Strategic Responses to Grand Challenges: Why and How Corporations Build Community Resilience

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Abstract

We explore why and how corporations seek to build community resilience as a strategic response to grand challenges. Based on a comparative case study analysis of four corporations strategically building community resilience in five place-based communities in South Africa, as well as three counterfactual cases, we develop a process model of corporate practices and contingent factors that explain why and how some corporations commit to community resilience building and whether they try to do so directly or indirectly. We thus help explain corporations' strategic contributions to community resilience, and we emphasise the role of place-specific resources, social-ecological system viability, and limited statehood in motivating such organisational responses to grand challenges.

Keywords Community resilience · Grand challenges · Corporate strategy · Social-ecological systems · Africa

Introduction

Management scholars have called for increased attention to how organisations respond to “grand challenges” (Ferraro et al. 2015; George et al. 2016). Despite significant prior scholarly work on corporate social and ecological

responsiveness (e.g., Hart 1995; Bansal and Roth 2000; Aguinis and Glavas 2012) and the more recent empirical focus on grand challenges (e.g., Berrone et al. 2016; Grodal and O'Mahony 2017; Venkatesh et al. 2017; Wright and Nyberg 2017), we still lack understanding of why and how for-profit corporations might seek to address such multifaceted and complex social and ecological challenges as part of their core strategy, as opposed to discretionary contributions to worthy causes.

Yet we encountered such strategic efforts in some corporations' efforts in South Africa to systematically contribute to community resilience, that is, to building the capacity of a place-based community to enhance and maintain its members' livelihoods in the face of both gradual and sudden social-ecological changes. In doing so, these corporations strategically address a number of grand challenges in their “local, territorially bounded” instantiation (Berrone et al. 2016, p. 1941). These efforts were strategic in that they involved significant investments, which were motivated by managers with reference to core business risks, rather than regulatory compliance, stakeholder expectations, reputation, or philanthropic objectives.

There has been some research on business organisations building their own resilience (Linnenluecke 2015) or on community empowerment (e.g., Ansari et al. 2012), but this could not explain the efforts we observed. Nor could predominant resource-based or institutional theoretical

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explanations for corporate social or environmental responsiveness (see, e.g., Hart 1995; Bansal and Roth 2000; Aguinis and Glavas 2012), because we saw neither competitive motives commonly associated with resource-based theory, nor institutional pressures on these companies. The closest we came to an explanation in the literature was that corporate managers worry about community resilience because they recognise their value chains' interdependence with these communities and associated social-ecological systems (Winn and Pogutz 2013; Whiteman et al. 2013), but the resulting corporate responses have not been empirically elaborated. We thus ask, why and how do corporations seek to build community resilience as a strategic ambition?

We address this question by means of a comparative case study analysis (Eisenhardt 1989; Eisenhardt et al. 2016) of four corporations that proactively seek to build community resilience in five place-based communities, as well as three auxiliary, counterfactual cases that illustrate alternative pathways. This allowed us to develop a process model consisting of three sets of corporate practices (*exploring; focusing and partnering; and contributing directly or indirectly*) and three sets of contingent factors that motivate or shape these practices. We argue that corporations build community resilience when they have not just firm-specific but also *place*-specific resources at risk due to social-ecological changes that are insufficiently addressed by the government or other actors. Corporate resources also influence how directly managers become involved in this effort.

Our first contribution is to explain why and how corporations adopt a strategic and systemic approach to community resilience building, which has been called for by scholars but has scarcely been empirically analysed (Bansal 2019; Gold et al. 2018; McKnight and Linnenluecke 2016; Whiteman et al. 2013; Winn and Pogutz 2013). Our second contribution is to expand resource-based and institutional explanations of pro-social and pro-environmental corporate strategies to emphasise social-ecological system viability and limited statehood as motivations and explanations of corporations' strategic responses to grand challenges, despite the complexity and scale of the underlying social-ecological processes (Ferraro et al. 2015; George et al. 2016; Bansal et al. 2018).

Community Resilience as a Strategic Ambition for Corporations

Grand challenges are globally relevant, multifaceted, and complex social and ecological problems or ambitions that implicate diverse role-players and defy straightforward solutions (Ferraro et al. 2015; George et al. 2016). They have become salient for management scholars because organisations contribute to many of the underlying problematic trends, such as climate change (e.g., Wright and Nyberg

2017) and income inequality (e.g., Cobb 2016; Amis et al. 2018), and they are also involved—at least potentially—in ameliorating or even reversing them (George et al. 2016).

