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Mobilization of Collective Resources for Entrepreneurship: Case Studies in Nordic Peripheries

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Abstract

Entrepreneurial firms often draw on critical resources that are owned and/or used by more than one actor simultaneously to accumulate the complete range of resources needed to pursue entrepreneurial opportunities. I use the term “collective resources” to denote resources that are not governed by a single actor. Examples are common pool natural resources and resources shared in networks. The shared governance of collective resources comes with a unique set of challenges, such as free-rider problems and allocation inefficiencies, for example, in form of over-exploitation and negative externalities. Hence, the use of collective resources to undertake entrepreneurial action is a non-trivial concern for entrepreneurial firms.

Entrepreneurial firms exploit entrepreneurial opportunities to create new economic activities. Before resources can be used to pursue opportunities, they need to be mobilized and assigned to entrepreneurial activities. Since collective resources are non-excludable, non-transferable, and non-enforceable by nature, they require more creative resource-mobilization approaches than resources owned by sole actors. In particular, collective resources are likely to be mobilized without ownership transfer, and other actors have the right to use these resources simultaneously. In turn, these conditions lead to market transaction inefficiencies. In this dissertation, I take the following research question as the starting point: *How do entrepreneurial firms mobilize collective resources for opportunity exploitation?*

This dissertation includes four independent empirical papers that explore entrepreneurial firms in the maritime industry and their collective resource-mobilization approaches in Nordic peripheries. The papers elaborate on how entrepreneurial firms gain access to and create collective resources. Further, they examine how the way firms intend to use collective resources for opportunity exploitation (in terms of purpose and duration) influences their choice of resource-mobilization approach. I use a

qualitative embedded case study approach in these studies, which enables me to develop a theory of collective resource mobilization and account for the particularities of the maritime industry and Nordic peripheries.

The results show that entrepreneurial firms use the following four approaches to mobilize collective resources: 1) collective institutional entrepreneurship to define the room to maneuver, 2) inter-organizational arrangements to increase co-dependences, 3) social exchange to use local at-hand resources, and 4) network initiatives to accumulate and create collective resources. Through these four approaches, entrepreneurial firms draw on social and institutional arrangements to mobilize collective resources. Social arrangements are established to increase mutual dependences on collective resources, and institutional arrangements are developed to create mutual benefits and safeguards. In this way, entrepreneurial firms address uncertainties related to the use of collective resources. My findings suggest that issues stemming from the shared governance of collective resources become particularly salient when entrepreneurial firms aim to mobilize such resources over longer periods. However, when resources are needed only for short durations, the mobilization of collective resources is more promising because these resources can be mobilized at a low cost through social exchange in form of favors and goodwill.

This dissertation concludes that the peculiarities of collective resources lead to idiosyncratic mobilization approaches because markets and individual contracts fail to address the shared governance of these resources. The findings expand on the current resource mobilization debate in entrepreneurship, which has thus far paid scant attention to the collective nature of some resources.

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1 Introduction

1.1 Research purpose

Common pool natural resources, such as crabs (Alvarez et al., 2015) or whales (Lawrence and Phillips, 2004), can potentially be combined with other resources by entrepreneurs to create value. Moreover, entrepreneurial firms often draw on resources embedded in networks to accumulate the complete range of resources they need to pursue entrepreneurial opportunities (Boehe, 2013). These are examples of collective resources. I use this term to denote resources that are not governed (i.e., owned and used) by a single firm or individual but are instead owned and/or used by more than one actor simultaneously—at least for part of their lifespan. The shared governance of collective resources can often lead to inefficient allocation, over-exploitation, free-rider issues, and other negative externalities because no individual party takes full responsibility for effective resource allocation (Dean and McMullen, 2007, Cohen and Winn, 2007, Dhanaraj and Parkhe, 2006). Despite the importance of collective resources for entrepreneurship—for example, in form of shared resources in networks (Gulati, 1999, Huggins and Johnston, 2010) and clusters (Li and Geng, 2012)—as well as their inherent challenges and resulting allocation inefficiency (Tietenberg and Lewis, 2009/1984), the entrepreneurship literature has thus far paid scant attention to the concept of collective resources.

Resources are critical ingredients for firms when they engage in entrepreneurial action, and they must be mobilized in relation to the activities firms aim to undertake, such as pursuing an opportunity (Desa and Basu, 2013, Villanueva et al., 2012). Building on the argument that the shared governance of collective resources leads to a unique set of challenges, I argue that the mobilization of collective resources becomes a non-trivial concern for entrepreneurial firms that plan to use collective resources to create value. The purpose of this dissertation is to enhance our understanding of how entrepreneurial firms mobilize critical resources that are owned and/or used by multiple parties simultaneously. This dissertation is motivated by the assumption that entrepreneurial firms utilize collective resources to exploit entrepreneurial opportunities and that the shared governance of this type of resource matters for the approaches taken to mobilize them.

1.2 General topic and research focus

Given the fast-changing world of today and increased competition, firms need to act entrepreneurially to sustain their business (Lant and Mezias, 1990). Entrepreneurial firms can expand and renew their business activities by routinely innovating (Miller and Friesen, 1982). Entrepreneurial strategies, such as the renewal of business activities, are often challenging for established firms and represent the inherent uncertainties these firms have to deal with (Covin and Miles, 1999). For example, the outcome of the entrepreneurial process is always uncertain as firms act upon perceived opportunities (Vogel, 2017). At the same time, entrepreneurial action is often resource intensive (Baker and Nelson, 2005), so entrepreneurial firms allocate resources to entrepreneurial activities based on an unknown but assumed outcome.

Resources are heterogeneous, and entrepreneurial firms can use resources in alternative ways (Penrose, 2009/1959). As a result, any one resource can possibly provide services to different business activities, and entrepreneurial firms need to make decisions regarding whether and where to allocate resources. In this dissertation, I focus on resources that firms need to exploit entrepreneurial opportunities. Building on the definition of entrepreneurship as the activities of identifying, evaluating, and exploiting opportunities, which are conceptualized as new means-ends relationships (Hitt et al., 2001, Shane and Venkataraman, 2000), opportunity exploitation is a key entrepreneurial activity for firms that seek to renew and/or expand their business activities.

Entrepreneurial firms use various types of resources and combine them to act entrepreneurially (Alvarez and Busenitz, 2001). Resource mobilization is the activity of creating, accessing, and often also acquiring critical resources (Rawhouser et al., 2017) and becomes a key activity for entrepreneurial firms as they exploit opportunities (Rawhouser et al., 2017, Ausrød, 2017, Desa and Basu, 2013). Therefore, understanding how firms mobilize the resources they need to undertake entrepreneurial action is a key concern for entrepreneurship scholars (Alvarez and Busenitz, 2001). Extant research has highlighted that firms mobilize resources in many different ways, such as through the reallocation of undervalued resources (Alvarez and Busenitz, 2001), local networks (Boehe, 2013), and relational contracting (Granovetter, 1985). Entrepreneurial firms may make use of internal resources—for example, through reallocation (Sirmon et al., 2007), and acquire external resources to exploit opportunities (Villanueva et al., 2012). By mobilizing critical resources, entrepreneurial firms mediate the relationship between the ends they aim to achieve and scarce resources as means to achieve these ends (Levinthal, 2017, Desa and Basu, 2013). Following this line of thinking, entrepreneurial firms constantly mobilize resources to exploit opportunities in order to sustain their business (Korsgaard et al., 2015a, Haynie et al., 2009).

This dissertation claims that resource ownership is another important aspect that should be considered in the scholarly discussion on resource mobilization. There has been research interest in resources that are owned and used by multiple parties, such as network and industry resources (Gulati, 1999, Huggins and Johnston, 2010, Lavie, 2006), suggesting that the often-made distinction between internally or externally owned resources is too simplistic (Levinthal, 2017). Similarly, there is research interest in the use of resources by multiple parties, particularly in the context of the software and application industry (Grand et al., 2004, Safner, 2016, Richter et al., 2017), common pool natural resources (Ostrom, 1990), and the sharing economy (Cohen and Kietzmann, 2014). I define resources that are owned and/or used by a group of actors simultaneously during a certain timeframe as collective resources. Given the multiple owners and/or users, these resources have shared governance, which often lead to situations in which the resources are non-excludable, non-transferable, and non-enforceable (Demsetz, 1967, Tietenberg and Lewis, 2009/1984).

In situations in which external resources owned by one party are mobilized, typically through acquisition, both the resources themselves and the ownership is transferred between the resource owner and the resource user, and the exchange underlies direct market transaction (Eggertsson, 1990). Common property resources, such as crabs or whales, are not owned by anyone per se and are therefore non-excludable and non-transferable, which I argue requires more complex resource-mobilization approaches. The shared governance of this type of resources leads to questions like how do firms access those resources, and how do they retain them during opportunity exploitation. Transaction cost economics argues that the non-excludability and non-enforceability of common property resources leads to high transaction costs and conflicting use of resources (Coase, 1974, Eggertsson, 1990), which supports the assumption that mobilizing collective resources is more complex.

The shared governance of collective resources sheds additional light on how firms use them given their inherent co-dependence between the possible resource users. Resources can be used in a consumptive or non-consumptive way (Campbell, 1998). Consumptive use is, for instance, when fish are caught and timber is cut. Prior studies on the allocation of common pool natural resources have typically focused on natural resources utilized in a consumptive way (Lertzman and Vredenburg, 2005, Prior et al., 2012). However, resources are also used in non-consumptive ways, such as the use of a vehicle in a transport service or a sight in a tourism experience (Duffus and Dearden, 1990, Stem et al., 2003). Further, knowledge and other key resources in entrepreneurship are often use in a non-consumptive way such that the resource is still there after usage and can be mobilized again by the same firm or by other firms.

1.3 Research questions

This dissertation contributes to the literature on resource mobilization by exploring the following overarching question:

How do entrepreneurial firms mobilize collective resources for opportunity exploitation?

I propose that access to, creation of, and usage of collective resources needed to pursue an opportunity are key elements of a firm's mobilization approach and are directly linked to the planned activities related to entrepreneurial action. Thus, these collective resources are within an entrepreneurial firm's scope of control. Given the shared governance of collective resources, I argue that access and creation are two activities that are particularly relevant and idiosyncratic for collective resources. Moreover, given the inherent uncertainties of collective resources—for example, related to over-exploitation and negative externalities—I furthermore assume that the use of collective resources explains how entrepreneurial firms mobilize collective resources.

1.3.1 Access to critical common pool resources

Collective resources are distinct from resources with exclusive ownership, such as private property resources, in regard to their accessibility and transferability (McCay and Jentoft, 1998, Tietenberg and Lewis, 2009/1984). Through well-defined property rights, the owner of a resource can control access to the resource and thereby the extent to which and how others may acquire the resource (Eggertsson, 1990). Markets are a platform for entrepreneurial firms to access and acquire resources needed to exploit opportunities, and resource acquisition often comes with ownership transfer (Eggertsson, 1990). However, without a well-defined property rights structure, markets fail to act as a platform that facilitates resource mobilization (Dean and

McMullen, 2007). Therefore, collective resources are less amenable to market allocation (Pacheco et al., 2010a, Cohen and Winn, 2007). This leads to the question of how firms access collective resources outside the factor market.

Common pool natural resources are a distinct type of collective resource with common property rights (Tietenberg and Lewis, 2009/1984). Given the ongoing debate regarding the allocation of natural resources and inherent sustainability issues (Tietenberg and Lewis, 2009/1984, George et al., 2015), I focus on natural resources to learn more about accessing collective resources. I address the following sub research question:

1) *How do entrepreneurial firms access critical common pool natural resources?*

1.3.2 Creation of collective resources

The literature on networks has argued that firms may share resources with, for example, actors along the value chain or competitors (Li and Geng, 2012, Lavie, 2006). Resources that are shared between firms, such as in a network, might be owned by one of the firms but are made accessible for other firms in the network, or a group of firms may have jointly created resources that are consequently collectively owned by several firms (Li and Geng, 2012). Further, firms may share resources to achieve a common goal (e.g., the joint exploitation of an opportunity), organizing themselves to share and create resources and thereby undertake collective action.

To focus on the creation of collective resources is interesting as this mobilization activity underlies collection action. Activities that require collective action are often jeopardized by collective inaction and free-rider behavior among individual firms (Wijen and Ansari, 2007). Given that the creation of collective resources becomes a shared responsibility, individual firms have an incentive to contribute as little as possible to the collective endeavor, which is often referred to as the tragedy of the common (Ostrom, 2014). Thus, my second sub research question focuses on the creation of collective resources by entrepreneurial firms, as follows:

2) *How do entrepreneurial firms create collective resources for opportunity exploitation?*

1.3.3 Usage of collective resources

The assumption that the ownership and thereby the excludable right of using collective resources are often non-transferable leads us to the question of how collective resources are used once firms have accessed or created them. In the case of non-consumptive resources, the collective resource may be used by one firm and thereafter released and made available for other firms. Following this line of thinking, resources can be used for shorter or longer periods before (and if) they are released after opportunity exploitation (Eggertsson, 1990). Given that extant research has mainly focused on excludable resources, it is not surprising that studies have paid more attention to how entrepreneurial firms gain access to and acquire resources rather than how they use them (Rawhouser et al., 2017). However, when it comes to collective resources, entrepreneurial firms might not have the exclusive right to use the resources, which may make the time aspect of resource use a key element that influences how firms mobilize resources.

Moreover, entrepreneurial firms mobilize resources to create different types of value, such as economic, social, and environmental value (Shepherd and Patzelt, 2011). In their study of resource mobilization for social value creation, Desa and Basu (2013) found that the purpose of resource use matters for how resources are mobilized. In turn, extant studies focusing on environmental value creation argue that the shared responsibility of reducing environmental impact comes with the paradox of double externalities (e.g., Lauritzen, 2017). Hence, different value constellations influence the mobilization of collective resources. Acknowledging that both the intended duration and the intended purpose of resource use matters for the mobilization approach, my third sub research question is as follows:

3) *How does the usage of collective resources for opportunity exploitation influence the way these resources are mobilized?*

1.4 Research setting

I explore the above posed research questions in four empirical papers, which constitute the main part of this dissertation. Conducted in peripheral locations in Nordic coastal environments, these empirical papers build on case studies of how firms mobilize collective resources for opportunity exploitation. Context plays a crucial role in this dissertation not least given the interpretivist perspective this research is based on, which requires a solid understanding of the context in order for researchers to make sense of the data material (cf. 4.1. A interpretivist perspective; 4.2. Contextualizing).

Entrepreneurship in peripheral locations and resource mobilization have gained great attention from scholars (e.g., Korsgaard et al., 2015b, Anderson, 2000, Felzensztein et al., 2013). Peripheral locations are distant from central areas, which makes it more difficult to gain access to certain skills and markets. Therefore, prior studies have often characterized peripheries as resource constrained (McAdam et al., 2004). Building on this assumption, I argue that peripheries provide an interesting and relevant context to study resource mobilization for opportunity exploitation given the scarcity of local resources and the distance to factor markets. I focus on Nordic coastal environments located on islands and peninsulas in Norway, Iceland, Denmark, and Greenland. The Nordic countries are high-income countries, so the empirical setting of this dissertation provides a contrasting view to the growing amount of studies focusing on peripheral locations in less developed countries, such as in Africa (Khayesi et al., 2014), South America (Bosworth et al., 2015), or Asia (Ausrød, 2017).

The maritime sector is the industrial context of this dissertation. Maritime activities are a key industry in Nordic coastal environments. Coastal environments are at the interface between sea and land, which is a condition that naturally favors maritime activities. The maritime industry includes all sectors with coastal maritime and marine activities, such as marine transportation, marine tourism, fishery and marine products, shipbuilding, equipment manufacturers, and other marine sectors (Doloreux and Melançon, 2008). The empirical settings of the dissertation include two segments within the maritime industry: cruise tourism and marine equipment and systems.

1.5 Contributions

This dissertation provides four main contributions. First, I introduce the notion of collective resources to the scholarly debate on resource mobilization for opportunity exploitation in entrepreneurial firms. By doing so, I expand on the entrepreneurship literature, which has mainly discussed the mobilization of resources owned by an external firm (Rawhouser et al., 2017) or by the entrepreneurial firm exploiting the opportunity (Haynie et al., 2009). This dissertation argues that entrepreneurial firms also mobilize resources that are non-exclusive, such as common pool resources or resources owned by a network of firms. I discuss the mobilization of natural resources and network resources and claim that these two types of collective resources provide valuable insights into the concept of collective resources and their peculiarities linked to excludability, transferability, and enforceability. The dissertation builds on the assumption that these peculiarities and the shared governance of resources has an impact for how firms mobilize resources. I discuss four approaches to the mobilization of collective resources that take into account that this type of resource is not effectively allocated in a market (Dean and McMullen, 2007, Cohen and Winn, 2007) and that their ownership cannot be transferred (Eggertsson, 1990).

Second, and relatedly, I show that the shared governance of collective resources requires idiosyncratic resource mobilization that enables entrepreneurs to mobilize resources through social and institutional arrangements rather than market exchange. Extant research has claimed that shared governance of resources results in high transaction costs and therefore favors institutional resource-mobilization arrangements (North, 1990, Ostrom, 1990) and that social exchange becomes particularly relevant when the allocation of resources fails to be efficiently captured by market mechanisms (Granovetter, 1985). I identify four idiosyncratic collective resource-mobilization approaches: 1) collective institutional entrepreneurship to define the "room of maneuver," 2) interorganizational arrangements to manage co-dependences, 3) social exchange to use local "at hand" resources, and 4) network initiatives to accumulate and create collective resources.

Third, while studies focusing on excludable resources have been particularly interested in how firms access resources (Rawhouser et al., 2017), I argue the importance of also considering the use of resources. Given my focus on the non-consumptive use of collective resources, I claim that the non-excludability of these resources makes them particularly attractive for release after use. Research on resource mobilization has often assumed that once resources are accessed and acquired, the entrepreneurial firm possesses those resources. Building on this argument, it is not surprising that resource use has gained scant attention in the debate on resource mobilization. However, as use is independent of ownership for collective resources, how individual actors use the resources often becomes a common interest.

Finally, I further contribute to the discussion on contextualizing entrepreneurship research (Welter, 2011, Shepherd, 2015). The literature in this area has argued that the context where entrepreneurship happens matters. Extending on this, this dissertation emphasizes the local embeddedness of collective resources, thereby showing that the context of the resources, not only of the entrepreneurial activity, matters.

Thereby, I contribute to the context debate by arguing that we not only need to consider the context in which entrepreneurship is embedded but also the context in which the resources are embedded when studying collective resource mobilization for opportunity exploitation.

1.6 Outline of the dissertation

This dissertation proceeds as follows: Chapter 2 outlines the theoretical framework. I first define the concept of entrepreneurial opportunity and discuss opportunity exploitation as a key activity in entrepreneurship. Thereafter, I discuss the notion of collective resources and resource mobilization in general before I elaborate on resource mobilization from three theoretical perspectives: resource-based view (RBV), resource dependence theory (RDT), and new institutional economics (NIE). Chapter 3 presents the three empirical settings of the research papers and discusses peripheral locations as the broader empirical setting of this dissertation. Thereafter, I present the two maritime sectors: cruise tourism and marine equipment and systems. Chapter 4 explains the methodology that has guided this research and elaborates on ethical considerations. In Chapter 5, the four empirical research papers are summarized and presented, and their contributions to the overarching research question are discussed. This is followed by a broader and aggregated discussion of the findings of the empirical studies in Chapter 6. The chapter ends with offering a framework of collective resource mobilization. In Chapter 7, I discuss the main findings and offer conclusions of how entrepreneurial firms mobilize collective resources. Moreover, I elaborate on the implications and limitations and provide suggestions for further research.

2 Theoretical orientation

In this chapter, I give an overview and discuss the theoretical foundation for my dissertation. I first introduce the concepts of collective resource mobilization for opportunity exploitation to establish a common platform to understand these concepts and their elements. Second, I present the three theoretical perspectives on resource mobilization for opportunity exploitation applied in this dissertation: resource dependence theory (RDT), resource-based view (RBV), and new institutional economics (NIE) and compare the three perspectives as frameworks to study resource mobilization for opportunity exploitation in entrepreneurial firms. A theoretical perspective can be understood as glasses a researcher puts on to make sense of and understand the phenomenon studied (Suddaby, 2014). A theoretical perspective shapes the logic of argumentation. Here, I discuss the fundamental ideas of the theoretical perspectives applied in this dissertation.

