Marketing Management*, 96, 113-134.

Gnyawali, D. R., & Ryan Charleton, T. (2018). Nuances in the interplay of competition and cooperation: Towards a theory of coopetition. *Journal of Management*, 44(7), 2511-2534.

Grégoire, D. A., & Cherchem, N. (2020). A structured literature review and suggestions for future effectuation research. *Small Business Economics*, 54, 621-639.

Guo, R. (2019). Effectuation, opportunity shaping and innovation strategy in high-tech new ventures. *Management Decision*, 57(1), 115-130.

Jiang, Y., & Rüling, C. C. (2019). Opening the black box of effectuation processes: Characteristics and dominant types. *Entrepreneurship Theory and Practice*, 43(1), 171-202.

Karami, M., Wooliscroft, B., & McNeill, L. (2020). Effectuation and internationalisation: A review and agenda for future research. *Small Business Economics*, 55, 777-811.

Kraus, S., Klimas, P., Gast, J., & Stephan, T. (2019). Sleeping with competitors: Forms, antecedents and outcomes of coopetition of small and medium-sized craft beer breweries. *International Journal of Entrepreneurial Behavior & Research*, 25(1), 50-66.

Lingelbach, D., Sriram, V., Mersha, T., & Saffu, K. (2015). The innovation process in emerging economies: An effectuation perspective. *The International Journal of Entrepreneurship and Innovation*, 16(1), 5-17.

McGrath, H., O'Toole, T., & Canning, L. (2019). Coopetition: a fundamental feature of entrepreneurial firms' collaborative dynamics. *Journal of Business & Industrial Marketing*, 34(7), 1555-1569.

Nalebuff, B., & Brandenburger, A. (1996). Coopetition (p. 0). na.

Nielsen, E., & Stefan, I. (2019). Embracing the paradox of interorganizational value co-creation–value capture: A literature review towards paradox resolution. *International Journal of Management Reviews*, 21(2), 231-255.

Lengnick-Hall, C. A., & Beck, T. E. (2005). Adaptive fit versus robust transformation: How organizations respond to environmental change. *Journal of management*, 31(5), 738-757.

Osiyevskyy, O., Shirokova, G., & Ehsani, M. (2023). The role of effectuation and causation for SME survival amidst economic crisis. *International Journal of Entrepreneurial Behavior & Research*, 29(7), 1664-1697.

Perry, J. T., Chandler, G. N., & Markova, G. (2012). Entrepreneurial effectuation: a review and suggestions for future research. *Entrepreneurship theory and practice*, 36(4), 837-861.

Prashantham, S., Kumar, K., Bhagavatula, S., & Sarasvathy, S. D. (2019). Effectuation, network-building and internationalisation speed. *International Small Business Journal*, 37(1), 3-21.

Racat, M., Ricard, A., & Mauer, R. (2024). Effectuation and causation models: an integrative theoretical framework. *Small Business Economics*, 62(3), 879-893.
research. *Journal of Business Research*, 55(7), 553–560.

Ricciardi, F., Zardini, A., Czakon, W., Rossignoli, C., & Kraus, S. (2022). Revisiting the cooperation–competition paradox: A configurational approach to short-and long-term coopeition performance in business networks. *European Management Journal*, 40(3), 320-331.

Sarasvathy, S. (2008). Effectuation. *Elements of Entrepreneurial Expertise*.

Scazziota, V., Serra, F., Sarkar, S., & Guerrazzi, L. (2023). The antecedents of entrepreneurial action: A meta-synthesis on effectuation and bricolage. *Journal of Business Research*, 155, 113411.

Shirokova, G., Morris, M. H., Laskovaia, A., & Micelotta, E. (2021). Effectuation and causation, firm performance, and the impact of institutions: A multi-country moderation analysis. *Journal of Business Research*, 129, 169-182.

Villani, E., Linder, C., & Grimaldi, R. (2018). Effectuation and causation in science-based new venture creation: A configurational approach. *Journal of Business Research*, 83, 173-185.

Yin, R. K. (2003). Designing case studies. *Qualitative Research Methods*, 5(14), 359–386.

Yu, X., Tao, Y., Tao, X., Xia, F., & Li, Y. (2018). Managing uncertainty in emerging economies: The interaction effects between causation and effectuation on firm performance. *Technological Forecasting and Social Change*, 135, 121-131.