One such grand challenge is the need to enhance community resilience, or the ability of place-based communities to maintain and indeed enhance their members' livelihoods amidst both gradual and sudden economic, social, or ecological changes. Resilience scholars seeking to bridge natural and social sciences in understanding these dynamics emphasise their enmeshment in social-ecological systems (Olsson et al. 2004; Walker et al. 2004; Folke et al. 2005; Berkes and Ross 2013). These social-ecological system interactions occur at various scales, but they “hit the ground,” so to speak, in “communities of place” (Maida 2007). Local communities are characterised by their members' shared exposure to slow onset hazards and gradual pressures, such as droughts or deindustrialization, as well as sudden, disruptive events, such as floods or the demise of a large employer (Cutter et al. 2008). Community resilience thus highlights that while grand challenges “are global in nature, they are instantiated in local, territorially bounded contexts” (Berrone et al. 2016, p. 1941). Indeed, community resilience may be seen as the local nexus of other grand challenges including climate change, poverty, social inequality, and citizen empowerment.

Grand challenges are by definition complex, uncertain, and evaluative (Ferraro et al. 2015), which means that an individual corporation is unlikely to be allocated responsibility by its stakeholders to grapple with a grand challenge, nor will it easily identify competitive advantages that may stem from tackling such diffuse issues. An even more basic reason why corporate managers lack such motivation is that important aspects of grand challenges may manifest at temporal or spatial scales too small or large for managers' attention: “large-scale processes, such as those related to climate change, require broad attentional extent, whereas small-scale processes, such as those related to local variations in poverty, require fine attentional grain” (Bansal et al. 2014, p. 217). Even if managers were to overcome these obstacles and, firstly, notice these problematic processes and, secondly, ascribe strategic salience to them, they would likely still struggle to develop a systematic, strategic response, given these same problem characteristics of complexity, uncertainty, and evaluativity.

Perhaps for such reasons, the management literature on grand challenges often identifies corporations as more part of the problem than the solution (e.g., Cobb 2016; Wright and Nyberg 2017; Hamann and Bertels 2018) or—when organisations are more positively involved—it focuses attention on non-profit organisations (e.g., Berrone et al. 2016; Mair et al. 2016; Grodal and O'Mahony 2017; Lawrence 2017), small-scale or emergent organisations (Williams and Shepherd 2016), or hybrid enterprises such as microfinance

organisations (Cobb et al. 2016; Zhao et al. 2016). This literature could thus not explain the strategic corporate efforts at building community resilience that we encountered.

We then turned to the literature on community resilience. The bulk of this literature does not give much attention to corporations as salient actors (e.g., Folke et al. 2002; Olsson et al. 2004; Walker et al. 2004; Berkes and Ross 2013). There is a thriving management literature on resilience, but as Mcknight and Linnenluecke (2016, p. 2) argue in their review, most of this research “tends to be at the level of the firm, despite the need for a systemic approach to the relationship between firms and community stakeholders,” and it gives “little attention to the community level of analysis and the question of how firms contribute to community resilience.” There have been a number of studies on philanthropic responses to alleviate suffering and help rebuild after disaster (Muller and Whiteman 2009; Tilcsik and Marquis 2013; Ballesteros et al. 2017), but they do not explain any strategic links between the corporation and the communities in need of support.

Our third move, then, was to consider the literature on corporate pro-social and pro-environmental behaviour, given that corporate community resilience building efforts may be seen as a form or instantiation of these broader, more established concepts. As a platform to survey this extensive literature, we rely on Bansal and Roth’s (2000) model of ecological responsiveness, which has been fruitful also in analyses of corporate social responsibility, more broadly (Aguinis and Glavas 2012). They identified three categories or perspectives of firm motivations—competitiveness, legitimation, and responsibility—and link each of them to firms’ context and particular types of initiatives within the firms.

Bansal and Roth’s (2000) legitimation perspective is framed in terms of institutional theory, according to which firms become environmentally responsive due to a growing array of government laws and regulations, private regulation (such as rules and guidelines specified by industry associations), as well as more intangible social norms (Scott 1995; Hoffman 1999). Bansal and Roth (2000) argue that legitimation is associated in particular with initiatives related to regulatory compliance and impression management (see also, e.g., Delmas and Toffel 2008). That is, it emphasises reactive accountability for corporations’ social and ecological impacts, rather than the more proactive and systemic ambition of community resilience (cf. Winn and Pogutz 2013). Indeed, most practical and scholarly efforts to invoke regulatory and normative pressures on corporations have focused on the need to address negative corporate impacts on social and ecological systems. For instance, Idemudia and Osayande (2018, p. 156) highlight “the widespread expectation that companies should be held accountable for their impacts on the communities and the environment where they operate.” This focus on accountability is especially prevalent

(and understandable) in sectors where social and environmental impacts are direct and significant, as in extractive industries (e.g., Owen and Kemp 2013; Gold et al. 2018; Idemudia and Osayande 2018). Yet—as will become more apparent in our empirical analysis—corporate contributions to community resilience are not in the first instance about addressing corporate impacts on their social-ecological context, but rather about addressing the social-ecological context’s impact on the corporation (see Winn and Pogutz 2013), based on the recognition of systemic interdependence and corresponding business risks. Extant uses of institutional theory seem to offer little purchase in explaining this.