2.1 Introduction to entrepreneurship in established firms

Entrepreneurship is studied from both a corporate and startup perspective (Shepherd and Patzelt, 2017, Shane, 2003). A corporate perspective addresses innovative proactive behaviors within established firms and is based on the assumption that in a dynamic and competitive environment, entrepreneurial attitudes and behaviors are necessary for all sizes of firms to sustain the continuity of their businesses (Guth and Ginsberg, 1990, Kuratko, 2006). A startup perspective emphasizes that the proactive behavior of entrepreneurs creating or responding to dynamics in the business environment can result in the startup of a new venture (Gartner, 1990). In this dissertation, I apply a corporate perspective on entrepreneurship and focus on entrepreneurial initiatives in established firms that, for example, emerge from employees' opportunity-seeking behaviors or management's strategic action initiatives. Such initiatives can be undertaken due to reactions to impulses from the business environment or through innovations leading to environmental discontinuity (de Lurdes Calisto and Sarkar, 2017, Corbett et al., 2013). In this dissertation, entrepreneurship is considered a tool to reply to changes and/or to proactively create new dynamics in this environment through, for example, innovative initiatives (Franco and Haase, 2013, Corbett et al., 2013).

The corporate perspective on entrepreneurship emerged in the 1980s (Miller and Friesen, 1982, Burgelman, 1983, Burgelman and Sayles, 1986) and 1990s (Guth and Ginsberg, 1990) and challenges the assumption that firms flourish by increasing rigidity and setting routines. Extant entrepreneurship research has even argued that rigidity and routines reduce proactivity and firm renewal (de Lurdes Calisto and Sarkar, 2017). This dissertation explores new firm activities and builds on the assumption that entrepreneurial firms strive to expand and renew their business activities by regularly exploiting opportunities to ensure business continuity and to grow in competitive and dynamic environments (Sirmon et al., 2007, Miller and Friesen, 1982).

2.2 Entrepreneurial opportunities

Emerging trends, such as increased environmental awareness, new markets, technological advances, and changing market preferences are conditions that stimulate firms to perceive entrepreneurial opportunities for themselves (Thurik et al., 2013, Dean and McMullen, 2007, Larson, 2000). On the other hand, slack, undervalued, or unique resources can trigger the process of exploring new business activities (Wood and Williams, 2014). Firms evaluate perceived opportunities based on both demand-side (i.e., market demand) and supply-side characteristics (i.e., the availability of resources) (Choi and Shepherd, 2004). Entrepreneurs commence with entrepreneurial action because they perceive an opportunity in using available resources to create something new, acting upon a condition in the market, or a combination of both (Sarasvathy et al., 2003).

Entrepreneurial opportunity is a key concept in the field of entrepreneurship research (Venkataraman et al., 2012, Busenitz et al., 2003). The concept has gained great attention and has been highly debated since Shane and Venkataraman's (2000) seminal work "The Promise of Entrepreneurship as a Field of Research" (Korsgaard, 2013), which has resulted in a multifaceted understanding of the concept that is constantly evolving. Shane and Venkataraman (2000) defined entrepreneurial opportunity as an external condition promising new or renewed business activities via new means-ends relationship. However, this definition is questioned by the evolving creation view(s)[1] (Dimov, 2011, Suddaby et al., 2015, Alvarez et al., 2013). The creation view defines entrepreneurial opportunities as actively constructed by entrepreneurs, thereby challenging the underlying assumption of the discovery view (Edelman and Yli-Renko, 2010). From a discovery view, opportunities are defined as existing externally, objective and independent of the mind (Korsgaard and Sassmannshausen, 2014). While the existence of opportunities is debated, there seems to be a shared understanding that entrepreneurs act upon what they perceive to be an opportunity for them based on the belief that it is worthwhile to exploit (Vogel, 2017, Packard, 2017, Leitch et al., 2010).

In this dissertation, entrepreneurial opportunities are defined as new means-ends relationships, which are perceived to have the potential to evolve into new or renewed business activities (Sarasvathy et al., 2003). Ends refer to the demand-side characteristics, and means refer to the supply-side characteristics (Choi and Shepherd, 2004, Companys and McMullen, 2007). In particular, I follow the Schumpeterian understanding of means meaning new combinations of resources. Ends are current or potential future demands—for example, stemming from external conditions in the market or a situation—which entrepreneurs aim to satisfy with help of

[1] I use the term "creation view" in the singular form as an umbrella term for the different views within the creation view movement, such as the development, evolutionary, and construction views.

means (Essig, 2015, Shepherd, 2015). Following this line of thinking, I argue that the evaluation of a perceived opportunity depends not only on the perception of ends but also of the mean—that is, the perceived availability of resources and their possible mobilization.

2.3 Value creation and opportunities

Entrepreneurs pursue opportunities to create value. The value that firms aim to create serves different purposes, and extant research on sustainable entrepreneurship has argued that entrepreneurs address not only economic but also environmental and social value through opportunity exploitation (Shepherd and Patzelt, 2011, Cohen and Winn, 2007, Pacheco et al., 2010a). For example, increased environmental awareness and practices lead to value seeking that is beneficial for the natural environment.

Research has demonstrated that environmental and social value creation comes with challenges (Pacheco et al., 2010a, Lauritzen, 2017). Opportunities that address two or even three of the sustainable value dimensions (i.e., economic, environmental, and social) may face double externality issues linked to the common goal paradox (Lauritzen, 2017). Moreover, individual and collective incentives may diverge as society often reaps the benefits from social and environmental value creation, whereas firms bear the costs of exploiting opportunities. This divergence is a source of free-rider issues and externalities.

On the other hand, entrepreneurial firms are often embedded in a rich social context, for example, in a local community (Jack and Anderson, 2002). Social factors, values, and other social structures are inherent in the social context and influence the opportunities firms perceive (Gulati, 1999, Korsgaard et al., 2015a). Research on entrepreneurship in peripheral locations has shown that entrepreneurs form and pursue opportunities in a way that they create sustainable value for the community, particularly social values and economic benefits (Korsgaard et al., 2015a, Smith and Stevens, 2010).

2.4 The exploitation process of entrepreneurial opportunities

Drawing on the definition of opportunities as new means-ends relationships that are perceived to have the potential to *evolve* into new or renewed business activities (cf. 2.2. Entrepreneurial opportunities), I here discuss the development process of opportunities. I follow Shepherd (2015) understanding of opportunity development as the process beginning with an entrepreneur's initial belief about an entrepreneurial idea to the fully-developed concept.

The process to develop entrepreneurial opportunities consists of different phases, which can be grouped into opportunity identification, evaluation, and exploitation (Davidsson, 2004, Shane and Venkataraman, 2000). The identification phase refers to recognizing a potential opportunity based on an often premature idea (Companys and McMullen, 2007). The evaluation phase is defined as the process of deciding whether to act upon concept development and whether the opportunity is worth exploiting based on both demand-side and supply-side characteristics. Finally, exploitation refers to the process of fully developing the opportunity concept and realizing the opportunity (Shepherd, 2015, Davidsson, 2004). Clearly, these three phases represent a simplification of the process. Often the different stages are intertwined, and the process is less linear than described above. However, this dissertation is mainly concerned with opportunity-development activities, which fall into the stage of opportunity exploitation.

Developing an entrepreneurial opportunity requires refining the initial idea toward a more fully developed concept (Shepherd, 2015) and demands a bundle of resources to undertake the needed activities (Plambeck, 2012). Thus, exploiting an opportunity involves both developing the opportunity concept, such as testing or prototyping, and mobilizing the resources needed. Resource mobilization and opportunity development are interdependent processes. The availability and deployment of resources may enhance or hamper the initial idea underlying an opportunity depending whether the available resources match with those needed to exploit the opportunity (Alvarez and Busenitz, 2001). Opportunities can only be regarded as attractive if there is a possibility that the resources needed can be mobilized, and the resources available influence the development of the opportunity idea (Holmén et al., 2007, Ardichvili et al., 2003).

2.5 Resource mobilization for opportunity exploitation

Resource mobilization includes the activities of accessing and often also acquiring and allocating critical resources through, for example, resource exchange and sharing (Rawhouser et al., 2017, Desa and Basu, 2013). Firms mediate the relationship between a present or future (market) demand they hope to meet or create and scarce resources as a means to meet/create these ends through the mobilization of critical resources (Levinthal, 2017, Desa and Basu, 2013). Resources are limited and have alternative uses within or among firms, which often challenges resource mobilization (Penrose, 2009/1959, Levinthal, 2017). Further, when critical resources are scarce, such as natural resources, they are particularly costly to acquire. Therefore, resource mobilization is a central concern for understanding firms' actions, particularly those involved with opportunity exploitation (Levinthal, 2017).

Opportunities are heterogeneous and require different types of resources for exploitation. The RBV literature has argued that the heterogeneity of resources creates value as firms can build on unique resources to obtain a competitive advantage (Alvarez and Busenitz, 2001). Resources that are essential for exploiting a valuable opportunity and provide firms an advantage are defined as critical resources. Shane and

Venkataraman (2000) argued that access to financial support and unique knowledge are the most relevant resources for opportunity exploitation. According to RBV, intangible resources, such as organizational capital, enable the firm to build sustained competitive advantage (Franco and Haase, 2013).

Franco and Haase (2013) argued that the type of resources has an impact on the external resource-mobilization process. Their results show that firms with a resource base containing many pieces of equipment tend to engage less in external resource exchange partnerships, whereas possessing a large amount of financial resources leads to a greater tendency to cooperate with external organizations. Moreover, Franco and Haase (2013) and Montoro-Sánchez et al. (2009) found in their studies that intangible resources do not greatly influence the decision to establish external arrangements to mobilize resources for opportunity exploitation.

The literature on resource mobilization has been fragmented, embracing multiple perspectives (Rawhouser et al., 2017, Maritan and Lee, 2017). Resource mobilization has been studied in different contexts, such as in relation to mergers and acquisitions (Harrison et al., 1991), as an internal conflict between lower-level employees and top management or between divisions (Harris et al., 1982), in projects (Engwall and Jerbrant, 2003), and in entrepreneurship (Rawhouser et al., 2017). This dissertation focuses on how entrepreneurial firms mobilize resources to exploit perceived opportunities. Resource mobilization for opportunity exploitation is distinguished from other resource-mobilization processes as it relates to new resource combinations and activities and is based on the perception that mobilizing resources to create something new is more worthwhile than alternative uses for the resources both internally and externally (Penrose, 2009/1959, Holmén et al., 2007).

Entrepreneurial firms engage in a range of activities to mobilize available resources for opportunity exploitation (Finch et al., 2012). Penrose (2009/1959) argued that resources can provide alternative services and can thus be used in different ways. Established firms have a resource endowment (Haynie et al., 2009), and the resources needed to exploit an opportunity can be mobilized internally through, for example, the reconfiguration, reallocation, or recombination of internal resources (Penrose, 2009/1959, Desa and Basu, 2013). Often, however, an established firm is not in control of all the resources it needs to exploit and opportunity or the resources are currently unavailable for reallocation. Consequently, firms also mobilize resources from organizations in the external environment (Pfeffer and Salancik, 2003/1978). That is, external organizations may control the resources needed for the entrepreneurial activity, and both social and economic activities are undertaken to access and exchange the required resources (Daily et al., 2002, Finch et al., 2012).

Entrepreneurial firms use different strategies to decide what types of resources they need and through which activities resources should be mobilized (Desa and Basu, 2013). Prior research has focused on the mobilization of resources that entrepreneurs have at hand, as described in the literatures on bricolage (Baker and Nelson, 2005) and improvisation (Hmieleski and Corbett, 2006), as well as strategies that follow an optimization (Desa and Basu, 2013, Alvarez and Busenitz, 2001). Hence, a firm can use more general resources that it has at hand and form the opportunity and its exploitation accordingly, or a firm can focus on high-quality resources with specific applications to enhance the realization of the desired means (Desa and Basu, 2013).

2.5.1 Critical collective resources

Research in, for example, the natural resource economics and network literature argue that resources can be collectively owned and shared among firms and other actors (Li and Geng, 2012). Example of such resources can be externally shared resources through networks (Li and Geng, 2012); open access resources, such as common pool resources (Ostrom, 1990) and joint resources (Freel, 2000). I define these categories of resources as collective resources, defined as resources with more than one simultaneous owner and/or user at least during a certain time frame. Characteristics of collective resources are shared governance and restricted divisibility.

Tietenberg and Lewis (2009/1984) argued that the following three property right characteristics define efficient resource mobilization: excludability, transferability, and enforceability. Excludability means that the resource owner should take on the benefits and costs linked to owning and using the resource, transferability means that ownership of the resource can be transferred from one use to another, and enforceability means that resources are secured from involuntary use and damage (Tietenberg and Lewis, 2009/1984). Common ownership of collective resources, however, often results in restricted transferability, excludability, and enforceability.

Extant research has shown that the mobilization of common pool resources is challenging given that this type of resource is non-excludable, non-transferable (in terms of direct ownership exchange), and non-enforceable (Ostrom, 1990, Tietenberg and Lewis, 2009/1984). To acquire collective resources, a resource must have a certain degree of transferability (Franco and Haase, 2013). Resources with a high degree of transferability include, for instance, financial capital, but other resources may also be utilized for different purposes other than their initially intended or current use. In other words, for resources to be allocated to alternative uses, they need to be transferable. While some resources are transferable in their usage, ownership exchange through resource mobilization as a firm-to-firm transaction might not be adequate for common pool resources since this type of resource does not have a single owner or a defined group of owners (Tietenberg and Lewis, 2009/1984). Common pool resources face inefficient market allocation as the resources are non-excludable, and their use can lead to environmental externalities (Dean and McMullen, 2007). Given the inefficient market allocation of common pool resources, Hardin (1968) introduced the notion “tragedy of the commons,” arguing that a public property right structure for common pool resources leads to over-exploitation and free-riding behavior among resource users.

Network resources are another type of collective resources (Gulati, 1999). Network resources are jointly developed, used, and owed by the network actors. Gulati (1999) introduced the notion of network resources to refer to resources a firm accrues from the network while simultaneously defining the extent to which a firm is willing to access a network or establish an alliance. Thus, network resources are located in the network and reside outside the firm's boundary (Lavie, 2006). Huggins and Johnston (2010) studied network resources as social capital and network capital and argued for the importance of access knowledge. Indeed, Gulati (1999) also argued that information is an important resource because it influences the set of opportunities focal firms perceive.

The literature on networks in entrepreneurship has also pointed out the issue of free-riding (Elfring and Hulsink, 2003). Thus, I propose that learning from the literature on natural resource economics related to the characteristics of property rights structure and the link to resource allocation are also applicable for network resources. Namely, I argue that certain resources embedded in networks can also be excludable, transferable, and enforceable to a certain degree.

2.5.2 Arrangements for resource mobilization

Resource mobilization happens through arrangements within a firm and between a firm and organizations in the external environment (Van Wijk et al., 2008, Simsek et al., 2003). Arrangements are socially and institutionally embedded constellations shaped and created through interaction between individual and collective actors (Neergaard and Ulhøi, 2006). To mobilize collective resources, firms establish different types of arrangements to transfer and exchange desired resources. Examples include intra-organizational arrangements between resources holders and users inside a firm, such as between divisions or projects (Cheng and Kesner, 1997); inter-organizational arrangements between firms (Marchington and Vincent, 2004, Drees and Heugens, 2013); multi-organizational arrangements in networks (Hermann and Wigger, 2017); and institutional arrangements to change and create institutions (Garud et al., 2007).

Intra-organizational arrangements are arrangements between, for example, two or several organizational units (e.g., for a temporary project) or between employees' respective teams inside a focal firm (Lazer and Katz, 2003). External resource allocation and collaboration are organized through inter-organizational arrangements between a focal firm and one or several organizations in the external environment. When resource transactions are not organized through intra- or inter-organizational arrangements, they are guided by (societal) institutions (North, 1990). In situations in which the status quo in institutions hinders effective resource mobilization, firms may establish institutional arrangements aimed at achieving more favorable resource transactions. These arrangements are socially and institutionally embedded constellations shaped by interactions between resource users and resource owners or/and institutional bodies guiding resource allocation (Neergaard and Ulhøi, 2006). Through arrangements, relationships between resource owners and other actors with control over or interest in the resources are established, allowing for resource exchange.

In the context of resource mobilization for opportunity exploitation, firms establish arrangements as instruments to mobilize needed resources. The efficiency of an arrangement influences the transformation of an initial idea for an opportunity into a fully formed concept. Hence, arrangements are instruments to formally and informally govern the mobilization of resources between different activities throughout the opportunity-development process (Busenitz et al., 2003) and to respond to the dynamic interplay of forces from the institutional and organizational environments.

Firms establish arrangements for different reasons (Iyer, 2002). I focus on arrangements that firms establish to access and create collective resources. In particular, I discuss arrangements to ensure sustained access to natural resources and to create network resources for opportunity exploitation. Arrangements consist of multiple dimensions, such as social, scope and structure, and variations along these dimensions. Hence, arrangements can be designed to fit the different motives of the resource holders and resource acquirers (Subramani and Venkatraman, 2003) and can thus be complex in response to the multiple dependences on the collective resources and to resources holders' attitudes toward collective use. Given my focus on collective resources, I am interested in arrangements established by two or more independent firms to exchange resources for mutual benefits in the form of sharing resources or as a control mechanism of collective resource use (Franco and Haase, 2013, Becker and Ostrom, 1995). In this line of thinking, arrangements provide a frame of legitimized collective resource use and give a scope of action to mobilize resources.

2.6 Theoretical perspectives on resource mobilization

Above, I argue that both the purpose of resource mobilization and the type of resources mobilized influence how firms get access to and/or create the resources they need. Resource mobilization is a key concept in entrepreneurship as well as in many other disciplines. The empirical papers included in this dissertation have been inspired by the resource-mobilization phenomenon, and different theoretical perspectives have been applied depending on each individual study's research question. Three theoretical lenses have been used as a frame to study resource mobilization: RBV (Barney, 1991, Penrose, 2009/1959), RDT (Pfeffer and Salancik, 2003/1978), and NIE (Williamson, 1985, Coase, 1937, North, 1990).

Research drawing on RBV has typically elaborated on the firm's existing resource endowment and internal resource mobilization for opportunities (Alvarez and Busenitz, 2001). In contrast, the assumptions of RDT are based on an open system perspective of firms. In particular, RDT stresses the mobilization of resources from the external environment and the dependence between resource owners and resource users. Furthermore, NIE argues that the mobilization of resources inside and between firms is influenced by power and other institutional instruments, such as contracts (Coase, 1937). NIE has paid great attention to the discussion of internal versus external resource mobilization (Williamson, 1985) and the different types of institutions defining resource mobilization (Ostrom, 1990). Given their distinct focuses on 1) entrepreneurial firms consisting of bundles of resources (RBV), 2) the dependence of entrepreneurial firms on the external environment (RDT), and 3) institutions guiding the exchange relationship (NIE), these three theoretical approaches are complementary for our understanding resource mobilization. They view resource mobilization from an inside-out perspective (RBV), an outside-in perspective (RDT), and a transaction perspective (NIE).

Given the aim of this dissertation, I focus on the following three main aspects of the three theoretical perspectives to enhance our understanding of mobilizing collective resources for opportunity exploitation: 1) fundamental firm ideas and perspectives, 2) resources and the way collective resources can be understood, and 3) opportunity exploitation. Table 2.1. provides a comparison of the three theories structured according to these three aspects.

Table 2.1: *Comparison of resource mobilization from the RDT, RBV, and NIE perspectives*

FUNDAMENTAL IDEAS OF THE FIRM AND PERSPECTIVES			
	Resource dependence theory	**Resource-based view**	**New institutional economics**
Nature of the firm	Firms as co-dependent entities	Firms as independent entities	Firms as a nexus of contracts
Assumptions about the firm	Firms are resource constrained and therefore depend on the external environment	Firms are a collection of productive resources	Firms and their objectives are shaped by institutions
Fundamental issue the theory addresses	Firm survival	Competitive advantage	Existence of firms
Research gap the theory addresses	Relationship between firms and their environment with a focus on the organizational environment	Inequality between the performance of firms (competitive advantage)	Relationship between firms and their environment with a focus on institutions
Perspective	Outside-in perspective	Inside-out perspective	Transaction perspective

Collective Resource Mobilization			
	Resource dependence theory	**Resource-based view**	**New institutional economics**
Definition of resources	Exogenous property	Endogenous creation of firms	Exogenous property
Type of resource base	Standardizing the resource base and increasing the diversity of resource sources	Unique set of resources leads to competitive advantages	Both specific and standard resources, whereas transaction cost increases the more specific resources are
Nature of collective resources	Increases the interdependences between firms benefiting from the resources	Contradicts with the logic of internalizing critical resources to build a competitive advantage	Increases transaction costs and requires institutions to guide allocation
Issues inherent in collective resources	Power imbalance and interdependences	Heterogeneity issues	Market failures inherent in the non-excludability
Level of resource mobilization	Meso level	Micro level	Micro level (transaction costs) and macro level (property rights)
Motivation for arrangement establishment	Dependences define the arrangements through which resources are mobilized	Creation and internalization of critical resources to enhance heterogeneity	Institutions provide incentive structure for how resources are mobilized
Type of arrangements	Inter-organizational arrangements	Intra- and inter-organizational arrangements	Institutional arrangements

Time aspect of resource mobilization	Mobilization as a repetitive action (early works on RDT in particular)	Transferability of resources is permanent	Contracts to mobilize resources are of different length, which defines the length of resource use

OPPORTUNITY EXPLOITATION			
	Resource dependence theory	**Resource-based view**	**New institutional economics**
The nature of opportunity in seminal work	Arguments are mainly based on a discovery perspective of opportunities	Opportunities are discussed as both discovered and created	Arguments are mainly based on a discovery perspective of opportunities
Opportunity to be exploited	External conditions that firms consider as an opportunity	Best match of opportunity and resources, which are unique to the firm	Institutions create conditions that influence exploitation

2.6.1 Resource mobilization and the RDT

RDT is one of five grand theories developed in the mid to late 20th century in response to the need for theoretical approaches discussing the relationship between firms and their environments (Pfeffer, 2005, Wry et al., 2013). The four other theories are fundamental contributions to transaction cost economics, evolutionary theory, agency theory, and new institutional theory (Pfeffer, 2005, Hitt and Smith, 2005, Wry et al., 2013). RDT was developed in response to the lack of well-established theories discussing firms as open systems and their relationship with the external environment (Pfeffer, 2005).