Bansal and Roth’s (2000, p. 724) second category is competitiveness, which relates to “the potential for ecological responsiveness to improve long-term profitability.” They make reference in this regard to the resource-based view of the firm (Barney 1991) and in particular Hart’s (1995) natural-resource-based view (see also Hart and Dowell 2011). Building on prior arguments centred on opportunities for product differentiation and cost efficiencies (Hart 1995; Porter and Van der Linde 1995), Bansal and Roth (2000) suggest that competitiveness is associated with process intensification and the development and marketing of green products—these motives and actions again seem to have little salience to community resilience building. Furthermore, an instrumental, profit-driven agenda has been repeatedly criticised as hampering corporate contributions to social and environmental causes at the community level. Emphasising the “business case” for such corporate engagement leads to a “transactional approach [that] conceives communities as beneficiaries and corporations as benefactors [and thus...] fails to reflect communities as complex systems” (Gold et al. 2018, p. 664).

Bansal and Roth’s (2000, p. 728) third category focuses on “a sense of obligation, responsibility, or philanthropy rather than out of self-interest,” with environmentally responsive firms developing a “corporate environmental ethic” (Henriques and Sadorsky 1999, p. 97). Bansal and Roth argue that this ethical motive gives rise to initiatives such as philanthropic donations. While philanthropic contributions to community resilience have been described, especially in anticipation or in the wake of disasters (Muller and Whiteman 2009; Tilcsik and Marquis 2013; Ballesteros et al. 2017), this did not explain the efforts that we encountered among some corporations, which were distinguished, in our view, by their strategic nature in both motivation and implementation.

In sum, the extant literature on pro-social and pro-environmental corporate behaviour has largely focused on institutional, competitiveness, and ethical drivers and corresponding strategies, but there remains a gap between these explanations and visible corporate efforts to build community resilience. The most pertinent observation we

came across in the literature is that corporate leaders are concerned with the longer-term viability of social-ecological systems (Winn and Pogutz 2013; Whiteman et al. 2013), upon which their businesses depend, but this argument has not been empirically substantiated, as far as we know. This lacuna motivated our inductive study of why and how corporations seek to build community resilience as a strategic objective.

Methodology

Setting and Data Collection

Our research design responded to recommendations for engaged scholarship (van de Ven and Johnson 2006), comparative case study analysis (Eisenhardt 1989; Eisenhardt et al. 2016), and process theorising (Langley 1999). Our choice of research setting and of our case study companies was linked to an engaged scholarship initiative in South Africa, in which senior strategy and sustainability managers participate in regular meetings with us as researchers to identify and study issues of both practical and scholarly significance. In these discussions, we became aware of some of our member corporations' community resilience building efforts, for which we lacked compelling explanations in the scholarly literature, as outlined above. In other words, we witnessed corporations engaging in sustainability practices that we believe were more advanced than scholarship has had a chance to study (Winn and Pogutz 2013; Whiteman et al. 2013).

We collected data from multiple sources (Eisenhardt 1989; Yin 2009) in two phases. Our data collection focused initially on one of these companies, InCo, which is one of the largest short-term insurance companies in the country. From 2011 to 2012, one of the authors participated in a collaborative research project with InCo to better understand how the company might respond to climate risks in the Coastland area. (Note that we have changed the names of the companies and communities.) This included 43 interviews with InCo employees and diverse role-players in the Coastland area. These interviews were exploratory and broad-ranging, but an underlying theme was why and how the company invests in community resilience in this particular area.

As we discussed this work in our engaged scholarship initiative, we realised—to our surprise—that other member corporations were involved in comparable community resilience building efforts. We thus embarked on a second, more targeted phase of data collection, commencing with 19 new interviews focused on InCo's resilience building efforts in Coastland. We complemented this with an analysis of another InCo initiative in a different part of

the country, Bushland. We also conducted additional case studies of three other companies engaging in community resilience efforts in three different parts of the country. Our focal cases thus consist of InCo's climate resilience efforts in Coastland and Bushland; ReCo's water stewardship work in Rivervale; MinCo's local economic development efforts in Farmville; and BanCo's town restoration initiative in Burgtown (see Table 1 for an overview). These companies were seeking to build community resilience for ostensibly different reasons, though we were able to identify important commonalities and also some salient differences in our analysis.