Pfeffer and Salancik's fundamental ideas, which developed into RDT, are rooted in the observation that differences in leadership cannot explain all variation in organizational behaviors, which was the conventional explanation for variation in firm behavior (Pfeffer, 2005). They developed the assumption that variations in organizations' behavior are the results of firms' responses to external pressures (Pfeffer, 2005). The central idea upon which RDT is built is that firms need to (re)acquire resources and transform them into services and products (Pfeffer and Salancik, 2003/1978, Pfeffer, 2005). Thus, firms' survival depends upon their ability to satisfy the demands of both suppliers and customers to ensure the mobilization and re-mobilization of sufficient resources from the organizational environment (Pfeffer, 2005).

RDT draws on theories of the environment to approach the organizational environment in which the critical resources are embedded (e.g. Yuchtman and Seashore, 1967, Terreberry, 1968) and the theory of power to discuss the relationship between resource providers and the focal firm (Emerson, 1962). RDT focuses on the relationship between firms and their organizational environment, which consists of other firms with their own interests and objectives (Wry et al., 2013). Resources are considered exogenous properties that are embedded in the organizational environment, and vital resources that a firm depends on to exploit an opportunity may be controlled by actors in this environment. However, while the focal firm may depend on other organizations for critical resources, resource providers may also depend on the focal firm in a reciprocal manner (Drees and Heugens, 2013, Gulati and Sytch, 2007). Hence, resource dependence between a focal firm and firms in the organizational environment constrains the focal firm's behavior and scope of action (Wry et al., 2013).

Casciaro and Piskorski (2005) argued that a firm's ability to manage external dependences and overcome constraints is determined by the extent of mutual dependence and power imbalance between the resource provider(s) and the focal firm. In this line of thinking, the arrangements firms establish to mobilize resources are designed to create mutual dependence and address power imbalance (Drees and Heugens, 2013). In particular, RDT discusses inter-organizational arrangements as instruments to mobilize resources in the form of resource exchange between a focal firm and the organizational environment.

RDT mainly deals with resources that are excludable and argues that the most direct method to alleviate dependence is to gain control through ownership, for example, through acquisition (Pfeffer and Salancik, 2003/1978). Ownership is a key element underlying the control resource dependence, and RDT assumes resource transferability. As mentioned above, I focus on collective resources, which have more complex ownership structures than assumed by RDT. Nevertheless, Pfeffer and Salancik (2003/1978, p. 143 ff.) acknowledged that a focal firm is not always able to gain control through ownership transferability, arguing that there are alternative methods to coordinate mutual dependence and power imbalance to deal with resource dependence. RDT emphasizes that there are alternative informal and semiformal inter-organizational arrangements that can be established to coordinate the different interests of various social actors, such as those controlling the resources (Pfeffer and Salancik, 2003/1978, Gulati and Sytch, 2007). Consequently, resources can be mobilized through both social exchange and market contracting (Starr and MacMillan, 1990).

Social coordination through inter-organizational arrangement is a means to create mutual dependences (Pfeffer and Salancik, 2003/1978). RDT suggests that social arrangements are guided by social norms. Hence, the exchange relationship between a focal firm and the organizational environment constitutes rules and norms, resource exchange, and the emergence and/or development of a relationship (Cropanzano and Mitchell, 2005). From a RDT perspective, inter-organizational arrangements without ownership transferability can be a means to manage resource dependence and tend to favor sustainable mobilization of critical resources. Such arrangements help stabilize resource exchange and the robustness of the relationship as well as reduce uncertainties linked to the supply of critical resources (Pfeffer and Salancik, 2003/1978).

The literature on resource mobilization for entrepreneurship has taken the existence of an opportunity as given, claiming that the opportunity exists before the resources are mobilized (Villanueva et al., 2012, Newbert and Tornikoski, 2013). Following this line of thinking, opportunities are regarded as situations that are worth exploiting in terms of the desirability of the opportunity. Entrepreneurship studies from the RDT perspective have followed the assumption that entrepreneurs exploit opportunities without considering the resources they currently control (Newbert and Tornikoski, 2013). Thus, resource mobilization is a vital entrepreneurial task.

2.6.2 Resource mobilization and RBV

RBV looks at firms as a broader set of resources, an idea that—among others—goes back to the seminal work of Penrose (2009/1959) (Wernerfelt, 1984, Peteraf, 1993). RBV applies an inside-out perspective of firms and is concerned with explaining how some firms outperform others (Barney, 2005) through the creation of an endogenous resource base. RBV's main idea is that firms' resource endowments are heterogeneous, which in turn makes firms heterogeneous entities. Consequently, the unique resource base can explain the extent to which firms fulfill their purpose (Hitt and Smith, 2005, Foss, 1997). This idea builds on the assumption that a firm's resource endowment relates to its performance. Along these lines, differences in firms' resource endowments causes variation in their performance outcomes (Foss, 1997). The outside part of the inside-out perspective relates to the assumption that resources provide services that match demand in the external environment (Peteraf, 1993)[2].

RBV scholars argue that resources provide services for firms, and the services they provide can vary. Consequently, resources can have alternative uses (Penrose, 2009/1959, Foss et al., 2008). The products and services firms produce often require the services of several resources, and given the alternative use of resources, resources can often be used in different products (Wernerfelt, 1984). Hence, firms differ from each other not only because of their heterogeneous resource bases but also due to heterogeneity in the productive services they extract from their resources (Teng, 2007). RBV suggests that the basis for value creation, such as from opportunity exploitation, are resources that are valuable and rare (Sirmon et al., 2007, Barney, 1991). Resources in use have different levels of efficiency (Peteraf, 1993), and when these resources are difficult to substitute or to copy, the firm is able to build an advantage over other firms for a longer time period (Barney, 1991). In particular, non-tradable assets that are accumulated rather than acquired in markets are of interest to RBV scholars (Dierickx and Cool, 1989).

RBV, particularly the sustained competitive advantage argument develop by Barney (1991) and Peteraf (1993) among others, draws on the assumption that critical resources need to be part of the firm's internal resource base for the firm to outperform others and to be competitive. Internalizing of critical resources is regarded as a prerequisite to preserve heterogeneity and to limit ex post competition (Peteraf, 1993). Rumelt (1997) coined the notion "isolation mechanism" to refer to strategies

[2] There is an ongoing debate about the role of Penrosean theory in regard to RBV that is driven by fundamental differences about the understanding of resource constellations and their output, among other issues. See, for example, Nason and Wiklund (2018) and Kor and Mahoney (2004). Given my focus on the mobilization approach rather firm performance, I consider a combination to shed light on collective resources and their mobilization as being beneficial rather than conflicting.

and tactics firms can apply to protect their resource bundles from imitation. Property rights of critical resources is one condition included in the isolation mechanism (Rumelt, 1997). Additionally, Peteraf (1993) argued that the structure of private property rights for resources causes imperfect mobility, which means that these resources are excluded from resource markets and become less valuable to other firms.

The nature of collective resources thus challenges the assumptions of RBV related to how resources and their characteristics lead to sustained competitive advantage (Lavie, 2006). As collective resources are to a certain extent non-excludable and/or their services are used by several actors, they challenge RBV's argument of strategic asset idiosyncrasy and the imperfect mobility of resources. RBV assumes that resources must be within the firm's boundaries to result in sustained competitive advantage (Lavie, 2006). Lavie (2006) criticized RBV's assumption of firms' independence and extended the theory by arguing that many firms are interconnected and that the interconnectedness includes collective resources, such as network resources. Furthermore, ownership and control of resources are not necessarily a needed condition to achieve competitive advantage (Lavie, 2006). Following Penrose (2009/1959/1959) suggestion of resources' alternative uses, firms can have access the services of a resource without obtaining the resource themselves. In this line of thinking, the imitability of collective resources depends more on the relationship between the actors that aim to use the services of the resources and those who control them. Moreover, the same collective resource acquired or accumulated by a single firm can provide different services in another firm, which, as mentioned earlier, contributes to the heterogeneity of firms.

Major contributions to RBV developed in the 1990s, such as Barney (1991) and Peteraf (1993) focus on mobilization in the form of resource accumulation. Extending this view, this dissertation argues that entrepreneurial firms often do not possess the resources they need to exploit an opportunity and that entrepreneurial action requires change in firms' resource-deployment patterns. Teng (2007) stressed that entrepreneurial action in established firms often creates a resource gap, which encourages firms to access external resources to fill the gap. A resource gap emerges when there is a mismatch between internally available resources and a firms selected strategies, such as the decision to exploit an opportunity.

RBV argues that when entrepreneurial firms need to acquire additional resources, they leverage their existing resources through, for example, internal development or external acquisition (Teng, 2007). When internal resource development is inefficient, entrepreneurial firms can access external resources or simply let the opportunity go. I build on the understanding of opportunities as means-ends relationships, meaning that the attractiveness of a perceived opportunity is directly linked to the availability of needed resources and the perceived value of critical resources (Holmén et al., 2007, Alvarez and Busenitz, 2001).

RBV supports the notation of the means-ends relationship of opportunities and claims that distinctive or superior resources become the basis for competitive advantage if they match the perceived environmental opportunity in terms of market demand (Peteraf, 1993). For instance, Andrews (1997) claimed that firms need to match their resources to opportunities to narrow alternatives, minimize organizational weaknesses, and build on internal strengths. This stream of literature has built on the assumption that an opportunity is objective and exists in the market prior to entrepreneurial action, and a unique resource base allows firms to exploit opportunities that are not accessible to other firms (Nason and Wiklund, 2018). In turn, Penrose (2009/1959) introduced the notion of productive opportunities. While environmental opportunities refer to situations in the market that are considered worth acting upon, productive opportunities emerge from combining slack and undervalued resources. Productive opportunities are concerned with supply-side characteristics that have the potential to match promising conditions in the market and provide higher rents than the resources current use. Desa and Basu (2013) illustrated that RBV helps clarify different resource-mobilization approaches, proposing that firms acquire high-quality resources to exploit a market opportunity and suggested that firms bundle slack or undervalued resources to develop productive opportunities. Hence, resources can be acquired externally or reallocated and developed internally.

2.6.3 Resource mobilization and NIE

New institutional economics integrates theory of institutions into economics and focuses on the effects of economic, political, and social institutions on economic behavior (Pacheco et al., 2010b). NIE draws on and expands institutional economics by incorporating new developments, such as Coase (1937) conceptualization of the nature of the firm and the role of social costs (Coase, 1960). These developments cover a broader range theoretical perspectives and I have chosen to mainly focus on two elements within NIE: transaction costs (Williamson, 1985) and property rights (Eggertsson, 1990, Demsetz, 1967). This decision is based on the assumption that transaction costs and property rights are central to understanding the mobilization of collective resources.

NIE assumes that institutions constrain economic behaviors and shape human interactions (North, 1990). Institutions contain both informal constraints, such as norms and practices, and formal rules that guide interactions and define behavior during transactions (Garud et al., 2007, North, 1991). Thereby, institutions can guide resource mobilization through, for example, incentives that influence exchange relationships. Following this line of thinking, institutions affect the performance of economies and the allocation of resources as they create order, reduce uncertainties in the exchange process, and mitigate opportunistic behaviors (Eggertsson, 1990, Williamson, 2000, Dew, 2006). Thus, NIE provides a framework to understand economic behavior based on institutions' influence (North, 1990).

NIE was developed to create a theoretical perspective to explain the firm-environment relationship (Hitt and Smith, 2005), and the fundamental question that drove the development of NIE is why firms exist (Demsetz, 1988, Coase, 1937). From an NIE perspective, firms can be viewed as a nexus of contracts, in particular, a set of contracts between input owners and hierarchical relationships for market exchange (Demsetz, 1988, Eggertsson, 1990). The entrepreneur negotiates the set of contracts, which specifies how firms act within the external environment consisting of, among others, contract partners (Ostrom, 1990). While (neo)classical economics primarily focuses on variations in contracts and price signals, NIE argues that firms can manage relationships between resource owners and market actors (Eggertsson, 1990) and make relation-specific investments (Dyer, 1997).

North (1990) argued that firms are designed to maximize wealth or other benefits by exploiting opportunities. From an NIE perspective, opportunities are afforded by institutional structures, both formal and informal, such as norms and values. Given that 1) firms are created as a purposeful intention to exploit an opportunity resulting from institutional structures and 2) the allocation of resources (e.g., in form of input factors of the firm) is defined by institutions, firms that attempt to accomplish their objectives change sub-optimal institutions to enhance their value creation (North, 1990). Thereby, institutional change can affect both resource allocation and perceived opportunities.

Since institutions shape resource allocation, firms establish institutional arrangements to change institutions for more favorable resource allocation (Becker and Ostrom, 1995). Resources discussed in the NIE literature include, for instance, input factors, such as labor (North, 1990), land (Anderson and Lueck, 1992), and other natural resources (Ostrom, 1990). NIE scholars particularly shed light on the role of property rights when allocating resources (Eggertsson, 1990, Demsetz, 1967). This dissertation uses Eggertsson (1990) understanding of property rights, defined as a method to assign authority to select how resources are used within institutional constraints by particular individuals organized in firms (as one example). The property rights associated with resources consist of the following three rights: right to use a resource, right to earn income from the resource, and right to permanently transfer resource ownership to another party.

In my study of collective resources, I particularly discuss property rights issues in relation to collective resources. Collective resources, such as common pool resources, are characterized by a non-excludable property rights structure and the non-exclusive privilege to use the resources, which comes with issues like free-riding, externalities, and ineffective resource mobilization that can, for example, lead to over-exploitation (Ostrom, 1990). For resources with common ownership or those that are open access, no one holds exclusive rights (Eggertsson, 1990, Cheung, 1970). In this kind of situation, institutions become particularly important because property rights and inherent enforcements are not applicable. Institutional change, such as the establishment of a common fishing ground, can constrain the scope of resource use. However, Ostrom (1990) argued that establishing institutional arrangements to monitor and control resource use can be costly. Thus, the transaction costs connected to the mobilization of collective resources are likely to be higher than for resources with an exclusive ownership structure.

North (1990) argued that when it is costly to transact, institutions are particularly important. When institutions sub-optimally mobilize collective resources, actors like firms, other organizations, and the state establish institutional arrangements to make more favorable conditions for resource allocation. For example, sub-optimal situations can occur when incentive systems fail to prevent over-exploitation (Ostrom, 1990) or lead to the under-use of quality collective resources, such as when resource use is constrained through patenting (Heller and Eisenberg, 1998).

2.6.4 Comparison of the theoretical lenses

The three theoretical perspectives, RDT, RBV and NIE draw on different assumptions about the firm (see Table 2.1), which frames our understanding of firm behaviors, such as when they mobilize a collective resource. The comparison made in this section is guided by my research questions and focuses on elements and assumptions relevant to the mobilization of collective resources to pursue entrepreneurial opportunities.

RBV regards firms as independent entities and thus mainly focuses on internal aspects[3] of resource mobilization, such as resource accumulation and creation (Barney, 2005/1959, Penrose, 2009/1959). RDT and NIE, on the other hand, emphasize how firms access and acquire external resources, stemming from these theories' intention to explain the firm-environment relationship (Hitt and Smith, 2005). RDT and NIE define the nature of the firm in relation to its external environment. In particular, RDT focuses on the organizational environment and defines firms as co-dependent entities (Pfeffer and Salancik, 2003/1978). Thus, RDT discusses how firms mobilize resources that are controlled by other firms. NIE regards firms as a nexus of contracts, proposing that firms' actions are guided by institutions (Coase, 1937). NIE assumes that institutions guide the allocation of resources (Williamson, 2000) and is concerned with the various situations in which firms use different types of contracts to mobilize resources (e.g., when do firms draw on relation-specific investments rather than vertical integration?) (Joskow, 1987). The theories' arguments for firm behavior are shaped by the different views of the firm and the environment.

The comparison shows (see Table 2.1.) that the theories' different focus on resource-mobilization activities further underpins the theories' perception of critical resources and their origins. RBV argues for the importance of resource heterogeneity to create competitive advantages and focuses mainly on intangible resources, such as knowledge that is unique to the firm (Barney, 1991, Peteraf, 1993). RDT's and NIE's arguments on resource heterogeneity are anchored in the view that resources are exogenous properties, which contrasts the RBV view on resource heterogeneity as an endogenous creation of firms (Desa and Basu, 2013). Both RDT and NIE assert that

[3] There is an emerging stream of literature within RBV that focuses on inter-firm relationships and extends early works, such as Lavie (2006).

external resources vary between standardized and specific high-quality resources. RDT assumes that specific high-quality resources increase a firm's dependence on specific resource providers. Therefore, RDT recommends creating a resource base consisting of standardized rather than specific resources as well as a diversified supplier network to reduce resource dependence (Desa and Basu, 2013). NIE emphasizes that variance in how specific resources are used influences associated contracts, including safeguards and transaction costs (Eggertsson, 1990).

Based on the RDT logic on resources and the nature of the firm, the collective nature of resources increases interdependences between firms, which is seen as beneficial with regard to the power relationships between firms (Casciaro and Piskorski, 2005). Interdependences between firms favors the establishment of inter-organizational arrangements, which are mutually beneficial. On the other hand, RDT, particularly in early works (Pfeffer and Salancik, 2003/1978), argues for internalizing critical resources to gain control through, for example, merger and acquisition, an approach that is challenged by the limited excludability and transferability of collective resources. Moreover, the nature of collective resources contradicts fundamental ideas of RBV related to internalizing a unique set of critical resources to build a competitive advantage. From an NIE perspective, collective resources in particular may lead to high transaction costs, thus requiring institutions to guide resource allocation because of the inherent market failure of non-excludability (Eggertsson, 1990). Given NIE's focus on institutions, mobilization inefficiencies are addressed through institutional arrangements.

Shared governance is common for collective resources, meaning that a sole party generally does not have exclusive ownership rights of these resources, which limits the excludability, transferability, and enforceability of resource use (Tietenberg and Lewis, 2009/1984). Common property rights in general make the control and enforceability of resources particularly costly. However, RDT argues for ownership exchange as a mechanism to reduce the uncertainties linked to resource dependence. Similarly, RBV considers property rights as an isolation mechanism, whereas private and joint ownership are more efficient, allowing others to be excluded from using the resources. In the same line, NIE defines property rights as a method to assign authority to select how resources are used. Hence, drawing on the arguments of all three perspectives, I propose that key mechanisms linked to the often-made assumption that resources are owned by one party and that ownership gives the right to use, transfer, and enforce resources become obsolete in situations when firms mobilize collective resources.

Based on the arguments from the three different theoretical perspectives, the nature of collective resources influences the mobilization of these resources for opportunity exploitation. The following are issues revealed by comparing these perspectives: 1) the collective nature of these resources most likely leads to increased interdependences between focal firms and other actors, 2) there are challenges linked to how firms draw on collective resources to outperform others, and 3) there will be increased transaction costs for collective resources. Further, mobilization logics within these perspectives extend arguments based on the assumption of private resource ownership. Hence, when discussing the mobilization of resources for entrepreneurship, I propose that collective resources should be considered a distinct type of resource and that mobilizing collective resources indeed deserves more attention.

3 The empirical setting: The maritime industry in Nordic coastal locations

Building on the argument that context matters (cf. section 4.2 contextualizing), it is important to describe the empirical settings of research (Pratt, 2009). The case studies included in this dissertation are located in Nordic peripheral coastal locations, which typically favor maritime activities. The studied firms are part of the maritime industry, inducing both local supply firms and external cruise operators that enter peripheral locations. In this section, I first discuss entrepreneurship in peripheral locations and then briefly describe the maritime industry.

3.1 Peripheral coastal locations

Peripheral locations have traditionally be defined as geographical locations distanced from the core region and are described as outer areas (Anderson, 2000). In regard to entrepreneurship, peripheral locations have several unique characteristics compared to central locations. Specifically, they have less developed innovation infrastructures, it is more difficult to gain access to skills and markets, they are short on knowledge production organizations, and they are often considered as resource constrained (McAdam et al., 2004, Shields, 2005, Felzensztein et al., 2013, Müller and Korsgaard, 2018). Scholars often assume that context matters and that the characteristics of peripheral locations hinder entrepreneurship. However, these results are not conclusive. For example, Shields (2005) did not find support for either the presence of resource constraints in peripheral locations or for the notion that the low concentration of highly educated workers in these areas leads to entrepreneurial adversity. Arguing that entrepreneurs act upon perceived conditions, Anderson (2000) emphasized that these objectifications of the peripheral environment are not deterministic realities as the entrepreneurs have their own interpretations of the environments in which they are embedded.

Applying an interpretivist perspective (for more details, see Section 4.1), I argue that peripheral locations consist of physical characteristics, which are in turn interpreted by entrepreneurs. The studied peripheral locations are non-populated natural resource sites, small communities, and a town with around 20,000 inhabitants, all located on islands and peninsulas in the Nordic region. The physical characteristics that these locations have in common are related to their coastal locations. Coastal environments are at the interface between land and sea and are rich in coastal and ocean-specific resources, such as fish, unique landscape, and minerals, which can become the means for opportunities and lead to entrepreneurial activities. The Arctic and Sub-Arctic are rich in natural resources, and the melting sea ice makes local resources in these areas more available (Howard, 2009).

The case communities and natural resource sites are situated in Norway, Denmark, Iceland, and Greenland, which as a group of countries is often referred to as the Nordic. Figure 3.1. illustrates the case destinations. Nordic countries are in general high-income countries. Nevertheless, some of the regions in Greenland face issues of developing countries, such as lack of access to basic services, which mainly has to do with the size of the country and the thin population (Niclasen and Mulvad, 2010). There are, however, also significant differences between the case studies, such as distance to the core region, location reachability, the pool of local critical resources, and the institutional environment (cf. Paper 2 provides more information about the differences between Svalbard, Iceland, and Greenland). At the same time, entrepreneurs interpret these characteristics differently as well as what they mean for both themselves and resource mobilization.

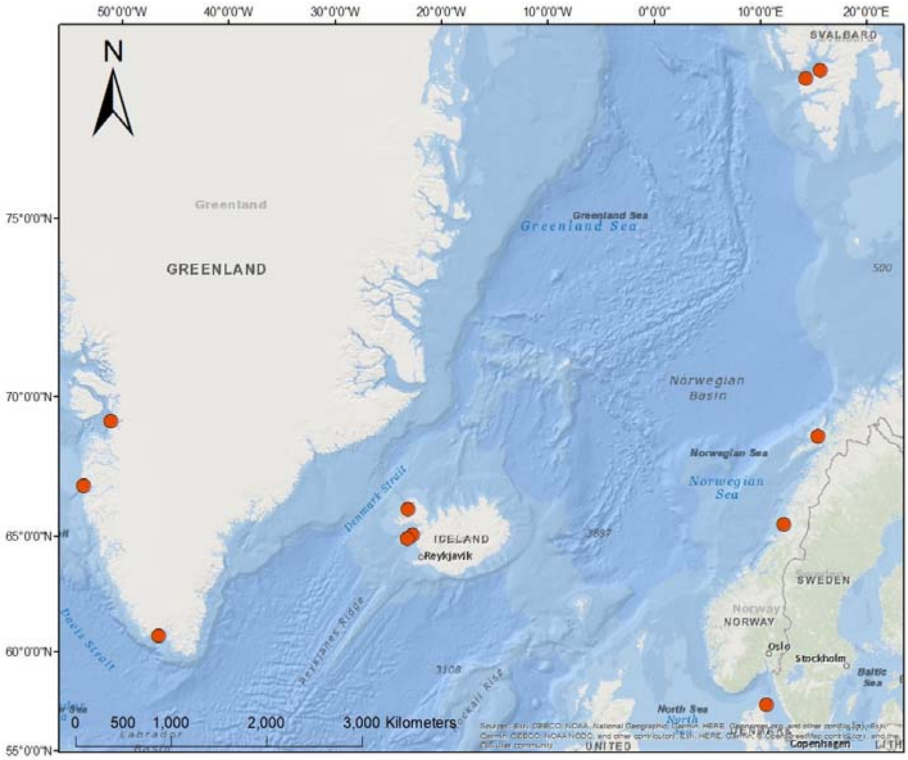

Figure 3.1: *Case destinations. Source: Personal illustration created with ArcGis Desktop.*

Müller and Korsgaard (2018) pointed out that distance becomes a key mechanism through which the spatial context influences the availability of critical resources for entrepreneurship. To illustrate the perception argument, given that Northern Norway is much more widespread and less populated than Northern Denmark, a distance of 100 kilometers is likely to be perceived as less far from a Northern Norwegian perspective than from a Danish one. Additionally, a town with around 20,000 inhabitants would mostly like be perceived as a core region from a Greenlandic perspective given that Nuuk, the capital and largest city has less than 20,000 inhabitants. Following this line of thinking, what is considered as peripheral depends on the context in which the entrepreneur is embedded. In turn, entrepreneurs act upon their perceptions and assumptions, which ultimately influences the resource-mobilization process.

3.2 The maritime industry

Coastal peripheral areas typically have long coastlines, which favor maritime activities (Karlsen, 2005). For instance, transportation offshore is vital for the local businesses in and the welfare of peripheral communities. Given the importance of offshore transportation, coastal locations often invest in maritime infrastructure that supports the industry.

The maritime industry can be defined as economic activities that have to do with building and operating ships, including marine transportation, maritime tourism, fishery and marine products, shipbuilding, equipment manufacturing, and other marine sectors (Doloreux and Melançon, 2008, Stopford, 2009). The maritime industry is highly modular, which means that firms within this industry depend on their value-creating networks to exploit opportunities and that the firms within these networks are co-dependent (Hermann and Wigger, 2017, Stopford, 2009). For example, cruise operators depend on maritime infrastructure, equipment manufacturers, and onshore services, among others.

Because ships are mobile and can easily be relocated (Stopford, 2009), they are often distant from land-based organizations. For instance, the headquarters of cruise operators that sail in Arctic waters are often in the United States, Europe, and Australia. Further, the mobility of ships makes the industry highly competitive and globalized (Lorange, 2009). At the same time, shipping companies depend on local resources, such as local services and infrastructure. Thus, the maritime industry provides a unique setting to learn more about the role of the placial context. While the vessels enter different contexts, critical factors effecting the resource mobilization of the land-based organizations and the vessels stay the same. Thus, this empirical setting facilitates context-sensitive theory development.

From the coastal community perspective, ships can provide mobile markets in the sense that the arrival of a vessel is an external enabler, which an entrepreneur may see as an attractive opportunity to sell services and/or products to the shipping company. In this dissertation, I focus on instances when cruise vessels visit peripheral Nordic locations and on the local supply industries in these locations.

3.2.1 Cruise tourism in Nordic regions

Tourism is often an important income source for peripheral communities in general (Müller and Korsgaard, 2018) and Nordic regions in particular (Sæþórsdóttir, 2010). Tourism in the north—for example, in Svalbard or Iceland—is often based on nature experiences, meaning that nature, such as unique landscape and wildlife, attracts tourists (Bystrowska et al., 2017, Sæþórsdóttir, 2010). The majority of the case communities studied herein are fishing communities with growing tourism activities. The activities of both key industries underpin common pool natural resources. These fishing communities have established some form of access to the sea, often a harbor or dock, which allows them to welcome ships. The cruise industry benefits from these established shore-based maritime infrastructures and services. Moreover, peripheral coastal locations are often difficult to reach by other means of transportation, which in turn favors the development of cruise activities.

Cruise tourism is one of the fastest-growing tourism sectors (Brida and Zapata, 2009). Characteristic of cruise tourism is interactions between cruise ships and local destinations—namely, the cruise experience is co-created between land-based experiences and those onboard cruise vessels (Gui and Russo, 2011). In particular, cruise passengers travelling to Nordic regions are interested in experiencing the local culture and the area's unique nature. However, for many small coastal tourism destinations, cruise activities are often a temporary phenomenon characterized by limited numbers of arrivals and high seasonality.

The cruise industry in Nordic regions can be divided into two main categories: the oversea cruise industry and the expedition cruise industry. The oversea cruise industry is often referred to as the traditional cruise industry: large cruise vessels with several thousand passengers and all kinds of activities onboard. Typically, the operators of oversea cruises are multinational companies. Given the small size of the communities, the largest vessel that arrived at the case communities had a capacity of 2,720 passengers. Extant research has claimed that the arrival of cruise ships can have negative social and environmental impacts on peripheral Nordic communities (Huijbens, 2015, Luck, 2010). Moreover, given that these cruise vessels can have more passengers onboard than the population of the local community, capacity issues often arise. Cruise arrivals demand a large amount of resources from the local communities, which provides an interesting setting to study resource mobilization.

The expedition cruise industry is a niche segment within the cruise market and is characterized by the use of small vessels that carry up to 320 passengers and closeness to nature (Hall et al., 2010). These vessels often carry smaller boats with them, which allows them to enter places with limited to no infrastructure. In the expedition cruise industry, it is typical for the vessels to visit exotic places and go to destinations that are less explored. Wilderness and solitude are key elements of the Arctic expedition cruise industry (Bystrowska et al., 2017). Therefore, the expedition cruise industry depends on access to quality natural resources as the core of its cruise product.

3.2.2 Maritime equipment manufacturers in Northern Denmark

Building, maintaining, and retrofitting vessels often demand the involvement of multiple equipment manufacturers. Thus, shipbuilding, ship maintenance, and ship repair have become modular, allowing for the supply of parts and equipment by networks of suppliers rather than by a single shipyard as it used to be in the past (Hermann et al., 2016). Maritime suppliers from Northern Denmark supply significant maritime services and equipment to Danish shipping companies (Hermann and Wigger, 2017).

These suppliers have initiated collaborative development projects related to environmental maritime technology by involving different actors and developing different levels of structuration (Mosgaard and Kerndrup, 2016). As one example, the maritime suppliers located in a town in Jutland ran the “green ship” network from 2009 to 2016. The network provided environmental technologies to retrofit vessels (e.g., the local ferry) to decrease air and water pollution from ships. The firms inside the network shared and created the resources needed to offer services to retrofit vessels.

Thus, both the placial and the industry context have their particularities, which are important to take into consideration when making sense of and interpreting data material. Moreover, a detailed description of the empirical settings enables other researchers and practitioners to evaluate the transferability of the findings. Therefore, in the following chapter, I discuss the contextualization of this study; the case studies; and the quality of the study, including the transferability of the findings.

4 Methodological considerations

In this chapter, I present the methodological approach applied to explore the research question: *How do entrepreneurial firms mobilize collective resources for opportunity exploitation*. I first argue for an interpretive perspective and then discuss my choice of research design, data collection, and data analysis. The chapter ends with an assessment of the quality of this research and ethical consideration.

4.1 An interpretivist perspective

This dissertation is inspired by an interpretivist perspective and draws on the assumption that the "social world" is socially constructed (Schwandt, 2003). Interpretivism describes the "natural world" as ontologically "real," whereas social phenomena and social concepts, such as the mobilization of resources and entrepreneurial opportunities, exist as one's subjective and intersubjective perceptions (Packard, 2017, Leitch et al., 2010). The social and natural world can be distinguished based on the notion that human action is inherently meaningful and has certain intentional content, which is not the case for the movement of materials in the natural world (Schwandt, 2003).

The ontological stance of nominalism, which underpins interpretivism, draws on the assumption that the social world outside one's cognition is just names, concepts, and labels as artificial creations for describing, making sense of, and negotiating the external world (Burrell and Morgan, 1979). Interpretivism acknowledges knowledgeable actors who interpret and apply rules creatively. Nevertheless, the scope of action undertaken by knowledgeable actors is constrained by, for example, its embeddedness in regimes and other institutional environments, such as institutions guiding the allocation of common pool natural resources (Geels, 2010).

Knowledge is what one perceives to be real and can therefore only be understood in terms of one's epistemic reality (Packard, 2017). Interpretivists are particularly concerned with "verstehen," meaning that actors' understanding of the social world is based on the interpretations that actors subjectively make to explain their behaviors (Leitch et al., 2010, Schwandt, 2003). Interpretivism assumes that human behavior is constructed through shared meanings. Thus, to study the "social word," researchers need to identify, understand, and interpret such meanings. Concepts, labels, and names help individuals structure meanings and identify patterns (Riley et al., 2000).

From an interpretivist perspective, entrepreneurial action, such as resource mobilization for opportunity exploitation, occurs in between and in relation to other actors, certain events, or even whole society and is thereby embedded in socialized contexts (Korsgaard, 2013). Consequently, opportunities are social constructs, meaning that an opportunity does not exist without an individual's belief in the opportunity's feasibility and potential and the entrepreneur's willingness to act upon it (Alvarez et al., 2013). For example, polar bears and cruise ships exist as part of "material reality." The perception that they constitute an entrepreneurial opportunity is socially constructed by the entrepreneur (Vogel, 2017). Interpretivism allows actors to account for their creativity and continuous sense-making (Geels, 2010).

When assessing an opportunity, an entrepreneur tests his or her idea and belief about the potential of the perceived opportunity against the current market, which itself is a social construction (Alvarez et al., 2013, Korsgaard, 2013). From an interpretivist perspective, social structures and patterns, such as how opportunities can be exploited, exist within a dynamic reality enacted through action and communication (Korsgaard, 2013). Therefore, knowledge about resource mobilization for opportunity exploitation can be created by identifying and interpreting the actors' understanding of how resources are mobilized and by using concepts and labels to structure the knowledge. In other words, explanations of how entrepreneurial firms mobilize collective resources is grounded in actors' self-understanding (Leitch et al., 2010).

Interpretivism has been largely criticized for rejecting the “reality” of the social world (Packard, 2017). In particular, it has been argued that if these structures are not real, they have no causal power over individuals’ actions and behaviors. Thus, interpretivists face the challenge of having to explain why and how individuals behave rather uniformly and predictably. Packard (2017) explained that social structures are learned patterns of behaviors and relationships that individuals voluntarily rely on when behaving in one or another. Moreover, our understandings draw on theory- and value-laden observations, and interpretation is essential to make sense of these observations (Leitch et al., 2010).

4.2 Contextualizing

Applying an interpretivist perspective, this dissertation accounts for creative and heterogeneous actors bounded by the constraints of their embeddedness (Geels, 2010), meaning that because actors are embedded, their actions have certain patterns. Hence, actors’ behavior is guided by “social structures,” such as institutions, that reflect the learned patterns of behavior and relationships these actors rely on (Packard, 2017). From an interpretivist perspective, context matters. Thus, the context in which the entrepreneurial action is embedded might influence the resource-mobilization process. In this line of thinking, context may influence the theoretical relationships underlying a certain phenomenon, such as resource mobilization.

According to (Welter, 2011, p. 167), context refers “to circumstances, conditions, situations, or environments that are external to the respective phenomenon and enable and constrain it.” Context represents the setting in which action and behavior is embedded. Thus, researchers who apply an interpretivist perspective need to address the questions “What are we actually researching” and “Are we conducting research to develop a theory of a certain phenomenon or of a certain context.” (Keupp et al., 2012, p. 382) claimed that “At the worst, this may mean that many articles that study the strategic management of innovation have identified context-specific subsets of the actual theoretical relationships rather than these relationships themselves."

At the same time, entrepreneurship research is often empirically driven, and context is therefore inherent in the data material researchers use to build theory. Therefore, Zahra (2007) and others argued for the need to contextualize entrepreneurship research, claiming that paying more attention to context and understanding its uniqueness, dynamics, and limitations can enrich entrepreneurial studies since entrepreneurship itself is an embedded social construct. Researchers who neglect the context-specific setting risk missing the contextual relevance of their findings and reifying core constructs (Chalmers and Shaw, 2017). The ongoing pressure to generalize and decontextualize research findings leads, according to Wiklund et al. (2011, p. 4), to "frustrated efforts to overgeneralize results across very heterogeneous settings within and across studies."

This dissertation acknowledges the context-specific settings of Nordic peripheries, which are described in Chapter 3. The contexts of the studies in this dissertation are carefully addressed to develop theory and to reduce falsification through a mismatch between theory and context (Zahra, 2007). In order to do so, the research design favors context-sensitive investigation. Further, I discuss the transferability of the findings from this dissertation in Section 4.7.

4.3 A multi-theoretical perspective

In this dissertation, I draw on three different theoretical perspectives that speak to the phenomenon of collective resource mobilization for entrepreneurship. Each of the theories adds a unique contribution to frame the mobilization of collective resources, thus providing an aggregated knowledge base to analyze the findings from the empirical papers comprising this dissertation (see Table 2.1.). I understand theories as essential elements to makes sense of the world and to create and accumulate knowledge (Suddaby, 2014). The fundamental ideas and assumptions underlying a theoretical perspective frame the research focus and guide the interpretation of empirical findings. Integrating different theoretical perspectives is common practice in entrepreneurship research as there are phenomena and research questions that cannot be fully addressed by drawing on one theory alone (Mayer and Sparrowe, 2013). Several previous studies have integrated two of the discussed theoretical perspectives—for example, Desa and Basu (2013), who drew on resource dependence theory (RDT) and the resource-based view (RBV) to explain strategic differences in resource-mobilization approaches; Starr and MacMillan (1990), who used RDT and new institutional economics (NIE) to explain how ventures use social contracting as a means for resource mobilization; and Foss and Foss (2008), who built on RBV and NIE to add new insight into value creation through opportunity exploitation.

Drawing on different theories provides a broader and more comprehensive view on resource mobilization and the role of collective resources. At the same time, combining theories comes with its pitfalls (Mayer and Sparrowe, 2013). Mayer and Sparrowe (2013) suggested four approaches to integrate theory to avoid issues. This dissertation is inspired by the approach of "letting multiple theories speak to the same phenomenon but from different perspectives" (Mayer and Sparrowe, 2013). This approach suggests that scholars identify and discuss the evident disparities between perspectives as a first step before arguing for the possibility of a synthesis (Mayer and Sparrowe, 2013). In Section 2.6.4., I discuss disparities between the perspectives. I decided to compare the three theoretical perspectives in terms of their fundamental ideas of the firm, collective resource mobilization, and opportunity exploitation and to accumulate their theoretical arguments.

The second step has been adjusted in line with the purpose of this dissertation. Theoretical arguments from the three perspectives that help frame collective resource mobilization has been accumulated. Hence, the theories are not integrated per se, as suggested by Mayer and Sparrowe (2013), but instead the theories are used separately in the individual empirical papers, compared in Section 2.6.4., and accumulated in Chapter 6 . A comparison provides a solid foundation to borrow and combine arguments from the three theoretical perspectives.

4.4 Research design: Embedded case study design

The research design determines how this study should be conducted to answer the research question “How do firms mobilize collective resources for opportunity exploitation” (Patton, 2002). The relative lack of understanding of collective resource mobilization necessitates exploring patterns of how these types of resources are mobilized to develop theory and thus expand the current literature. Besides, the interpretivist perspective and the context sensitivity of this study favor a research design that facilitates capturing the meaning and intended outcomes of human action. I chose a qualitative case study approach because it enables me to explore patterns based on entrepreneurs’ interpretations of resource-mobilization approaches and the inherent meaning linked to their action. Through case studies, the phenomenon under investigation can be reconstructed, which facilitates the generation of scientific knowledge (Baxter and Jack, 2008). Moreover, given the explorative nature of this study, a qualitative case study approach enables flexibility and openness to adapt to inquiries throughout the research process of this dissertation (Patton, 2002, Miles and Huberman, 1994).

Case study designs have different nuances (Grünbaum, 2007, Stake, 1995). For this research, I chose an embedded design. An embedded case study is a case study with multiple sub-units. In this dissertation, the embedded cases are communities or networks, and the sub-units are entrepreneurial firms operating within the maritime industry and their actions to mobilize resources (see Table 4.1). An embedded design allows me to explore the studied firms’ behavior while accounting for case context and the multi-level aspects inherent in the collective resource concept.

As with every research design, the embedded case study design has it weaknesses (Grünbaum, 2007). There is an ongoing debate linked to ambiguity in the meaning of "unit of analysis" and the case itself. The distinction between unit of analysis, sub-units, and the case is unclear, which challenges the consistency of the patterns found and leads to misperceptions of what the case is (Patton, 2002). Within a holistic case study design, the case is mainly identical to the unit of analysis (Grünbaum, 2007). This in turn has been criticized to be illogical for embedded case studies (Grünbaum, 2007).

The units of analysis in this dissertation are identical to the sub-units of the case, whereas the case is a higher level of abstraction of interpretations of the sub-unit and understanding of the case, such as action undertaken by a network or the meaning of institutions in a given context. Defining the sub-units as the units of analysis accounts for the multi-level perspective and context sensitivity of this research.