This second phase of data collection and analysis took place from 2016 to 2018 and involved a total of 96 formal interviews with 103 individuals ranging from 45 to 120 min. For each of the cases, we interviewed relevant corporate managers, as well as diverse representatives of local stakeholder groups, including those that were explicitly participating in the resilience building efforts, as well as some who were not or only indirectly involved. Our semi-structured interviews adopted a narrative approach to allow the generation of in-depth, context-specific information (Arksey and Knight 1999; Kvale and Brinkmann 2009). We asked representatives of participating organisations to tell us about their objectives, resource contributions, roles, responsibilities, and interactions in resilience building initiatives. (Our basic interview protocol is provided in [Appendix](#).) Almost all interviews were transcribed.

Because local context is a vital aspect of community resilience, we visited each of the five communities at least once, and these field trips were between 3 and 10 days long. We conducted many of our interviews during these trips, and these visits also enabled us to observe important features of the local social-ecological context. In most cases, we were able to observe meetings between local stakeholders and partners in the case study company's community resilience building initiative, or other related events. Finally, our data were also augmented with email exchanges with participants and a variety of secondary sources such as websites, meeting minutes, and published and unpublished documents that were provided by the participating organisations or were publicly available.

Table 1 provides an overview of our focal case studies and the corresponding data sources, while Table 2 details the interviews conducted in our second phase of data collection, which we focused on in our data analysis.

Data Analysis

Our data analysis involved multiple rounds of coding (Miles et al. 2014) and it also involved discussing our emerging arguments with participating managers (van de Ven and Johnson 2006). Following our first round of

Table 1 Overview of our focal case study companies and summary of corresponding data

Case	Overview	Data summary
InCo	<p>... in Coastland: During the 2000s, managers of insurance company InCo noted growing insurance claims from customers in the Coastland District in South Africa's Western Cape Province due to fires and floods caused by extreme weather events. They collaborated with social and natural scientists to better understand why risks were increasing in the area and what might be done in response. The response was a partnership with the district municipality's disaster risk management agency</p> <p>... in Bushland: Building upon the above experience, InCo managers established a broader program to partner with other municipalities to enhance community resilience to disasters such as fires and floods. The Bushland District municipality is one of the participating municipalities in this initiative, with a similar focus on fire and flood risks</p>	<p><i>Phase 1: 2011–2012</i>: <i>Interviewees</i> (43): Company representatives (43) <i>Documents</i>: Published reports (5); unpublished reports (10); presentations (1) <i>Phase 2: 2016–2017</i>: <i>Interviewees</i> (19): Company managers (6); municipality representatives (5); community-based organisation activists (4); university representatives (2); researcher (1); independent (1) <i>Observations</i>: 10-day field trip in April 2017 <i>Documents</i>: Municipal development plan (3); media publications (2) <i>Interviewees</i> (5): Municipality representatives (4); NGO representatives (1) [company managers included in row above] <i>Observations</i>: 3-day field trip in September 2017 <i>Documents</i>: Unpublished reports (2); municipal development plan (1); presentations (2); meeting minutes (1) <i>Interviewees</i> (12): Company managers (2); municipality representatives (2); environmental NGO representatives (4); government department representatives (4); community-based organisation activists (2); NGO representatives (1) <i>Observations</i>: Total of 10 days in three field visits in June 2017 <i>Documents</i>: Published reports (5); unpublished reports (2); municipal development plan (1)</p>
ReCo	<p>Managers at retail company ReCo realised that water security is becoming an increasing risk for the company's suppliers of fresh produce. Studies showed that this is especially so in Riversvale in the Western Cape Province, where many fruit suppliers are located. Working with the NGO EnvOrg and other partners, the managers decided to address water risks at a catchment level, as this would have important benefits for their suppliers, the local community, and the company</p>	<p><i>Interviewees</i> (12): Company managers (3); municipality representatives (2); environmental NGO representatives (4); government department representatives (4); community-based organisation activists (2); NGO representatives (1) <i>Observations</i>: 6 days during three site visits, July–October 2017 <i>Documents</i>: Published reports (5); unpublished reports (2); municipal development plan (1)</p>
BanCo	<p>Managers at retail banking company BanCo realised that their success in enrolling and maintaining customers in small towns depended on the towns' economic and social prospects. The town of Burgtown, located outside Johannesburg, was experiencing weakening agriculture and tourism, and subsequent deterioration. Managers thus focused on this town and they explored restoration of the area with the support of a community development organisation, DevOrg</p>	<p><i>Interviewees</i> (8): Company managers (2); municipality representatives (2); government department representatives (3); traditional authority representatives (1) <i>Observations</i>: 6 days in three field visits, July–October 2017 <i>Documents</i>: Published reports (1); unpublished reports (2); municipal development plan (1); media publication (1)</p>
MinCo	<p>Managers at mining company MinCo realised the importance of supporting local communities the Farmville District in the Eastern Cape Province, from where many of the companies' migrant workers have traditionally come. They engaged in comprehensive discussions with local role-players to better understand how they might contribute to community resilience, and this resulted in a collaborative initiative focused on developing an agricultural project</p>	

Table 2 Interviews and corresponding codes for our focal cases

Case	Organisation	Designation	Code
InCo in Coastland	Insurance Company	Manager	IC-M1
	Insurance Company	Manager	IC-M2
	University	Representative	IC-R1
	Insurance Company	Manager	IC-M3
	Insurance Company	Manager	IC-M4
	Research Centre	Representative	IC-R2
	University	Representative	IC-R3
	Insurance Company	Manager	IC-M5
	Forestry Company	Manager	IC-M6
	Forestry Company	Manager	IC-M7
	Fire Association	Representative	IC-R4
	Local Municipality	Official	IC-O1
	Local Municipality	Official	IC-O2
	Local Municipality	Official	IC-O3
	District Municipality	Official	IC-O4
	District Municipality	Official	IC-O5
	Development org	Representative	IC-R5
	Ratepayers' Assoc	Representative	IC-R6
	Landowners Initiative	Representative	IC-R7
InCo in Bushland	District Municipality	Official	IB-O1
	District Municipality	Official	IB-O2
	Local Municipality	Official	IB-O3
	Local Municipality	Official	IB-O4
	Development NGO	Representative	IB-R1
ReCo in Rivervale	Retail Company	Manager	RR-M1
	Environmental NGO	Representative	RR-R1
	Retail Company	Manager	RR-M2
	Retail Company	Analyst	RR-A1
	Catchment Mgt Agency	Official	RR-O1
	Catchment Mgt Agency	Official	RR-O2
ReCo (contd)	Environmental NGO	Representative	RR-R2
	Environmental NGO	Representative	RR-R3
	Environmental NGO	Representative	RR-R4
	Local Municipality	Official	RR-O3
	Local Municipality	Official	RR-O4
	Water Users' Assoc	Representative	RR-R5
	Government Department	Official	RR-O5
	NGO	Representative	RR-R6
	NGO	Representative	RR-R7
	Government Department	Official	RR-O6

Table 2 (continued)

Case	Organisation	Designation	Code
BanCo in Burgtown	Bank	Manager	BB-M1
	Bank	Manager	BB-M2
	Local municipality	Official	BB-O1
	Local municipality	Official	BB-O2
	NGO	Representative	BB-R1
	Business forum	Representative	BB-R2
	Tourism Partnership	Representative	BB-R3
	State-Owned Company	Manager	BB-M3
	Religious organisation	Representative	BB-R4
	Religious organisation	Representative	BB-R5
	NGO	Representative	BB-R6
	NGO	Representative	BB-R7
MinCo in Farmville	Mining Company	Manager	MF-M1
	District Municipality	Official	MF-O1
	Local Municipality	Official	MF-O2
	Government Department	Official	MF-O3
	Government Department	Official	MF-O4
	Government Department	Official	MF-O5
	Community Trust	Representative	MF-R1
	Beverage Company	Manager	MF-M2

IC InCo in Coastland, *IB* InCo in Bushland, *RR* ReCo in Riverdale, *BB* BanCo in Burgtown, *MF* MinCo in Farmville, *A* analyst, *M* manager, *R* representative, *O* official

coding, we wrote case-specific reports that were each about ten pages long. We compared these analyses to identify cross-case patterns of similarities and differences. Our coding, cross-case comparisons, and discussions eventually gave rise to two key categories of constructs: corporate practices and contingent factors. The *corporate practices* are recognised, temporally structured, and bounded patterns of activity by corporate managers (Whittington 2006), as they engage in the process of building community resilience. We identified three such practices across our four focal case study companies: exploring; focusing and partnering; and contributing either directly or indirectly. The second coding category consisted of *contingent factors*, that is, characteristics of the community, the corporation, or their relationship, which motivated or shaped the corporate community resilience building efforts.

To better define these contingent factors, we developed a counterfactual analysis by including in our comparison

Fig. 1 Model of why and how corporations seek to build community resilience

three auxiliary case study companies, which had been mentioned or discussed in our interviews or other data, including email correspondence, public meetings, media reports, and so on (and on which we also had data from other research projects). These were InCo2, a prominent national competitor to InCo; ReCo2, a global retail company; and ReCo3, a national competitor to ReCo. These auxiliary, counterfactual cases helped elaborate the alternative pathways in our process model, and this helped to explain why some companies sought to build community resilience in a particular area while others did not.