The case selection is based on criteria related to the maritime industry and geographical locations. My PhD position was within maritime innovation and therefore, the focus on the maritime industry has been predetermined by the beginning of my PhD journey. The decision to focus on peripheral Nordic coastal environments is based on my personal interest but also their relevance for mobilizing resources given that these environments are often resource constrained, as argued in Chapter 3. Entrepreneurial maritime firms operating within peripheral Nordic environments are regarded as a relevant setting to study collective resource mobilization.

Table 4.1: *Overview of the sample and data material for each empirical paper*

Empirical paper #: Title	**Paper 1:** Collective institutional entrepreneurship and sustainable natural resource use	**Paper 2:** Arrangements to access natural resources: The role of localness and interdependence	**Paper 3:** Resource mobilization for temporary opportunities	**Paper 4:** Challenges of creating and capturing value in an open eco-innovation network
Type of study	One embedded case study	Three embedded case studies	Four embedded case studies	One embedded case study
Case(s)	Network of Arctic expedition cruise operators	An individual Arctic expedition cruise operator operating in Svalbard, Greenland, and Iceland	Cruise suppliers along the Norwegian and Icelandic coasts	Network of maritime suppliers located in Northern coastal Denmark
Unit of analysis	Cruise operators	Cruise operator's arrangements with local actors	Cruise suppliers	Maritime equipment suppliers
Level of interpretation	Collective action at the network level	The focal firm and its arrangements with local actors in Svalbard, Iceland, and Greenland	Suppliers embedded in the local community	Value creation and capture at the network level
Data material	• 20 interviews • Annual reports • Participation in thematic workshops and annual meetings	• 24 interviews • Participation in thematic workshops and annual meetings and observation on Svalbard and Iceland • Archival documents	• 4 face-to-face interviews • 5 group interviews	• 17 interviews • Internal documents from the network • Participation at meetings and workshops
Interview guide	Interview guide Arctic expedition cruise round 1(1a) and 2 (1b)	Interview guide ArcBoat (2); Interview guide Arctic expedition cruise round 1 (1a)	Interview guide local cruise suppliers (3)	Interview guide maritime equipment suppliers (4)

The process of selecting the sub-units was determined by the purposes of the four research papers. In the first stage, the data-collection process was more explorative, and I used the snowball sampling strategy (Patton, 2002). For both the cruise and maritime supply industries, I chose the network secretary/administration for initial interviews. This decision was based on my assumption that these actors have rich insights into the industry and knowledge about other relevant actors. Table 4.1 provides an overview of the samples used in the four empirical papers.

4.5 Data collection

Semi-structured in-depth interviews, documentation analysis, observation, and participation are used in this dissertation. As illustrated in Table 4.1, the data material used varies between each of the four research papers. I collected the cruise data material, which is used in Papers 1 to 3, whereas my colleague Roberto Rivas Hermann and his team collected the maritime supplier data used in Paper 4 as part of his dissertation.

4.5.1 Interviews

The degree to which an interview should be structured depends on the research purpose and varies from qualitative to survey interviewing (Patton, 2002). In particular, researchers mainly differentiate between highly structured, semi-structured, and unstructured interviews, which can contain open and/or closed questions (Easterby-Smith et al., 2008/1991). In qualitative interviews, knowledge is produced through interactions between the informant and the researcher, and questions are posed based on situated personal judgement (Kvale and Brinkmann, 2009).

The lack of understanding of the mobilization of collective resources for entrepreneurship necessitates qualitative interviews, which enable an explorative approach and flexibility (Easterby-Smith et al., 2008/1991). At the same time, researchers need to have a stronger listener position in order to not influence the outcome of such interviews (Kvale and Brinkmann, 2009, Miles et al., 2014). This enables the openness needed for exploring how collective resources are mobilized. Nevertheless, structure is needed to keep track of each interview's direction and enhance comparability between interviews and analyzed units (Patton, 2002, Yin, 2011). Conversely, qualitative interviews may make generalizing a challenge and are particularly context sensitive.

To keep the needed flexibility while also ensuring content coverage and comparability, I conducted qualitative interviews with open-ended questions based on semi-structured interview guides. The interview guides were used as a tool to support the interview process. I used four different interview guides (see Table 4.1): interview guides for the expedition cruise industry, for ArcBoat (the focal firm in Paper 2), for the cruise supply industry, and for the maritime equipment supply industry. The interview guide for the expedition cruise industry was updated before the second round of data collection. As ArcBoat is part of the Arctic expedition cruise network, the interviews with key personal in ArcBoat included questions from the interview guide "Arctic expedition cruise industry."

The participants have various backgrounds and hold different positions. Further, there are relevant differences between the studied firms, such as internal organization and decision-making autonomy, which I took into consideration. Hence, I adjusted the interview guides and reformulated questions for each interview based on knowledge about the company, the interviewee's job position, and the informant's background. Moreover, the Arctic expeditions cruise industry is a globalized industry, so I interviewed representatives from companies located in different countries. Hence, I had to consider differences in both language and culture during the interviews, such as the use of metaphors. Even with thorough preparation before each interview, design changes during the interview, such as unplanned follow-up questions, did occur often. The interview process was thus non-linear and included numerous ad hoc decisions, which is typical for qualitative interviewing (Kvale and Brinkmann, 2009).

During the interviews, interviewees often discovered new relationships and patterns triggered by the questions asked (Miles et al., 2014). On the other hand, I, as the interviewer, reflected on what was said, condensing and interpreting the flow of meaning underlying how entrepreneurial firms mobilize collective resources (Miles et al., 2014). As such, the process of gathering data through interviews might more correctly be described as co-authored than collected since both what the interviewee tells the researcher and who the researcher is comprise a constructing processes that occurs during the artificial situation of an interview (Miles et al., 2014).

4.5.2 Archival data, observation, and participation

In addition to the interviews, the data material contains secondary archival data—in particular, annual reports, internal documents from the two studied networks and thematic reports, and field notes and conference proceedings collected during the observation study and participation at the workshops and annual meetings. These secondary materials were used to gain an overview of what is going on in these firms to get insights into the mobilization of collective resources as well as to gain an understanding of the context, which facilitates the sense-making process. Moreover, collecting secondary material addresses weaknesses linked to retrospective questions. By interpreting my observations and participation, I, as a researcher, uncovered patterns that I might not have been able to capture through interviews and the study of the archival data (Saldaña and Saldaäna, 2011).

4.6 Data analysis

To analyze the data, I adopted a coding approach supported by NVivo 10 and 11, a qualitative data analysis software. Using coding as analysis is based on the assumption that coding is a reflection and interpretation of data’s meaning (Miles et al., 2014). Coding of raw data has become a standard procedure in qualitative research (Miles et al., 2014, Gioia et al., 2013). Codes are defined as labels that are assigned to meaning to describe and bundle information (Miles et al., 2014). I structured the data according to the different meanings and elements explored during the data-collection process by assigning codes to them. I used NVivo to create, save, and organize the codes identified during the data-analysis process and to assign raw data to them.

My data analysis can be divided into two main stages: an initial exploration stage as a preparatory approach and the main systematic stage for more detailed and focused coding. I initially analyzed the data during the data-collection process. This means that I put the data in NVivo after collection. I organized the data to learn more about it and to get more knowledge about the mobilization of collective resources, the context, and the studied entrepreneurial firms. In this stage, I used a holistic coding approach, in which I applied a single code to a large data unit to capture the meaning of the overall context (Miles et al., 2014). The initial analysis stage was unstructured but helped me identify the broader focus of each of the research papers: the collective aspect in Paper 1, the local control of natural resources in Paper 2, and the temporary nature of cruise opportunities in Paper 3. This stage can be summarized as a journey from the basic idea[4] of the dissertation to the broader research focus of the research papers (Järvensivu and Törnroos, 2010). The data collected for Paper 4 on maritime eco-innovation did not undergo this initial data-screening approach since my colleague Roberto Rivas Hermann already had a good overview of the data.

Having identified the broader focus of each of the research papers, I created new NVivo projects to start coding the data more systematically with the specific focuses of the research papers in mind. In this stage, I only coded data that was relevant for the predefined focuses of the research papers. I followed a stepwise coding process as suggested by Gioia et al. (2013) and Miles et al. (2014), among others. I used an iterative coding process based on a recursive approach considering the phenomenon

[4] The initial basic idea of this dissertation was to explore the modes of entrepreneurial opportunity exploitation in a resource-based industry.

and the literature. This approach leads to increased abstraction to derive meaningful theoretical categories from raw data. In the first round, I used an inductive open-coding approach based on provisional coding (Gioia et al., 2013). I added new codes to NVivo as elements and concepts appeared. During the first round of coding, codes were revised, modified, and deleted. Thereafter, I searched for patterns and similarities between the codes in order to group the codes into concepts, which Gioia et al. (2013) call "first-order concepts."

For the second round of coding, I used a structural coding approach, in which I deductively developed the second-order themes by reviewing the relevant literature and drawing on the fundamental ideas and assumptions of the theoretical perspectives on which the individual empirical papers draw (Gioia et al., 2013). For example, to makes sense of the first-order concepts developed for Paper 1 and to develop themes of how firms ensure access to high-quality natural resources, I drew on relevant elements of NIE. I used the concept of institutional entrepreneurship to make sense of the institutional actions and fundamental ideas of natural resource allocation and understand their collective aspects. Similar, for Paper 2, I draw on RDT to understand the dependence situation between external firms and local actors. However, to makes sense of concepts related to the localness of natural resources, I built on elements from socio-ecological system theory as a complementary insight to RDT. Searching for themes is a form of pattern recognition in the data through theoretical inspiration (Miles et al., 2014). The different theoretical perspectives applied in the empirical papers enabled me to identify a broad set of theoretical explanations and assumptions that helped me understand entrepreneurs' actions to mobilize collective resources.

The data analyses of Paper 3 and 4 consisted of two stages: an open coding first round and a structural second round of coding to develop themes. In turn, for Papers 1 and 2, I followed Gioia et al. (2013) three coding stages. In the third coding round, I distilled the second-order themes into higher level “aggregated dimensions” through a discussion of the meaning of the second-order themes.

4.7 Assessing the quality of the research

To evaluate the quality of research, researchers need to follow practices within their research perspectives (Schwandt, 2007). Lincoln and Guba (2007) argued that qualitative research cannot be evaluated through practices applied in studies assuming an objective discovery of the truth. Meanings and interpretations underlying the findings in this dissertation cannot be tested, and the interpretivist perspective allows for value-laden knowledge (Leitch et al., 2010). Hence, to assess the quality of this research, I follow Leitch et al.’s (2010) suggestion for evaluating the quality of interpretivist research in entrepreneurship—namely, assessing credibility, transferability and confirmability.

Credibility of qualitative research relates to the trustworthiness of the raw data and the collection process as well as the interpretation of the raw material (Lincoln and Guba, 2007, Patton, 2002). The credibility of this research is enhanced by combining interviews with document analysis, observations, and participation. The triangulation of data sources and methods reveals different aspects of the empirical reality and decreases sensitivity to errors inherent in the method, such as loaded interview questions or biased responses and inaccuracies due to poor recall of past events (Patton, 2002). Additionally, I interviewed key personnel in different positions as well as different kinds of stakeholders, such as network administrators, which adds multiple voices to the raw material and enhances credibility (Shenton, 2004). The credibility of the interpretation of the raw material is enhanced through discussions with my more experienced supervisors and co-authors. Although, I did the first round of coding by myself, I discussed the meanings of the inputs and information with others throughout the process.

Transferability relates to the degree to which the findings are relevant and applicable to other contexts (Shenton, 2004). This dissertation is built upon the assumption that each case is unique but that social structures guide human behavior. In this line of thinking, the studied cases can be regarded as belonging to a larger group embedded in the same or similar social structure. Therefore, I believe that the transferability of the findings should not be rejected. In turn, I suggest that both practitioners and academics may relate their findings to their own situations (Shenton, 2004). In order to enhance a possible transferability of the findings, the papers present in-depth descriptions of the cases.

Finally, confirmability refers to researchers' effort to challenge their interpretations and theory (Drisko, 1997). This dissertation addresses confirmability issues related to non-matching patterns and researcher bias through the stepwise coding process and discussions with co-authors and supervisors (Gibbert et al., 2008). In the research papers, I present quotes from the interviews. Further, in Papers 1, 2, and 4, the data structure is presented, and in Paper 3, I offer a matrix of the different resource-mobilization approaches, all of which enhance confirmability.

4.8 Ethical considerations

Ethical considerations were made regarding the topic of this dissertation, data collection, and presentation of the findings. This dissertation abides by the guidelines for research ethics in social science, law, and the humanities developed by the National Committees for Research Ethics in Norway (NESH, 2016). The guidelines establish norms to distinguish between acceptable and unacceptable behaviors in research and provide a set of values and standards helping to codify the ethics of research in practice. This research and the data-collection method were registered with the National Committees for Research Ethic in Norway. In addition, to comply with the guidelines, I followed research codes regarding honesty, carefulness, openness, respect for intellectual property, confidentiality, and responsible publication.

Qualitative research issues particularly relate to the privacy of people affected by the research and the way the researcher gains access to participants. It is important to guarantee the freedom to choose to participate and to not harm the relationship of trust between participants, researchers, and the society (Bell and Bryman, 2007). Prior to their interviews, interviewees received necessary information about the research, its purposes, and the consequences of participating. Additionally, in order to guarantee the ethical presentation of the results, I sent the transcribed interviews to the participants, asking them to identify misleading information, which was dropped from this research.

I declare no potential conflicts of interest with respect to the findings of this research. Moreover, the research should be of value for society. Above all, this PhD position is financed by the public, which leads to certain responsibilities to deliver valuable outcomes and contributions to research. This dissertation provides novel insights to the sustainability and entrepreneurship debate, particularly discussions linked to natural resources and issues related to eco-innovation. Hence, this dissertation addresses societal grand challenges, and I regard the findings as valuable for society in general and for academics, policymakers, and practitioners in particular.

5 Empirical research papers: A summary

In this chapter, I summarize the four empirical research papers included in the dissertation and discuss the findings in relation to their contributions to the research question: *How do entrepreneurial firms mobilize collective resources for opportunity exploitation.* Table 5.1. provides an overview of the papers and their publication statuses.

5.1 Paper 1: Collective institutional entrepreneurship and sustainable natural resource use

5.1.1 Introduction and research question

Entrepreneurs can change and create institutions to address the sustainable use of natural resources, for example, by promoting stricter environmental regulations and developing sustainable practices (Pacheco et al., 2010a). This kind of action is referred to as institutional entrepreneurship and is defined as self-interested action to establish institutional arrangements that favor the entrepreneur's interests. This paper argues that when it comes to the sustainable use of natural resources, collaborative endeavors are vital for enforcing institutional change. In particular, the inherent environmental externalities and the non-excludability of common pool natural resources challenge the sustainable use of this type of resource.

Table 5.1: *Overview of the empirical papers*

Empirical paper #: Title	**Paper 1:** Collective institutional entrepreneurship and sustainable natural resource use	**Paper 2:** Arrangements to access natural resources: The role of localness and interdependence	**Paper 3:** Resource mobilization for temporary opportunities	**Paper 4:** Challenges of creating and capturing value in an open eco-innovation network
Authors	Wigger, K.	Wigger, K. & Bystrowska, M.	Wigger, K. & Alsos, G.A.	Garcia, R., Wigger, K. & Hermann, R.R.
Research question	Why and how does a network of firms collectively change institutions to ensure the sustainable use of common pool natural resources?	Which arrangements with local actors does a firm use to ensure access to natural resources?	How do small firms mobilize critical resources to exploit temporary opportunities?	What are the unique challenges when value is created and captured at multiple levels within a multi-stakeholder open eco-innovation process?
Key concepts (C)/ Theoretical positioning (T)	C: Collective institutional entrepreneurship (CIE) T: Institutional economics, natural resource management	C: Inter-organizational arrangements, natural resource opportunity T: Resource dependence, socio-ecological systems	C: Entrepreneurial opportunity T: RBV from a Penrosian perspective	C: Double externalities, eco-innovation T: Value creation and capture in networks

Key finding(s)	Firms apply inbound CIE to cope with ecological unpredictability and outbound CIE to mitigate ecological degradation; thus, access to and the quality of natural resource are ensured	The location of natural resources defines what kind of arrangements a firm uses to access natural resources controlled by local actors	Resource mobilization for the exploitation of a temporary opportunity entails the logics of prioritizing and exception	Imbalanced value creation at the individual level and co-creation at the meso-level, yet value capture is with society/natural environment
Publication status	In review at *Entrepreneurship Theory and Practices* Editor decision: Revise and resubmit	Published in George & Schillebeeckx (Eds.) 2018. Managing Natural Resources. Organizational Strategy, Behaviour and Dynamics. Camberley. Edward Elgar Publishing.	Preparing to submit to *Strategic Entrepreneurship Journal* *Accepted for presentation at 78th Annual Meeting of the Academy of Management (AOM 2018)*	Submitted to *Journal of Product Innovation Management* Editor decision: Reject Preparing manuscript for new submission to *The Journal of Cleaner Production*

This paper studies collective institutional entrepreneurship undertaken by a network of firms that depend on a common pool of natural resources and examines why and how a network of firms collectively changes institutions to ensure the sustainable use of common pool natural resources. The paper builds on an embedded case study of Arctic expedition cruise operators organized in a network who depend on the same common pool natural resources.

5.1.2 Theoretical orientation

This paper studies institutional entrepreneurship from an institutional economics perspective and integrates elements from natural resource management, particularly aspects linked to collective action toward sustainable natural resource management (Ostrom, 1990) and natural resource dependence theory (Tashman and Rivera, 2016). Institutional economics argues that entrepreneurs change institutions to make them more favorable for their business outcomes as institutions guide the allocation of resources.

However, prior research has shown that individual environmental entrepreneurship often fails (Lounsbury, 1998) and that the sustainable management of common pool natural resources faces challenges linked to collective inaction and non-participation (Wijen and Ansari, 2007). This paper argues that changing institutions to use natural resources more sustainably is challenged by free-riding motivated by incentives of non-participation. This paper builds on the assumption that joint dependence on nature affects the motivation to develop collective institutional entrepreneurship and may determine its form.

5.1.3 Methodological approach

This study employs an embedded single case study design to study a network of 48 firms that depend on a common pool of natural resources and collectively act to change institutions. For the case, I chose to study the Arctic expedition cruise network, which is relevant because of network firms' joint dependence on natural resources and because the Arctic environment is vulnerable to environmental and climatic changes.

I conducted 20 interviews; studied secondary data, such as annual and thematic reports from the network; and participated in two of the network's annual meetings and one of their thematic workshops. I used a stepwise coding approach inspired by the Gioia methodology (Gioia et al., 2013) to analyze the raw data. To ensure reliability, this study applies criteria related to validity, credibility, and replicability.

5.1.4 Findings

The analysis unveils that collective institutional actions are linked to two groups of perceived ecological uncertainties: ecological degradation and ecological unpredictability. Moreover, the network creates incentives—namely, increased access to natural resources—to join the collective endeavor. The institutional changes undertaken by the network are based on 1) the expectation that the common use of natural resources leads to degradation, 2) the perception that the natural environment is unpredictable, and 3) the expected benefits of enhanced access to quality resources.

In particular, the finding suggests that firms establish outbound and inbound institutional entrepreneurship as two distinct processes to deal with ecological uncertainties. Inbound collective institutional entrepreneurship is used to change norms and practices aimed to facilitate firms' ability to cope with ecological uncertainties. Firms undertake outbound collective institutional entrepreneurship to establish bureaucratic institutional arrangements aimed to mitigate ecological degradation through, for example, regulatory changes. These two processes of collective institutional entrepreneurship help address both the economic exploitation and sustainable use of natural resources.

5.1.5 Contribution to the dissertation

This study contributes to our understanding of collective resource mobilization for opportunity exploitation in two ways. First, this study provides evidence that institutions guiding the mobilization of resources are particularly important for collective resources that have multiple users. The findings suggest that firms that collectively use a resource or a pool of resources engage in institutional entrepreneurship when the status quo of the institutions is regarded as suboptimal. Suboptimal institutions can be changed through inbound or outbound processes, meaning that both practices and norms related to the use of the collective resource and bureaucratic arrangements at the institutional environment or governance levels can be changed. Given that the collective resources studied in this paper are non-exclusive, I suggest that institutions are particularly important for collective resources that have both multiple users and non-controlling owners.

Second, in the context of publicly available resources, the phenomenon of the "tragedy of the commons" challenges the quality of resources. Firms that use this type of resource have an interest to maintain the quality of and access to these resources. However, maintaining resource quality comes at a certain cost, particularly if other entities freely use the resources without implementing measures to maintain their quality. This study shows that mobilizing collective resources that have multiple users comes with free-riding issues and allocated social costs caused by degrading the resource.