Findings

Our analysis resulted in a model of corporate contributions to community resilience as illustrated in Fig. 1, consisting of three contingent factors, which each motivate or shape three successive corporate practices in community resilience building. There are also two alternative pathways, which illustrate why corporations do *not* strategically contribute to community resilience in response to two of the contingent factors. We describe each of the three practices (or alternatives) and their associated contingent factors in turn. Figure 1 mentions in brackets the case study companies demonstrating different paths in the model, and Table 3 provides an overview of each case study company.

Exploring

The point of departure in our model is the possible existence of place-specific resources, to which the company is strategically committed because of their firm-specific nature (that is, they cannot be easily replaced or traded), and which are at risk due to social-ecological changes in a particular

community (the first box on the left in Fig. 1).¹ This contingent factor was given for five of our case study companies, which therefore engaged in the practice of *exploring*, that is, managers defining the focal area and identifying key social-ecological trends and their impact on the corporate value chain. It was not given in two of the case study companies, with the result that these companies were *absent*, that is, managers did not even consider exploring motives and mechanisms for community resilience building.

To illustrate, InCo managers started focusing on the Coastland district in the wake of a pronounced spike in insured losses due to fires and floods in that area. They engaged in a committed *exploring* process to try to understand why these insured losses were occurring and what might be done about them. This involved collaborating with a university and a national research institute in a study on climate risks in Coastland. This was explicitly an open-ended exploration because the managers recognised that they faced a complex problem that they had not grappled with before, for which they had no apparent solutions, and on which they needed diverse inputs from different perspectives and disciplines. As noted by an InCo manager:

¹ Firm-specific resources play an important role in our findings, so some definitions are in order. We adopt Ghemawat and del Sol's (1998, p. 28) definition of *resources* as "all the durable factors, assets, or capabilities the firm uses to produce its goods or services." Such a resource is *firm-specific* if "its value to the firm exceeds its price in the factor market, i.e., if its value to one firm exceeds its value to any other firm" (or organisation), and thus "there are significant costs to separating [it] from the firm that possesses [it]" (Ghemawat and del Sol 1998, p. 28). For instance, businesses' relationships with other businesses, government, and suppliers are firm-specific. On the other hand, "cash is probably the most flexible resource a company can have because it can be used by any firm for any purpose," and many natural resources may be traded easily (Ghemawat and del Sol 1998, p. 30).

Table 3 Case-specific evidence for each of the constructs in our model of corporate contributions to community resilience

Case company	Contingent factor 1	Practice 1 [or alternative 1]	Contingent factor 2	Practice 2 [or alternative 2]	Contingent factor 3	Practice 3
InCo	<p>The corporation has firm- and place-specific resources that are at risk due to social-ecological changes: InCo has long-established relationships with wealthy clients and local brokers in Coastland, which are at risk due to increased fires and floods</p> <p>“We have a high concentration of assets in the district... how could we... reduce risk exposure to the assets we underwrite?” (IC-M2)</p>	<p>Exploring: Prompted by a spike insured losses, InCo managers embarked on exploring the area in collaboration with social and natural scientists to better understand why risks were increasing in the area and what might be done in response.</p> <p>An InCo manager explained: “So, at the time that we were having all these floods in Coastland... We asked ourselves: what’s changing here?” (IC-M1)</p>	<p>The ultimate cause of increasing fires and floods is climate change, but there are also local-level “proximate risk drivers” that increase the likelihood or impact of such events (e.g., effectiveness of the drainage system; land-use planning).</p> <p>Many of these are the responsibility of local government, but the capacity of local government is constrained</p> <p>“It’s not about the rains—it’s about the drains!” (IC-R1)</p>	<p>Focusing and partnering: InCo managers focused on supporting the municipality’s Disaster Risk Management agency, which was most directly relevant to risks posed by fires and floods, but it struggled to fulfil its mandate. InCo managers established a partnership with the DRM department, including a MOU that outlined the objectives and partners’ responsibilities</p> <p>“For me to build resilience in vulnerable communities I need to work through municipalities... We invest in municipal initiatives that impact the vulnerable directly—our focus is specifically on disaster risk.” (IC-M2)</p>	<p>InCo managers identified a range of resources that they could contribute, including firm-specific ones, such as detailed risk models and data, as well as convening power and local and national networks</p> <p>“If the municipality needs data, we will help source the data; we will build a GIS [Geographic Information System] and train them to use it.” (IC-M2)</p>	<p>Contributing directly: Because InCo had valuable, firm-specific resources to contribute, InCo managers became directly involved in contributing such firm-specific resources, such as data, towards community resilience efforts in Coastland</p> <p>“[InCo] are sitting on this risk data... but we need this for our spatial development framework. They’ve shared this data with us.” (IC-O5)</p>
InCo2 (counterfactual)	<p>Place-specific relationships with clients in Coastland are at risk due to fire and floods, but these are not of sufficient strategic importance to motivate special attention</p>	<p>Absence: InCo2 managers did not engage in exploring community resilience in Coastland</p>				