5.2 Paper 2: Arrangements to access natural resources: The role of localness and interdependence

5.2.1 Introduction and research question

Natural resources belong to a certain location, which makes them distinct from other critical resources, such as knowledge or technology (Wiggins and Proctor, 2001). Firms that perceive an opportunity in exploiting natural resources need to enter the resource location to pursue the opportunity. However, growing pressure on natural resources and their depletion cause challenges for sustainable natural resources use (Cohen and Winn, 2007). Additionally, local actors often have a stake in natural resources and control resource use directly or indirectly through, for example, owning infrastructure needed to access the resources. Thus, accessing natural resources is a non-trivial business challenge.

This paper argues that firms establish arrangements with local actors who control natural resources to manage their dependence and ensure access to those resources and elaborates on *which arrangements with local actors firms use to ensure access to natural resources.* This study focuses on an expedition cruise operator that regularly enters several Arctic locations to exploit natural resource opportunities. The findings illustrate that the arrangements the firm uses vary across the three different Arctic locations: Svalbard, Iceland, and Greenland. Thereby, this paper contributes to the literature on opportunity exploitation from a resource dependence perspective by focusing on the localness of natural resources and the interdependence between local actors and focal firms. To understand the arrangements focal firms establish, we expand on this literature by integrating a socio-ecological system perspective to account for the local context of the natural resources.

5.2.2 Theoretical orientation

RDT provides a framework to study dependences between a focal firm and the organizational environment (Pfeffer and Salancik, 2003/1978). To manage dependences, firms establish arrangements, which are instruments to restructure dependences and reduce uncertainties in accessing natural resources (Casciaro and Piskorski, 2005). The dependences addressed in this paper occur when an actor controls a desired resource in a local context. External firms that aim to exploit a natural resource opportunity engage into exchange relation with the local actors to alleviate dependences.

These arrangements involve mixed motives regarding how to manage dependences, which are addressed through multiple dimensions and variations (Iyer, 2002). Thus, not all types of arrangements are equally suitable to alleviate dependence and ensure access to natural resources. Given the localness of natural resources, we argue that external firms select arrangements based on the local context in which natural resources are embedded. We conceptualize the local context as a socio-ecological system consisting of a natural environment and social actors (Rist et al., 2007). Integrating a socio-ecological system perspective, we argue there are multi-dependences between a focal firm wanting exploit a natural resource opportunity, other organizations having an interest in the natural resources, and the local community, which influence the selection of arrangements. Thus, we suggest that arrangements help firms to adapt to the socio-ecological system ex ante and to respond to disturbances caused by its entrepreneurial action ex post and argue that the selection of arrangements is shaped by conditions linked to natural resource use, the community's vulnerability, and natural resource opportunities.

5.2.3 Methodological approach

An embedded multiple case study approach is most suitable to learn more about the local context of natural resources and the selection of arrangements. We study one expedition vessel of a cruise operator that enters several locations in Svalbard, Greenland, and Iceland. Because the organizational factors remain the same for these cases, we suggest that differences in arrangements are caused by the local context of the natural resources.

We conducted 24 interviews, collected documents from the case firm, participated in one workshops and two annual meetings, and did field work in Iceland and Svalbard. The raw material was analyzed through a stepwise coding approach inspired by the Gioia methodology (Gioia et al., 2013).

5.2.4 Findings

The analysis unveils that the arrangements the studied firm selects are idiosyncratic to the three case destinations, which indicates that certain local contexts influence the selection of arrangements. The analysis suggests that the arrangements vary along three dimensions: social, scope, and structure. The motives leading to variations in these three dimensions result from specific dependence situations shaped by the firm's interest in natural resource opportunities, conditions linked to the natural resources (e.g., accessibility and institutional reliance), and the natural resource community.

Our findings suggest that the natural resource context, which consists of both the natural environment itself and the local actors, defines a focal firm's space of action when exploiting a natural resource opportunity. We identify two factors—localness and interdependences— that influence how a focal firm interacts with the local natural resource context. Localness is linked to conditions that determine the use of natural resources and to expectations from the local community. Thus, resource dependence together with specific characteristics of the local socio-ecological system influence the selection of arrangements.

5.2.5 Contribution to the dissertation

The findings from this study contribute to our understanding of collective resource mobilization for opportunity exploitation in two ways. First, the findings highlight the importance of both gaining and sustaining access to collective resources and suggest that future use has to be taken into consideration when managing resource dependences. The study suggests that the selection of arrangements is influence by multi-dependences shaped by the local context and other actors having an interest in the collective resource. Prior research has suggested that the firm's organizational environment has to be accounted for when managing resource dependences. The findings of this paper suggest that firms managing dependences linked to the use of collective resources also have to account for the embeddedness of the collective resources.

Second, our findings show that using collective resources comes with challenges linked to legitimacy and autonomy, which have an impact on the mobilization of these resources. Firms gain legitimacy and autonomy to mobilize collective resources by establishing arrangements that account for the embeddedness of the resources and the interdependence between resource users. We suggest that arrangements, which are designed to address dependences, include a response strategy for possible damage, and increase transparency and trust, enhance the scope of action to exploit collective resources. We argue that firms exploiting natural resource opportunities also need to account for the natural environment and the disturbances caused (or those expected to be caused) when exploiting the natural resource.

5.3 Paper 3: Resource mobilization for temporary opportunities

5.3.1 Introduction and research question

The type of opportunity influences the resource-mobilization approach required to exploit opportunities (Welter and Alvarez, 2015). In particular, we argue that entrepreneurial opportunities are limited to a distinct lifespan (Eckhardt and Shane, 2003) and that the duration of opportunities can vary from temporary to more durable. So far, the literature has mainly viewed opportunities as long-lasting situations (Timmons, 2004). We argue that entrepreneurs may also act upon opportunities of shorter duration, conceptualized as temporary opportunities. An entrepreneur considers an opportunity worth exploiting when the potential return from allocating resources to exploit it will be higher compared to the current use of these resources.

We assume that the short payback time of temporary opportunities influences the resource-mobilization process.

This paper addresses the following research question: *"How do small firms mobilize resources to exploit temporary opportunities?"* This paper builds on an embedded case study of small firms that offer services to cruise ships in four peripheral regions in Norway and Iceland. These small firms, usually focusing on other markets, perceive the arrival of a cruise ship as an opportunity for them, but at the same time, the cruise ship represents a mobile market that is only available while the ship is in harbor. This paper contributes to the literature on resource mobilization for opportunity exploitation by introducing the notion of temporary opportunities. Moreover, the paper elaborates on how firms mobilize resources for this type of opportunity. We argue that resource mobilization in this context involves two distinct logics: the logic of prioritizing and the logic of exceptions.

5.3.2 Theoretical orientation

In this paper, we define entrepreneurial opportunities as new means-ends relationships (Eckhardt and Shane, 2003), and we argue that the value of an opportunity is related to both the demand-side characteristics and the supply-side characteristics of an opportunity. The potential lifespan of an opportunity has important implications for how it is evaluated. Based on the competitive advantage logic of the RBV, opportunities may often only be considered worthwhile to pursue when they are enduring as sustainable advantages are regarded as more preferable than temporary advantages (Alvarez et al., 2013, Choi and Shepherd, 2004). We argue that there are situations when temporary opportunities are perceived as attractive—for example, the short-term availability of critical resources or when markets only exist for a short period.

Resource availability is a key consideration impacting the entrepreneur's decision to pursue an opportunity or not (Wood and Williams, 2014). We draw on Penrose

(2009/1959) and later work with the RBV to frame resource mobilization for temporary opportunity exploitation. When exploiting an opportunity, small firms need to leverage their internal resources and acquire resources from the external environment, often through social networks. In case of a temporary opportunity, resources are only needed for a short timespan, meaning that they can be released afterwards. We build the argument that utilizing existing resource endowments and network contacts is a promising strategy for exploiting temporary opportunities.

5.3.3 Methodological approach

We apply an embedded multiple case study approach, which allows for studying small firms located at different case destinations (Yin, 2013). The sub-units are the local small firms exploiting temporary opportunities. We applied procedures from an inductive approach and carried out face-to-face interviews and group interviews with personnel of the case companies. To analyze the data, we were inspired by Gioia et al.'s (2013) stepwise coding approach and used a recursive approach between our data material and the theories we drew upon. This study employed criteria of credibility and confirmability to ensure trustworthiness (Lincoln and Guba, 1985).

5.3.4 Findings

Our findings suggest that the short duration of temporary opportunities effects both how opportunities are evaluated and how resources are mobilized. We find that temporary opportunities are perceived as an additional source of income besides daily business. In particular, small firms generally do not consider opportunity costs when deciding to exploit temporary opportunities. Instead, small firms tend to treat critical resources that currently are in use as slack resources and deem in-use resources to be available for temporary opportunities that cannot be mobilized for more durable opportunities at the same cost. Moreover, small firms do not aim to achieve competitive advantage through the exploitation of temporary opportunities, which can explain the observed logic that small firms use resources that may not be ideal but are available at a low cost.

The analysis reveals three resource-mobilization strategies entrepreneurs use that are, in different ways, tightly bound to the short duration of the opportunity: mobilization through internal reallocation, mobilization through social exchange, and mobilization through market contracts. Our analysis uncovers that the short duration of perceived temporary opportunities underlies two logics defining the resource-mobilization process: the logic of prioritizing and the logic of exceptions. An example of prioritizing is a small firm putting its main business on hold to exploit a temporary opportunity. Using volunteers or involving local schools to gain access to additional resources are examples of the logic of exceptions. We suggest that these two logics do not apply for all resource-mobilization approaches, however. In particular, the logic of prioritizing is applied to internal resource reallocation, and the logic of exceptions has a positive effect on internal resource reallocation and on mobilization through social exchange. We did not find evidence that mobilization through market contracts benefit from these logics.

This study expands the debate on resource mobilization by highlighting that the short lifespan of temporary opportunities not only restricts resource mobilization but can also facilitate the mobilization of generic and releasable resources that are currently being used for other purposes. Moreover, the short duration of resources use opens up for goodwill in form of resource complementary through local involvement or from actors that are more powerful.

5.3.5 Contribution to the dissertation

The findings from this paper provide evidence that the temporary use of resources indeed influences resource mobilization for opportunity exploitation and thus strengthens the argument that usage influences mobilization strategies. This argument is developed in Section 1.3. The small firms studied in this paper draw on local network resources to exploit temporary opportunities and make use of collective resources, such as from volunteer organizations and local schools. The study shows that small firms use social exchange in the form of favors and goodwill to mobilize these collective resources for a short timespan.

Moreover, we argue that evaluations of opportunities are based on a combination of demand- and supply-side characteristics. Given the involvement of collective resources embedded in local communities, it is not surprising that entrepreneurs regard temporary opportunities as collective opportunities in the sense that they are interested in sharing such opportunities with other local actors.

5.4 Paper 4: Challenges of creating and capturing value in an open eco-innovation network

5.4.1 Introduction and research question

With the growing concern about the environmental impact of products, more firms are considering introducing eco-innovation. However, firms often do not have the needed resources, such as knowledge and technology, to design and develop products that minimize impacts on the natural environment. Thus, firms seek these resources in the organizational environment and turn to open innovation for this knowledge and technology. In this study, we focus on a multi-stakeholder network that jointly develops eco-innovation.

Eco-innovation aims to create both economic and environmental value and faces the paradox of double externalities, meaning that firms bear the costs of innovation while society reaps the benefits of an improved environment. In combination with a multi-stakeholder network, we argue that eco-innovation comes with a set of challenges that emerge at the micro-level, meso-level, and macro-level. We address the following research question: "*What are the unique challenges when value is created and captured at multiple levels within a multi-stakeholder open eco-innovation process?*" We use an embedded case study approach on a maritime supplier network in Northern Denmark to identify challenges inherent in developing eco-innovation.

5.4.2 Theoretical orientation

This paper draws on the literature on open innovation in networks. Open innovation is a distributed innovation process across organizational boundaries—in our case, within the network as a platform for resource inbound, outbound, and couple flows (Chesbrough, 2017, West et al., 2014). Value creation is the process of producing new value for oneself and for other actors in the network who are engaged in the innovation. Chesbrough (2017) argued that not only value creation but also the way value is captured should be key elements when studying open innovation.

Eco-innovation is innovation that is meant to have a positive environmental impact (Horbach et al., 2012). Eco-innovation aims to create and capture both economic and environmental value. This double goal causes issues related to double externalities, which can reduce the incentive for firms to undertake environmentally focused innovation. In particular, environmental value is extracted from the environment, which ultimately leads to the question of who should pay to create such environmental value. Given that double externalities decrease the incentive for individual firms in a network to contribute to environmental value creation, free-riding activities arises.

5.4.3 Methodological approach

We use an embedded case study of a maritime supplier network in Northern Denmark to identify a set of value-creation and value-capture challenges that emerge at the firm level, the network level, and the societal/natural environment level. We rely on 17 in-depth interviews, document review and observations. The data material was systematically coded and analyzed. We used a stepwise coding approach to first organize the raw data into concepts and then develop themes to identify groups of challenges. This study employed criteria of credibility and confirmability to ensure trustworthiness (Lincoln and Guba, 1985).

5.4.4 Findings

This findings reveal antecedents of challenges at the micro-, meso-, and macro-levels linked to both value-creation and value-capture issues. At the micro-level, we identify challenges linked to the conflicting nature of economic versus environmental interests and lack of incentives to capture collective interests, which in turn leads to free-riding among network firms and a withdraw of resources. Challenges at the network level are linked to misaligned opportunities for value capture and issues of competing value spaces, which ultimately slow down the innovation process and lead to a closing of the innovation process. At the macro-level, we reveal challenges that are linked to the absence of environmental stewardship, which negatively affects value capture for society and the natural environment. We argue that in an open eco-innovation context, value is created at the individual firm level and co-created between the actors inside the network, yet the major goal of value capture is meant to be with society/the natural environment. Understanding this negative cycle of open eco-innovation helps managers alleviate negative impacts on the development of such innovation projects.

5.4.5 Contribution to the dissertation

The findings from this paper contribute to the dissertation in two ways. First, the network, which provided a platform to share and create resources, emerged as an initiative to develop maritime solutions that have a positive impact on the environment. The environmental goal of the network attracted many actors during the initiation stage. However, throughout the innovation process, the double externalities problem of environmental value creation led to challenges in accumulating resources.

Second, the study illustrates that drawing on network resources to exploit environmental opportunities comes with a set of challenges, such as free-riding behavior. The findings provide evidence that while firms bring resources into a network to co-create value, value that is co-created by the use of network resources often cannot be captured in a way that effectively reflects the individual costs of collective action. This paper shows that not only are network resources accumulated and created but that the pool of collective resources in a network are also at risk of decreasing when individual firms withdraw resources previously shared within the network.

6 Discussion

In this chapter, I discuss the findings of the four individual empirical studies in regard to the overarching research question: *how do entrepreneurial firms mobilize collective resources for opportunity exploitation?* First, I structure the findings of each of the empirical papers. Afterward, I discuss the aggregated findings in regard to the three sub-questions about 1) access to critical common pool resources, 2) the creation of network resources, and 3) the usage of collective resources. I argue that these three elements are key concerns of entrepreneurial firms when mobilizing collective resources to pursue perceived opportunities (cf. Section 1.3. Research questions). This chapter ends by offering a framework of collective resource mobilization, which builds on the discussion of the aggregated findings.

6.1 Findings in relation to the research questions

The empirical papers are individual and independent studies, and each of them addresses different aspects of the research questions (cf. Section 1.3. Research questions). Table 6.1 provides a summary of the contributions of the empirical papers to the overarching research question. The empirical papers focus on two types of collective resources: common pool natural resources and network resources in the form of locally embedded resources and professional network resources. Moreover, the empirical papers explore two different mobilization activities: accessing and creating. The collective resources are mobilized to be used either in the short term or for longer periods. When entrepreneurial firms plan to use resources for longer periods, they need to design their resource-mobilization approach in a way that ensures sustainable usage.

Table 6.1: *The empirical studies in light of the research question*

Empirical paper #: Title		**Paper 1:** Collective institutional entrepreneurship and sustainable natural resource use	**Paper 2:** Arrangements to access natural resources: The role of localness and interdependence	**Paper 3:** Resource mobilization for temporary opportunities	**Paper 4:** Challenges of creating and capturing value in an open eco-innovation network
Collective resources		Common pool natural resources and network resources	Common pool natural resources	Locally embedded (network) resources	Professional network resources
Mobilization activity		Access to and creation of collective resources	Access to collective resources	Temporary appropriation of collective resources	Creation of network resources
Intended usage	**Duration of resource use**	Sustained long-term usage	Sustained long-term usage	Short-term usage	Sustained long-term usage
	Intended value creation	Economic and environmental value creation	Economic and local social value creation	Economic and local social value creation	Economic and environmental value creation
Firm's relationship to the periphery		Firm external to the peripheral location	Firm external to the peripheral location	Firm embedded in the peripheral location	Firm embedded in the peripheral location
Antecedents of collective resource mobilization approaches		-Mutual benefits and incentives -Safeguards and increased excludability -Institutions	-Legitimacy -Autonomy -Mutual dependence -Localness -Ownership	-Duration -Social and economic value creation	-Environmental and economic value creation -Ownership

Key contributions to the research question: How do entrepreneurial firms mobilize collective resources for opportunity exploitation?	Through collective institutional entrepreneurship to define the "room to maneuver" linked to the access and usage of common pool resources	Through inter-organizational arrangements to manage dependences between entrepreneurs and actors that control collective resources	Through social exchange; the short-term use of the resources allows firms to utilize locally embedded resources that are unavailable for long-term usage	Through network initiatives to create collective resources for common benefits and use

Moreover, entrepreneurial firms mobilize resources to create different types of value, such as economic, environmental, and social value. Thus, collective resources serve multiple purposes in regard to the value entrepreneurial firms aim to create. Furthermore, entrepreneurial firms may be local or external to the peripheral locations in which collective resources are embedded. I distinguish between firms that enter the location from outside, and thereby the context of collective resources, and those that are located where the resources are found. Moreover, Table 6.1 summarizes identified the antecedents of the collective resource-mobilization approaches, which I group into attributes of shared governance and resource context. Examples of attributes of shared governance are legitimacy, mutual benefits, and safeguards, whereas resource context includes the ownership structure, localness, and institutions. In the following, I first discuss the different resource-mobilization activities and resource use before I further elaborate on the antecedents of the resource-mobilization processes in Section 6.5.

6.2 Access to critical common pool natural resources

The empirical studies show that entrepreneurial firms mobilize common pool natural resources 1) by establishing social relationships with other resource users and the local actors who control the resources and 2) by changing and creating institutions that define entrepreneurs' "room to maneuver" and offer incentives for collective action to efficiently allocate common property resources.

The common ownership of natural resources provides entrepreneurial firms with accessibility challenges they do not face when mobilizing excludable resources. Natural resources often cannot be acquired as such, and access is not regulated through contractual terms between resource owners and users. Usual practices to reduce uncertainties, such as through ownership transfer or contract agreements with resource owners (Pfeffer and Salancik, 2003/1978, Eggertsson, 1990), are not efficient for common property resources (Cleaver, 2000, Brown, 2000). Therefore, entrepreneurial firms use less conventional strategies to decrease the uncertainties related to sustained access to quality natural resources and to manage dependences.

Further, firms deal with these uncertainties by changing and creating institutions that guide and define the allocation of natural resources in a more favorable way. For example, cruise operators establish common guidelines for accessing natural resource sites and undertake institutional action to make those guidelines mandatory for all users. Entrepreneurial firms in this context engage in institutional action because access to common property resources is not regulated in contracts between resources owners and resources users (Cheung, 1970). The case study of the network of cruise operators (Paper 1) illustrates that firms have an incentive to engage in institutional entrepreneurship with other actors who depend on the same common pool of natural resources. Incentives are considered important mechanisms that shape both individual and collective action—for example, in regard to the effective allocation of natural resources (Cleaver, 2000). Institutions, such as common practices and regulations, guide the allocation of common property resources (North, 1990, Eggertsson, 1990). I propose that institutional entrepreneurship is a key activity for common property resource mobilization, particularly when current institutions are regarded as suboptimal for guaranteeing sustained accessibility.

The network of cruise operators engages in two distinct institutional change processes: outbound collective institutional entrepreneurship to create and change the regulatory framework guiding the allocation of common pool resources and inbound collective institutional entrepreneurship to create mutual beneficial incentives to reduce the risk of collective inaction. When acting according to agreed rules, norms, and practices, entrepreneurial firms gain the necessary legitimacy to access these resources. Thus, institutions define the scope of action, and within this defined frame, the firms' actions are legitimized. Cleaver (2000) used the metaphor "room to maneuver" to illustrate this point. The norms and common practices agreed on by a group of resource users can act as an inexplicit contract between those resource users.

Cleaver (2000) argued that creating room to maneuver for human action is motivated by the desire for freedom of action. Institutions provide a scope of action entrepreneurial firms need to follow when accessing resources, such as where, when, and how much resources can be accessed by firms. Within the frame of the defined scope of action, entrepreneurial firms can act autonomously. Thus, through institutional entrepreneurship, firms collectively establish institutional arrangements that favor autonomous action when accessing common property resources.