Table 3 (continued)

Case company	Contingent factor 1	Practice 1 [or alternative 1]	Contingent factor 2	Practice 2 [or alternative 2]	Contingent factor 3	Practice 3
ReCo	The corporation has firm- and place-specific resources that are at risk due to social-ecological changes: ReCo has long-standing relationships with its fresh produce suppliers in the Rivervale area, upon which the company relies as part of its broader strategy to have long-term relationships with suppliers. These suppliers are threatened by water risks that were growing due to climate change <i>"From 1952 onwards, we [got...] into long term relationships with suppliers so that you see your supplier of goods as a partner... as somebody who is going to invest on your behalf." (Interview with CEO as part of different project)</i>	Exploring: ReCo and ReCo2 managers worked together on studies that showed that fresh produce suppliers in Rivervale were especially at risk. The managers explored ways to increase these farms' water efficiency, but this showed that the bigger problems were beyond the farm boundaries, at a catchment level <i>"Obviously water is a critical issue for our business... we've done work on our own operations, even on our suppliers... but this is the slightly uncomfortable space where you're working across a much bigger area." (RR-M1)</i>	Water risks are associated with a range of issues interacting at a catchment level. A particularly important trend is the spread of alien invasive vegetation species, which cause more water loss than indigenous species. The government has an alien vegetation clearing program, but this is constrained by limited state capacity and a lack of cooperation between the state and farmers <i>"Most farmers here... when you tell them you are from the state then immediately they are on the defensive, because most of them have a bad history with state officials promising them things that do not happen." (RR-R5)</i>	Focusing and partnering: ReCo managers focused on alien vegetation clearing as a viable and effective way to address water security issues in Rivervale. They partnered with EnvOrg, an environmental NGO, to figure out how best to do so <i>"It is a much more complex issue, so... [our focus is on] alien clearance across the whole catchment." (RR-M1)</i>	ReCo managers decided that they did not have valuable resources specific to the company, which could help address the coordination challenge. Instead, the partners they were working with had the technical knowledge and local networks	Contributing indirectly: ReCo contributed indirectly by funding a position dedicated to pooling resources from diverse sources and to improving coordination and trust between key role-players, including between farmers and government agencies <i>"[Our focus is on] funding a resource that can coordinate alien clearance... This allows us not to be as hands-on." (RR-M1)</i>
ReCo2 (counterfactual)	Similar to ReCo, above	Exploring: As with ReCo, above	As above, but ReCo then embarked on focusing and partnering to develop a strategic project focused on alien vegetation clearing	Withdrawing: ReCo2 managers withdrew from Rivervale, given ReCo's commitment in the area		
ReCo3 (counterfactual)	Place-specific relationships with suppliers in Rivervale are at risk due to water scarcity, but these are not of sufficient strategic importance to motivate special attention	Absence: ReCo3 managers did not engage in exploring community resilience in Coastland				

Table 3 (continued)