In addition to the importance of institutional reliance for access to natural resources, the findings suggest that the local context in which natural resources are embedded influences how firms access the desired resources. For instance, expected local value creation, other actors' current use of the natural resources, and exploitation threats, are critical factors that influence the accessibility of natural resources. The findings answer Cleaver (2000) call to include social context in the management of common property resources. Previously, Granovetter (1985) challenged the functional approaches of economic actions and suggested that we should instead understand economic life as a sub-sector of our social world. Following this line of thinking, I argue that social relationships become particularly important when accessing common pool natural resources because the functioning and rationale of factor markets fail for common property resources.

Natural resources are tied to certain locations. Thus, to access natural resources, entrepreneurial firms must physically enter resources' locations. Entering natural resource locations is a non-trivial business challenge since such planned entrepreneurial action typically disturbs local systems and since entrepreneurial firms often need to rely on local infrastructure, such as harbors or roads, to gain access. Moreover, local actors have the privilege of using resources through their local embeddedness. The case study of a cruise ship operator (Paper 2) indicates that external firms need to gain legitimacy to access natural resources. The findings show that the localness of natural resources, the interdependences between resource users, and the need to build legitimacy influence what kind of inter-organizational arrangements entrepreneurial firms establish with the local actors to gain access to natural resources.

Moreover, the social dynamics and local activities of the resource context create uncertainties related to resource access for entrepreneurial firms. These uncertainties can be better managed through trust relationships than through market exchange or regulations (Lui et al., 2006). Casciaro and Piskorski (2005) suggested increasing the interdependences between actors when gaining control over resources through appropriation is an ineffective strategy, such as in the context of collective resources. The findings from my studies support this argument and show that entrepreneurial firms are willing to reduce autonomy for the sake of mutual benefit and are thus willing to increase mutual dependences between entrepreneurial firms and local actors. Thus, my findings highlight that entrepreneurial firms create mutual benefits between possible users of common property resources with the intention to create win-win situations.

Through both institutional and social inter-organizational arrangements, entrepreneurial firms build legitimacy and gain autonomy to access collective resources. However, the findings provide evidence that entrepreneurial firms undertake actions to increase their autonomy only when doing so does not have a negative impact on the mutual benefits. For example, the group of competitors in Paper 1 creates a platform to book landing sites and to register their sailing plans to avoid over-exploitation and ensure the quality of the natural resources, which are in direct conflict with firms' autonomy to access natural resources.

6.3 Creation of collective resources

To create collective resources, entrepreneurial firms establish common platforms to share and exchange resources, such as networks. The creation of resources happens when shared resources are combined and transferred into new resources as a collective endeavor (Lepak et al., 2007). The findings show that although beneficial for the involved actors, the creation of collective resources also comes with challenges, such as free-riding problems and value drain, that influence value creation and mobilization approach.

Entrepreneurial firms that aim to create joint resources with a group of other firms to achieve a common goal bring their own resources into this process. For example, in Paper 1, the cruise operators accumulate information about the landing sites and the seabed, which is crucial information for sustainable resource use and safe navigation. Each cruise operator helps collect the needed information. Combining information from different operators, the network creates a database, which is the collective resource in this case. Thereby, the cruise operators create a network resource that is beneficial for all the actors because the resource serves the purpose of increasing access to critical natural resources. In turn, such resources are collectively owned by a defined group of actors.

Moreover, the resources that are created by combining the information pieces increase the interdependence between the entrepreneurial firms in the network. Mutual dependences can reduce the uncertainties individual firms face in resource-dependence situations (Casciaro and Piskorski, 2005). At the same time, the entrepreneurial firms share the right to use the collective resources, which enables them to exclude others from using the resources (Dew, 2006). This can provide actors with an incentive to join a network.

However, when sharing resources in networks, entrepreneurial firms that provide their own resources share the right to use the resources without transferring ownership. For example, in the clean ship case (Paper 4), the maritime supply firms brought technologies into the network that are used to create the resources needed to provide the retrofit service. Consequently, firms can withhold resources if they want as they still have sole ownership of the resources they share with the network. For the maritime supply firm network, withholding resources is a key challenge, which at one point had a negative impact on the collective process to achieve the defined common goal. When multiple actors in a network create joint resources through collective endeavors, the resources are often owned by the group of actors inside the network, not by a single firm, meaning that the ownership of resources is indivisible. In this situation, collective resources are less sensitive to the behavior of an individual firm.

Extant research on co-development and co-creation processes have highlighted free-riding issues, meaning that all firms within the network profit from the collective effort while some firms put significantly more resources into the co-creation process than others (e.g., West and Gallagher, 2006). Free-riding issues inherent in collective action have also been observed in my case studies. Free-riding issues often occur when efficiently allocating resources to achieve common goals becomes a shared responsibility (Berge and Van Laerhoven, 2011). The case of the cruise operator network shows that created collective resources can have monitoring purposes, which decreases free-rider incentives. To illustrate, in the database the network has created, there is also a function to track all the cruise ships in teal time, which, among other things, reports all ship landings and the length ships stayed at natural resource sites.

6.4 Usage of collective resources

Entrepreneurial firms access and create resources for the sake of using them to create value. Collective resources can be used only for short periods or for an undefined time, and the resources can serve different purposes, such as to create environmental or social value. Deciding how to use resources is a central part of entrepreneurs' evaluations of opportunities, which further influences potential approaches to resource mobilization. I examine two particular aspects related to the intended usage of collective resources for opportunity exploitation: the type of value creation aimed for and the duration of resource use.

6.4.1 Value creation and mobilization of collective resources

Collective resources can be used to create different types of value through opportunity exploitation, as illustrated in Table 6.1. Extant studies have argued that environmental and social opportunities face double externalities of common goal paradoxes (Lauritzen, 2017), leading to a misbalance between value creation and value capture. This dissertation argues that value, whether it is economic, environmental, or social, is created by entrepreneurial firms, while environmental and social value is mainly captured at the societal/environmental level.

I propose that the type of value entrepreneurial firms aim to create influences how collective resources are mobilized. Opportunities that addresses multiple types of value, such as environmental and economic value, gain high initial attention from entrepreneurial firms. For example, when the clean ship network was initiated, entrepreneurial firms were enthusiastic to join the network and to invest resources into the common goal of pursuing the environmental opportunity. In turn, the network serves as a platform to accumulate and create collective resources. Extant studies have claimed that the double goal aspect of environmental opportunities facilitates the creation of collective resources needed to jointly pursue environmental opportunities in networks (e.g. Jakobsen and Clausen, 2016).

6.4.2 Duration of collective resource use

Collective resources can be used by several actors concurrently during a distinct timespan. This dissertation focuses on situations when collective resources are used by several actors simultaneously during both long and short timespans. The findings suggest that the duration of resource use influences the mobilization of collective resources needed to exploit perceived opportunities. For instance, for short-duration needs, specific resources that are not available for long-term usage can be allocated temporarily. Moreover, long-term usage of collective resources can lead to sustainability issues linked to the availability and quality of collective resources.

When intending to use collective resources long term, entrepreneurial firms face uncertainties linked to the enduring availability of the resources and their own lack of ability to prevent others from using the same common pool of resources (Eggertsson, 1990, Cheung, 1970). These issues are particularly pertinent for non-enforceable collective resources. The long-term availability of resources can be threatened by, for example, over-use or damage to the resources since they can be accessed and used by multiple users and no individual party takes full responsibility for effective resource allocation (Dean and McMullen, 2007).

This dissertation provides evidence that the expected long-term use of common property resources influences the design of arrangements established to mobilize these resources. Institutions, such as regulations, can define the use of common property resources (North, 1990), act as legal safeguards, and provide sanctions (Eggertsson, 1990). For instance, bureaucratic and social institutional arrangements established by the network of Arctic expedition cruise operators are designed to ensure the sustainable use of the common property resources. Further, institutional changes create barriers for external actors to access common property resources. Therefore, the excludability of natural resources is increased for the group of institutional entrepreneurs (Coase, 1974). In turn, the findings suggest that creating collective resources through inbound institutional entrepreneurship provides accessibility advantages for the group of institutional entrepreneurs.

The long-term perspective also plays a role when establishing inter-organizational arrangements with other actors. Entrepreneurial firms that depend on natural resources build social exchange relationships that are beneficial for all parties involved. For example, the entrepreneurial firm studied in Paper 2 organizes local soccer events at the location to build trust between the focal firm and local actors. Trust is considered a key requirement for long-term relationships (Lui et al., 2006, Welter and Smallbone, 2006).

However, on the other hand, when an entrepreneurial firm needs a collective resource only for a short timespan, the sustained availability of the collective resource is no longer a key concern. My findings illustrate that in situations of short-term resource use, the logics of sustainability and exclusive access do not play in. When collective resources are needed only for short periods, the uncertainties linked to the non-excludability of the resources are not prevalent. Moreover, the findings suggest that the temporary use of resources favors the acquisition of collective resources because it increases willingness to share. My findings provide evidence that the short-term mobilization of collective resources underlies the logic of exception because resource use is considered extraordinary.

6.5 Framework of collective resource mobilization

Figure 6.1 presents a framework of collective resource mobilization, which builds on and systematizes the aggregated findings from the empirical papers. The framework suggests that entrepreneurial firms can use different mobilization activities, such as access and creation, and that these activities are performed through different resource-mobilization approaches. Moreover, choosing which mobilization approach to implement depends on the intended usage of the collective resources, the attributes of shared governance, and the resource context, which are antecedents of collective resource-mobilization approaches. The resource context and attributes of shared governance are key elements of the collective resource concept, whereas usage is linked to the exploitation of the perceived opportunity.

As illustrated in Figure 6.1, entrepreneurial firms use the following four idiosyncratic approaches to access and create collective resources: 1) collective institutional entrepreneurship to define the room to maneuver, 2) inter-organizational arrangements to manage co-dependences, 3) social exchange to use local at-hand resources, and 4) network initiatives to create collective resources. The findings suggest that collective resource–mobilization approaches in particular draw on social and institutional arrangements.

At the micro-level, the findings provide evidence that uncertainties inherent in the shared governance of collective resources, such as legitimacy and autonomy issues, influence the resource-mobilization approach. To illustrate, a cruise operator that enters a natural resource site needs to gain legitimacy to use natural resources and ensure sustained access to the localized collective resources. Firms can gain legitimacy to use resources when their actions are desirable; appropriate; and in line with the beliefs, norms, and values of the organizational environment. Therefore, firms establish social arrangements to build social relationships and a common understanding of collective resource allocation. This common understanding of collective resource use is built through institutional arrangements, which increase an entrepreneurial firms' autonomy to mobilize the collective resources in question.

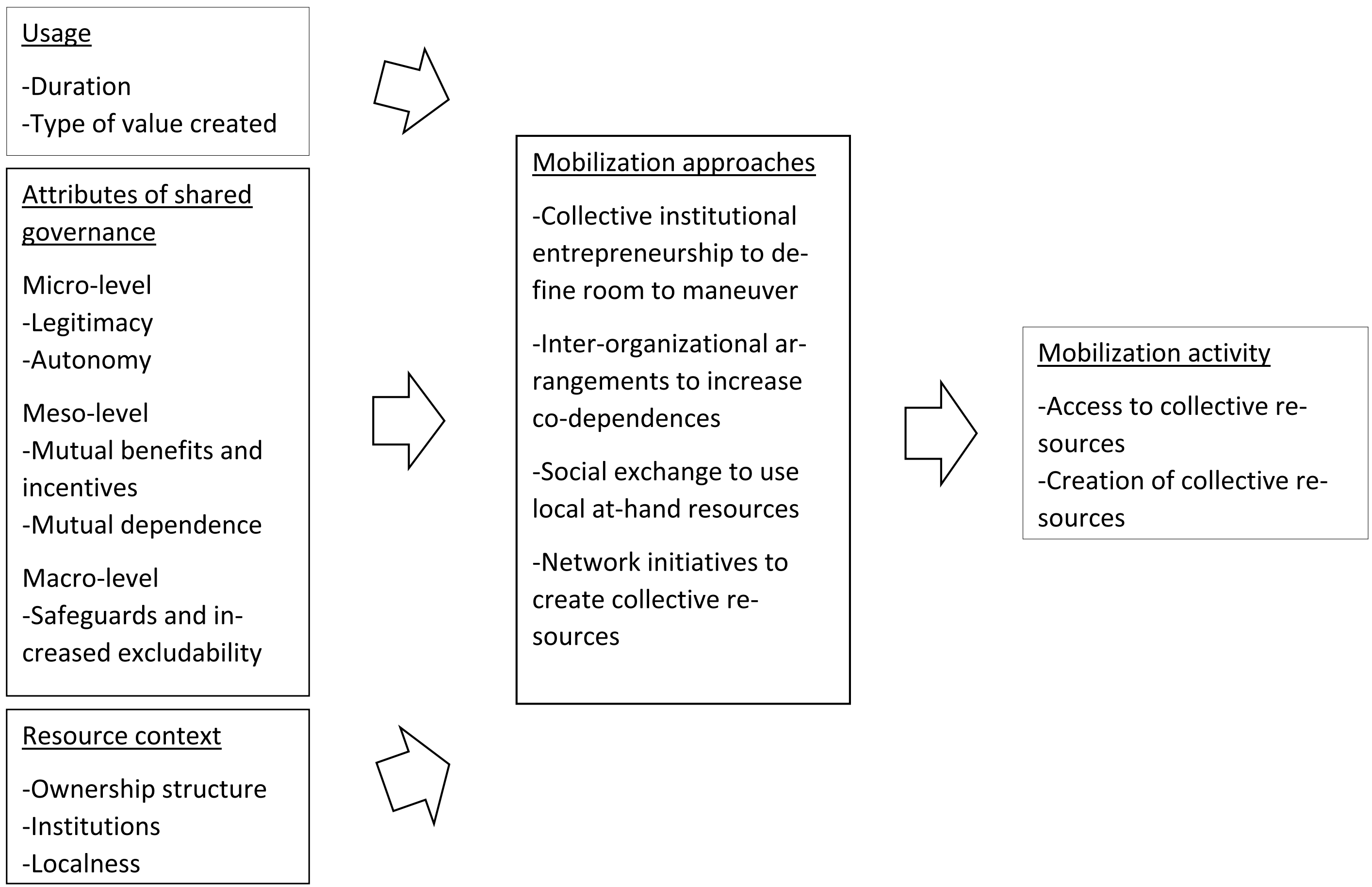

Figure 6.1: *Aggregation of the empirical findings*

At the meso-level, firms that draw on collective resources to pursue entrepreneurial opportunities create mutual benefits and incentives and develop mutual dependences with other actors who have stakes in the same resources. The results from this dissertation show that mutual benefits, incentives, and dependences decrease the uncertainties of shared governance, such as over-exploitation. Finally, at the macro-level, these uncertainties are addressed through establishing safeguards and increasing the excludability of collective resources. To do so, firms need to design their resource mobilization accordingly.

In addition, the findings suggest that the resource context influences the resource-mobilization approach. I suggest that key considerations in this regard are ownership structure, institutions, and localness. To illustrate, collective resource can be owned by a network of firms or may not be owned by anyone, which influences the efficiency of different types of arrangements, such as social or institutional arrangements. Moreover, the case studies show that the institutions in which the collective resources are embedded have an impact on the resource-mobilization approach because these institutions can be more or less efficient for collective resource mobilization. The main conclusions from this dissertation as well as their implications for theory and practice are discussed in the following and last chapter.

7 Conclusion, implications, limitations, and further research

In this last chapter, I conclude the main findings discussed in the previous chapter. Then, I discuss the implications and limitations of this dissertation. Finally, I offer suggestions for further research.

7.1 Conclusions

The shared governance of collective resources requires idiosyncratic resource-mobilization approaches that may not be considered equally efficient for other more exclusive types of resources. Such unique approaches are required because the institutional and social arrangements entrepreneurial firms draw on to mobilize collective resources typically come with higher transaction costs than market exchange (North, 1990, Eggertsson, 1990). Nevertheless, because markets and individual contracts often fail to address the shared governance of collective resources effectively, social relationships (Granovetter, 1985) and institutions (Ostrom, 1990) can be efficient alternatives to govern collective resources. Moreover, entrepreneurial firms that mobilize collective resources face uncertainties they do not encounter, at least not to the same extent, when mobilizing more exclusive resources. For instance, extant research has pointed out free-riding issues when resources are created in networks (West and Gallagher, 2006) and instances of inefficient natural resource allocation (Ostrom, 1990). I argue that these issues become even more salient when entrepreneurial firms plan to use collective resources over longer periods, which in turn justifies the use of social and institutional arrangements.

Moreover, in line with Gulati and Sytch (2007), this dissertation argues that arrangements become less instrumental when exchange relationships build on joint dependences between firms and exchange partners. Such dyadic and multi-party relationships can develop a common understanding of mutual beneficial actions, which creates situations that often lead to mutual dependences between the resources users. Following this line of thinking, I propose that the mobilization of collective resources likely favors social arrangements over instrumental arrangements and that maximizing total dependence results in actors' jointly aiming for mutual benefits.

The shared governance of collective resources causes entrepreneurial firms legitimacy issues related to the use of collective resources. Social arrangements with other users and/or owners of the collective resource can increase trust. Further, they can be a means through which value is created for others and can thus increase mutual dependences between the resource users (Casciaro and Piskorski, 2005). Moreover, using collective resources leads to autonomy challenges, and institutions can define the scope of action within which resource use is accepted (Cleaver, 2000). Institutions, such as regulations or norms, can act as safeguards and can provide mutually beneficial incentives, which decreases uncertainties related to collective inaction.

On the other hand, the non-excludability of collective resources can provide opportunities that entrepreneurs find worthwhile to act upon—for example, in form of institutional entrepreneurship. For instance, the cruise operators considered it worthwhile to create and invest in collective means to increase the excludability of their local wildlife and unique landscape. These findings underpin similar logics in Coase (1974) example of the excludability of lighthouses in the United Kingdom, which is defined by Dean and McMullen (2007) as Coasian entrepreneurship, a means to address market failures related to the non-excludability and often also the non-enforceability of collective resources through entrepreneurship.

7.2 Theoretical implications

The results of this dissertation have several theoretical implications. I discuss the theoretical implications related to 1) the resource mobilization for opportunity exploitation debate, 2) the three theoretical perspectives RDT, RBV and NIE, 3) the debate on entrepreneurship in peripheries, and 4) the contextualization of entrepreneurship research.

7.2.1 The debate on resource mobilization for opportunity exploitation

Some of the resources entrepreneurs use to pursue opportunities are of collective nature. I argue that the particularities of this type of resource, such as shared governance, have implications for the debate on resource mobilization for opportunity exploitation. However, thus far, the debate has paid little attention to these particularities. There are examples of studies that elaborate on resources that I define as collective resources, such as crab (Alvarez et al., 2015) and network resources (Boehe, 2013), as well as studies on resource mobilization as a collective endeavor, for example, in form of community ventures (Vestrum, 2016). However, these studies have not explicitly explored the collective nature of the resources. I argue that collective resources often have low degrees of excludability, transferability, and enforceability. I propose that collective resources deserve more attention from entrepreneurship scholars because non-excludability and non-enforceability lead to sustainability concerns and because our steadily more intertwined world relies on an increased amount of shared and collectively created resources, such as in the sharing economy.

Moreover, this dissertation shows that the ownership and usage of collective resources are other important aspects that should be considered in the resource-mobilization debate. To illustrate, when external privately owned resources are mobilized in form of acquisition, both the resources themselves and the ownership thereof is transferred, so the exchange involves direct market transaction (Eggertsson, 1990). Owning a resource is usually linked to stability, efficiency, and industry customs (Stevenson and Gumpert, 1985). However, common pool resources, such as crabs or whales, are not owned by anyone per se and thus require more complex resource-mobilization approaches. Further, such resources are associated with accessibility uncertainties. I propose that group/public ownership and usage by multiple actors simultaneously have implications for the debate on resource mobilization for opportunity exploitation. The underlying theoretical perspective often assume that entrepreneurs can control or at least gain control over the resources they need to exploit opportunities. In contrast, this dissertation illustrates that entrepreneurs also mobilize resources that they do not directly control.

Extant research on entrepreneurial opportunities has largely focused on whether a market condition is perceived as an opportunity (e.g., Gruber et al., 2013, Davidsson, 2015) and how an entrepreneur's prior knowledge, experiences, and social capital influence opportunity identification and development (e.g., Shane, 2000, Haynie et al., 2009). Building on the definition of opportunities as means-ends relationships, this dissertation expands on the opportunity debate by gaining more insights into the means of the means-ends relationship beyond human and social capital. In particular, I argue that collective resources are an important type of resource for entrepreneurial firms to create value and can be a source of particular opportunities (e.g., natural resource opportunities).

Opportunities are heterogeneous in nature, and the different characteristics of opportunities influence entrepreneurs' evaluations and ultimate exploitation of opportunities and thus the ways firms mobilize resources to exploit them (Welpe et al., 2012, Ardichvili et al., 2003, Hill and Birkinshaw, 2010, Eckhardt and Shane, 2003). Scholars have focused on different characteristics of opportunities and variations in their characteristics, such as newness (Dahlqvist and Wiklund, 2012) and time to profit (Welpe et al., 2012). Other studies have focused on distinct types of opportunities and their influence on the entrepreneurial process to gain a more nuanced understanding of the heterogeneity of opportunities and the ways they influence resource mobilization (Ardichvili et al., 2003). Examples are technology opportunities (Shane, 2001), innovative opportunities (Holmén et al., 2007), and radical opportunities (Marvel and Lumpkin, 2007). I argue that the type of value created is another way to distinguish between different types of opportunities, such as environmental opportunities (Dean and McMullen, 2007, Cohen and Winn, 2007), social opportunities (Zahra et al., 2008), and sustainable opportunities (Cohen et al., 2008). The findings of this dissertation stress that value creation is necessary to gain access to critical resources, but it can also lead to the withholding of collective resources, which in turn has an impact on the perceived attractiveness of opportunities.

7.2.2 Collective resource mobilization within resource dependence theory, the resource-based view, and new institutional economics

In this section, I discuss the implications of each of the three theoretical perspectives (resource dependence theory [RDT], the resource-based view [RBV], and new institutional economics [NIE]) separately. Table 7.1 provides an overview of the contributions of the individual theories. I assign each of the four identified resource-mobilization approaches to one of the three theoretical perspectives (RDT, RBV and NIE) as a starting point to discuss their contributions, and in the following row, I summarize the ideas underlying the arguments for the individual approaches for collective resources. The last two rows—"Shared governance of collective resources" and "Resource context"—result from the framework of collective resource mobilization describing how firms mobilize resources for opportunity exploitation (cf. Section 6.5. Framework of collective resource mobilization).

Table 7.1: *Contributions to RBV, RDT, and NIE*

	RDT	**RBV**	**NIE**
Mobilization approaches	Inter-organizational arrangements to increase co-dependences	Social exchange to use local at-hand resources Network initiatives to create collective resources	Collective institutional entrepreneurship to define the room to maneuver

Underlying ideas	Uncertainties linked to resource non-excludability and non-transferability are addressed through mutual dependences	A heterogeneous resource base for value creation can be built through social arrangements	Institutions can act as practices and regulations that guide resource exchange and use (similar to contracts)
Shared governance of collective resources	Inter-organizational arrangements are designed to increase the legitimacy and autonomy of collective resource users and mutual dependences	Unique relationships facilitate the inimitability of resources and spill over rent between collaborative resource users	Institutions favor mutual benefits and incentives, which can result in safeguards and increased excludability
Resource context	The localness of collective resources defines the dependence situation	The embeddedness of resources can hinder the inimitability of resources and can result in increased enforceability	Institutions can be weak and suboptimal, a situation which favors institutional change
Key implications	Local embeddedness logic and external environment as a socio-ecological system (particularly relevant for dependences on local social resources and natural resources)	Social relationships can open up collective resources that are otherwise non-accessible (or only accessible at significantly higher costs); when collective resources are only used temporarily, the competitive advantage logic plays in	Both social and bureaucratic institutional arrangements are needed to create institutions that favor more efficient allocation of collective resources

Contributions to RDT

RDT provides insights into dependence situations through accumulated constructs of power relationships and the organizational environmental context (Pfeffer and Salancik, 2003/1978). My findings suggest that when entrepreneurs depend on collective resources, resource dependence is managed through created co-dependences between the actors with stakes in the collective resources instead of ownership control. These findings build on those of, for example, Gulati and Sytch (2007), who claimed that scholars need to distinguish between inter-dependences and joint dependences to understand resource dependence, and Vestrum and Rasmussen (2013), who argued for establishing mutual dependences between community ventures and local resource owners. These studies both suggested applying the logic of social embeddedness to understand resource dependence rather than focusing exclusively on dependence advantages and power imbalances (e.g., Gulati and Sytch, 2007). The findings of this dissertation have implications for the social embeddedness logic of resource dependences. When actors depend on the same pool of collective resources, the mutual dependence between these actors is the result of the collective resources' local embeddedness, which I refer to as the localness of collective resources. Thereby, this dissertation expands on the literature on social embeddedness from a RDT perspective by showing that the localness of collective resources also needs to be considered in future work on collective resource mobilization.

Furthermore, this study has implications for RDT's conceptualization of the external environment. The case studies show that dependence is defined not only by the organizational environment (e.g., Pfeffer and Salancik, 2003/1978) but also by the collective resources' natural and institutional environments. I propose that when firms depend on collective resources, they need to understand the external environment as a socio-ecological system rather than an organizational environment. As such, these results extend the current focus of RDT.

Contributions to the RBV

The non-enforceability of collective resources challenges the central idea of RBV of creating, maintaining, and protecting unique resources to build sustained competitive advantages (Barney, 1991). Therefore, RBV argues that firms engaging in inter-firm relationships should build unique connections between actors who have stakes in collective resources (Lavie, 2006). My findings support this argument and expand on it by showing that through these relationships, firms are able to mobilize resources that are often not accessible for other firms or at least not accessible at the same cost. Following this line of thinking, unique relationships facilitate the inimitability of collective resources, which are non-accessible for actors without these relationships. To illustrate, resources that local volunteer organizations share with local cruise suppliers might not be accessible for firms that do not have the same social relationships with these organizations. Moreover, when collective resources are created and become mutually beneficial for the firms inside the network, spillover rents arise, and the network is likely to become interested in limiting external access to these network resources.

A second implication for RBV is related to issues stemming from temporary resource use. I propose that when collective resources are needed for short periods and can be released after usage, the actors controlling these resources tend to regard their use as an exception, which favors goodwill for resource usage and ultimately enables the mobilization of collective resources. The logic of exception contradicts the concept of sustained competitive advantage, which argues the importance of creating a unique resource base for the long term (Barney, 2005). Contrary to this, I propose that there are situations when entrepreneurial opportunities are of short duration and that these situations favor the mobilization of collective resources. Thus, mechanisms to address the uncertainties linked to the non-enforceability of collective resources become insignificant from a short-term perspective.

Contributions to NIE

Given that collective resources often cannot be allocated through ownership exchange, the findings from this dissertation illustrate that firms that use collective resources must deal with legitimacy and autonomy issues. Through institutional entrepreneurship, actors can shape their scope of action, which in turn increases their legitimacy and autonomy as long as they follow relevant norms, practices, and regulations (Cleaver, 2000, North, 1990, Kalantaridis and Fletcher, 2012). My findings provide evidence that when firms co-depend on common pool resources, they engage in both outbound and inbound institutional entrepreneurship. Therefore, I propose that within a group of collective resource users, firms undertake entrepreneurial action to change internal institutions that favor mutual benefits and incentives, which can result in safeguards and increased excludability in addition to formal institutional changes (see also Alvarez et al., 2015). Following this line of thinking, I suggest that NIE scholars should consider institutional change both inside networks and in institutional environments in the context of collective resource allocation.

7.2.3 The debate on entrepreneurship in peripheries

My findings indicate that the spatial context influences both entrepreneurs' evaluations of opportunities and their resource-mobilization approaches, which has implication for the debate on entrepreneurship in peripheries.

Several studies have shown that the local embeddedness of entrepreneurs in peripheries enables entrepreneurial action despite resource constraints (Müller and Korsgaard, 2018). Korsgaard et al. (2015a) argued that on islands, entrepreneurs adopt a resource mobilization strategy whereby they first exhaust local resources before they search for non-local resources. Thus, the mobilization of local resources is likely to follow a bricolage perspective since the available resources are limited (Baker, 2007). Local embeddedness gives actors access to knowledge about the local resource endowment. Prior studies have shown that entrepreneurs in peripheries access local resources by making use of their local networks and their sense of community (e.g., Müller and Korsgaard, 2018). I suggest that collective network resources may be particularly important for entrepreneurial action in peripheral locations. Further, I claim that entrepreneurs gain knowledge about local resources through their local embeddedness, which makes local network resource particularly attractive for entrepreneurs in peripheral locations.

The locations in which entrepreneurship takes place influence how entrepreneurs perceive the supply- and demand-side characteristics of opportunities (Korsgaard et al., 2015b). Entrepreneurial firms operating in peripheral locations may choose to pursue opportunities that are related to their current resource bases (Alsos et al., 2003). However, they often learn that their home market is limited and that market expansion outside their home location can be challenging due to a lack of various market proximities, such as closeness to customers and suppliers (Korsgaard et al., 2015a, Wiggins and Proctor, 2001). In line with this argument, this dissertation suggests that local embeddedness creates nuances in opportunities' distinct characteristics and the ways entrepreneurs evaluate them.

7.2.4 The debate on the contextualization of entrepreneurship research

The findings presented in this dissertation suggest that entrepreneurship scholars should distinguish between the context of the entrepreneurial firm and the context of resources. Such a distinction has implications for the debate on the contextualization of entrepreneurship research. In many cases, the firm and the resources it relies on for opportunity exploitation are located in the same context. However, this dissertation shows that there are instances when the resource context not is the same as that in which the entrepreneurial firm is embedded. In such situations, a distinction between firm context and resource context becomes particularly salient.

More specifically, extant studies have argued that the context of the entrepreneurial firm—for example, whether the firm is located in a peripheral or urban area—has an impact on the resource-mobilization approach (Welter, 2011, Müller and Korsgaard, 2018). Extending this understanding, my findings suggest that the context in which collective resources are embedded influences how entrepreneurial firms mobilize resources. The case studies provide evidence that collective resources' spatial context and institutional environment are crucial for resource mobilization, as illustrated in Figure 6.1. These findings expand extant research claiming that the idiosyncratic characteristics of peripheries, such as distance to markets (Felzensztein et al., 2013, Müller and Korsgaard, 2018) and local embeddedness (e.g. Korsgaard et al., 2015b), influence entrepreneurial firms' behaviors. While acknowledging the importance of both the context of the entrepreneurial firm and the context of resources, I suggest that research should distinguish between the two contexts to further enhance our understanding of how entrepreneurship is context dependent.

As an illustration of the implications of this conclusion, take the entrepreneurial firms studied in Papers 1 and 2, which are external firms that enter several natural resource locations in Nordic peripheries. The firms themselves are international, and their land-based organizations are more centrally located. Since the studied cruise operators are external to the locations with the collective (natural) resources they wish to access, the identified resource-mobilization approaches are not the result of their organizations' local embeddedness. Instead, they reflect the shared governance of the collective resources and the characteristics of the context in which the collective resources are embedded. As argued in Chapter 3, vessels are mobile and therefore provide a unique setting to learn more about the context of collective resources. This dissertation elaborates on how entrepreneurial firms that are external to the locations of the natural resources they wish to use gain access to local common property resources. The findings illustrate that the context in which natural resources are embedded plays a crucial role when entrepreneurial firms must decide on their resource-mobilization strategy.

7.3 Implications for practice

The findings of this dissertation have several implications for practice. First, they suggest that collective resources mobilized through social and institutional arrangements come with high transaction costs. However, when entrepreneurs evaluate opportunities, particularly temporary opportunities, transaction costs are often neglected. I suggest that practitioners increase their awareness of transaction costs when evaluating opportunities and making decisions regarding which resources to access and how to mobilize them. At the same time, investing in trust-based relationships with other actors who also use and/or co-own the resources is often worthwhile in the long term because it creates conditions that favor the legitimacy and autonomy needed to continue accessing the resources in the future.

Second, the findings show that collective endeavors in form of collective institutional entrepreneurship can be used to create institutions and network resources that are mutually beneficial and provide incentives for the group of entrepreneurs working together. Practitioners can benefit from engaging in entrepreneurial action that increases the excludability of collective resources. When resources become excludable, the risk of over-exploitation decreases, thus enabling the sustained availability of collective resources. Similarly, the findings suggest that practitioners who depend on collective resources should increase mutual dependences with other actors rather than alleviate dependences.

Finally, I suggest that entrepreneurs who mobilize collective resources embedded in peripheral locations should consider social value creation as a means to ensure sustained access to localized collective resources. Collective resources, such as natural resources or locally embedded resources, are often controlled by local actors. Hence, local social value creation leads to situations that favor legitimacy and autonomy to use the localized collective resources. This becomes particularly salient when firms are external to the locations with the collective resources they wish to use, such as in the case of cruise operators.

7.4 Implications for policy

This dissertation illustrates that firms collectively undertake action to change institutions they find suboptimal, which has implications for policy. I suggest that policymakers acknowledge that collective initiatives taken by entrepreneurs can be an efficient means to change institutions. At the same time, for collective institutional entrepreneurship to be effective, the group of entrepreneurs needs to create mutual beneficiaries. Policymakers can facilitate this process by accommodating institutional entrepreneurship, for example, by supporting network initiatives and providing platforms that facilitate interactions and information exchange between institutional entrepreneurs and policymakers.

Moreover, my findings suggest that when institutions are seen as less reliable, external firms tend to utilize social arrangement to access localized resources and thus face the need to increase mutual dependences. Social exchange and mutual dependences between external firms and local actors can support local economic and social value creation. In the same vein, institutions can reduce uncertainties. This dissertation shows that in situation of high uncertainty related to access to local collective resources, firms establish social and institutional arrangements. Thus, I advise policymakers to acknowledge that the extent of institutional reliance can have effects on local value creation from external firms' business activities.

7.5 Limitations

This dissertation has several limitations. First, the distinction I made between resource-mobilization activities and the usage of collective resources in the sub-research questions is a simplification. I suggest that access/creation and usage are intertwined and, in some regards, interdependent, implying that the intended usage of collective resources influences the approaches firms take to access and create them. I discussed the three elements separately to clearly show that they have different implications for resource mobilization. The drawback of this approach is that it hides the interdependence between mobilization activities and resource use and thus does not capture the complexity of collective resource mobilization. Nevertheless, such a structure is valuable because usage, access, and creation are key elements of collective resource mobilization that are directly linked to the planned opportunity-exploitation activities and are therefore within the scope of entrepreneurial firms' control.

Second, this dissertation has limitations regarding the transferability of the results (cf. Section 4.7 Assessing the quality of the research). My findings suggest that market transaction can be inefficient in the case of collective resources and, consequently, that entrepreneurial firms mobilize this type of resource using other approaches, such as social exchange or institutional entrepreneurship. At the same time, peripheral locations are often characterized as distant to markets, which can in turn be regarded as a motivation to draw on social relationships to mobilize resources (Felzensztein et al., 2013, Müller and Korsgaard, 2018). Moreover, the extant literature on peripheral entrepreneurship has highlighted the importance of entrepreneurial firms' local embeddedness, which enables firms to gain access to local resources (e.g. Korsgaard et al., 2015b), and has claimed that the institutional frameworks in peripheral regions are often less favorable for innovation than those in more central locations (McAdam et al., 2004). The empirical studies in this dissertation are contextualized in peripheries, which limits the transferability of the identified collective resource-mobilization approaches. However, the studied cruise operators are external to their respective collective resource locations, which suggests that the results are transferable to both internal and external firms in similar settings that mobilize collective resources in peripheries. While the maritime industry provides a unique setting to study collective resource mobilization, this industry selection also comes with limitations linked to the transferability of the findings to other industries.

Third, my choice to focus on two distinct types of collective resources—common pool natural resources and network resources—has limitations. My findings build on empirical studies on natural resources and network resources, which I use to draw conclusions for collective resources. I assume that studying these two types of resources provides important insights to understand collective resources more generally. However, this assumption needs further elaborations to clarify when and to what extent these two types of resources are representative of collective resources.

7.6 Directions for future research

This dissertation shows that the peculiarities of collective resources influence how entrepreneurial firms mobilize them. While the findings have important implications, as explained above, they also open several avenues for future research on collective resources in entrepreneurship.

I propose that further theoretical development is needed to create a common framework of collective resources that incorporates the idiosyncratic elements of this type of resource, including that they are indivisible, non-excludable, non-transferable, and non-enforceable. Such development is needed to enhance the knowledge creation of collective resources. Since there are already various studies focusing on collective resources, such as network resources and natural resources, I suggest that a meta-analysis of extant studies on collective resources will be helpful. Although previous studies might not have explicitly addressed the collective nature of the resources they explored, an analysis combining insights from studies of different types of collective resources can provide new insights into their collective nature and facilitate the process of developing a common theoretical framework for collective resources. Moreover, a systematic research agenda for collective resources in entrepreneurship would facilitate the knowledge-accumulation process.

In particular, the literature on natural resource economics (e.g., Tietenberg and Lewis, 2009/1984, Ostrom, 1990) has already theorized on several aspects of natural resources, such as their over-exploitation and free-rider problems. This dissertation has benefitted from incorporating arguments and perspectives from natural resource economics into an entrepreneurship study, which indicates that integrating and combining elements from the natural resource economics and entrepreneurship literatures enhances research on collective resources. I argue that we need more studies drawing on both literatures that systematically integrates and combines them.

The empirical studies in this dissertation build on two types of collective resources: resources that are shared in networks and natural resources used in non-consumptive ways. While these two types of collective resources are relevant, empirical studies focusing on different types of collective resources as well as on situations in which collective resources are used in consumptive ways will enhance our understanding of collective resources in entrepreneurship. For instance, research could explore the timber and extractive industries to explore how collective resources are used in consumptive ways. Moreover, comparative case studies of collective resource mobilization versus the mobilization of resources owned by sole external actors will help identify and elaborate on the particularities of collective resources. Furthermore, I call for more empirical research addressing collective resources in various contexts, such as multinational firms and urban locations, and also resources used for different purposes. Additionally, my empirical studies have unveiled four collective resource-mobilization approaches. Most likely, these are only a subset of the possible approaches to mobilize collective resources, so I call for more research focusing on how entrepreneurial firms mobilize collective resources.

Moreover, this dissertation shows that both the context of the entrepreneurial firm and the context of resources matter. This finding suggests the need for more research on the context of key elements in entrepreneurship, such as the context of the opportunity, entrepreneurs/entrepreneurial firms, and resources, and the ways these different contexts are intertwined and interdependent. I purpose that the debate on contextualizing entrepreneurship research can be further enhanced by elaborating on questions like “What key elements of entrepreneurship are embedded in a context” and “What does it mean for contextualizing entrepreneurship research when different aspects of a firm’s activities are embedded in different contexts.”

To conclude, this dissertation makes collective resources a subject of discussion in entrepreneurship research. My findings indicate that collective resources come with unique challenges and uncertainties that affect resource mobilization. Having illustrated that the collective nature of some resources indeed influences the firm behaviors (e.g., their resource mobilization), I argue the importance of gaining a deeper theoretical understanding of collective resources, particularly since many entrepreneurial firms use collective resources.

8 References

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9 Papers included in this dissertation

Paper #1

Wigger, K. (in review)[5]. Collective Institutional Entrepreneurship and Sustainable Natural Resource use.

Paper #2

Wigger, K. & Bystrowska, M. (2018). Arrangements to access natural resources: the role of localness and interdependence. In George & Schillebeeckx (Eds.) 2018. Managing Natural Resources. Organizational Strategy, Behaviour and Dynamics. Camberley. Edward Elgar Publishing.

Paper #3

Wigger, K. & Gry, A. (in progress). Resource mobilization for Temporary Opportunities.

Paper #4

Garcia, R., Wigger, K. & Hermann, R.R. (reject)[6]. Challenges of Creating and Capturing Value in an Open Eco-innovation Network.

[5] The version included is the one submitted to ETP. I am currently working on revising the paper (April, 2018).

[6] The version included is the one rejected by JPIM. We are currently preparing the manuscript for submission to Journal of Cleaner Production (April, 2018).

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Mobilization of Collective Resources for Entrepreneurship:
Case Studies in Nordic Peripheries

Many entrepreneurial firms use collective resources in their business activities. Examples of collective resources are common pool natural resources, cultural heritage, and resources shared within networks of firms. Collective resources are not owned or governed by a single actor, so they cannot be easily sold or bought in a market. Therefore, entrepreneurial firms seeking to utilize collective resources must find other ways to mobilize them. In this dissertation, I examine how entrepreneurial firms mobilize collective resources for opportunity exploitation.

My findings suggest that collective resources require more creative resource-mobilization approaches compared to resources owned by sole actors. These unique approaches are necessary because collective resources are generally mobilized without transfer of ownership and actors have the right to use these resources simultaneously. In this situation, market transactions are not effective, and the mobilization of collective resources is challenged by allocation inefficiencies, such as over-exploitation and free-rider issues. My results indicate that entrepreneurial firms draw on social and institutional arrangements to mobilize collective resources. Social arrangements are established to increase mutual dependences on collective resources, and institutional arrangements are developed to create mutual benefits and safeguards. In this way, entrepreneurial firms address uncertainties related to the shared governance of collective resources. My findings suggest that these uncertainties become particularly salient when entrepreneurial firms aim to mobilize collective resources over longer periods.

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