Case company	Contingent factor 1	Practice 1 [or alternative 1]	Contingent factor 2	Practice 2 [or alternative 2]	Contingent factor 3	Practice 3
BanCo	<p>The corporation has firm- and place-specific resources that are at risk due to social-ecological changes: BanCo has numerous business clients in Burgtown that reported social and economic hardships. BanCo's managers saw these difficulties faced by customers as a threat to BanCo's business, and the area was seen as emblematic of such problems</p> <p><i>"It's important to recognise that this was driven by the bank's retail division. It was not a philanthropic exercise."</i> (BB-M1)</p>	<p>Exploring: BanCo managers explored the area with the support of a community development organisation to better understand how they might support community resilience</p>	<p>The problems faced by BanCo business clients resulted from a range of economic, social, and ecological dynamics, which were insufficiently addressed by local government or other actors</p> <p><i>"The local government is... quite unstable... the council was dissolved... because they couldn't approve budgets."</i> (BB-M2)</p>	<p>Focusing and partnering: BanCo managers focused on fostering a community empowerment approach to addressing Burgtown's problems. They partnered with DevOrg (a community development organisation) to design and implement such an intervention</p> <p><i>"We were now saying how can we enable the community development organisation to transform a whole town... which is why it's seen as being catalytic in a way."</i> (BB-M2)</p>	<p>BanCo managers decided that they did not have valuable resources specific to the company, which could help foster community empowerment in Burgtown. Instead, the partner they were working with had the technical knowledge and local networks</p>	<p>Contributing indirectly: BanCo managers opted for an <i>indirect</i> role, providing funding for DevOrg to implement a structured community empowerment process</p> <p><i>"Ultimately, we are the enabler, we are not the spatial planning experts, but we see why it's important for South Africa to have these implementing agencies doing this kind of work."</i> (BB-M2)</p>
MinCo	<p>The corporation has firm- and place-specific resources that are at risk due to social-ecological changes: MinCo has long-standing relationships with local communities in Farmville, from where many of its employees have come as part of the century-old migrant labour system. Additionally, the company's mining licence depends on its ability to show that it is contributing to socio-economic development in such "labour-sending areas."</p>	<p>Exploring: MinCo managers identified Farmville as particularly important and engaged in comprehensive discussions with various local role-players, including the local government and traditional leaders, to better understand how they might contribute to job creation and development in the area</p> <p><i>"We sit down with the executive mayor, Local Economic Development [department], municipal manager, and all other relevant people."</i> (MF-M1)</p>	<p>Farmville is characterised by severe poverty and unemployment. Local government is unable to address the diverse underpinning economic, social, and ecological trends</p> <p><i>"But as a local municipality we do not have a budget, local economic development is an unfunded mandate... So, it works when we have the private sector come into assist us with agriculture related programmes."</i> (MF-M2)</p>	<p>Focusing and committing: MinCo managers focused on facilitating a large-scale maize growing project on a specific piece of fallow land as a feasible objective with benefits for the local community and the company</p> <p><i>"We saw a large piece of fallow land and we decided that's what we can use to make a difference, to help the locals do what they do, but at a bigger scale."</i> (MF-M1)</p>	<p>MinCo managers realised that the necessary role-players were all involved, but what was missing was a central actor coordinating their contributions. They realised that their financial contributions were important, but more important was their ability to play a project management role.</p>	<p>Contributing directly: MinCo managers contributed directly to supporting agricultural development in Farmville. Over and above providing funding for infrastructure, such as fencing, they took responsibility for project management and for ensuring that key role-players fulfilled their commitments</p> <p><i>"We are the ones who have to hold it all together... the key role-players... When [one of the partners] wanted to run away, we had to persuade them to come back."</i> (MF-M1)</p>

So, at the time that we were having all these floods in Coastland... We asked ourselves: what's changing here? The way an underwriter looks at risk is very different to how science looks at this; it is two paradigms; so, what we did in Coastland is we brought those paradigms together [in our study]. (IC-M1)

This exploring practice was motivated by strategic concerns, given the significant costs created by the fires and floods—importantly, these costs affected InCo in a particularly significant way because they represented risks to firm- and place-specific resources. For InCo managers, the increasingly frequent and intense extreme weather events represented a strategic problem because this particular part of the country is not only disaster prone, but also a popular retirement area with many wealthy clients that InCo had spent years cultivating a relationship with. In addition, InCo had established over many decades a network of insurance brokers, who were local residents with personal relationships to clients. In other words, InCo had long-standing relationships with clients and brokers, which were both firm-specific and place-specific, and these relationships were at risk due to increasingly frequent and severe extreme weather events. In comparison, InCo2 (one of InCo's main competitors) also faced insured losses due to fires and floods, but it was less exposed because it had fewer firm- and place-specific resources at stake. It is a much younger company and had not devoted many years' effort in cultivating clients among retirees in Coastland, nor did it rely on brokers in its business model. As a consequence, it did not occur to InCo2 managers to respond in a strategic and place-specific manner to the spike in fires and floods. InCo2 was thus *absent* from community resilience building in the area, as indicated in Fig. 1.

ReCo and its main domestic competitor, ReCo3, offer another example of this. ReCo managers became concerned about supply chain risks associated with water and they came to realise that these risks were particularly salient for fresh produce farmers in Rivervale. They thus embarked on an *exploring* process with a foreign retail corporation, ReCo2, which was also concerned about these water risks in its own supply chain, and the environmental NGO, EnvOrg. They initially focused on trying to make their suppliers more water resilient, but soon realised that these farmers were already very sophisticated in their water use. Their focus shifted to the broader catchment level, as they realised that a range of factors were threatening both quantity and quality of water available to farmers. Thus, for ReCo, the at risk resources were its firm-specific relationships with fresh produce suppliers who could not be replaced easily, and who faced serious water security risks that emanated from the catchment level. ReCo had developed these relationships over many years as part of its strategy to source

high-quality fresh produce from local farmers. This was also evident in a multi-year program, in which ReCo had been working with suppliers to improve their farming practices. In comparison, ReCo3 (and indeed most other national competitors) relied more on transactional, rather than relational, supply chain management (as confirmed in our analysis of these companies' annual and sustainability reports, as well as auxiliary interviews with their managers). Even though ReCo3 also sourced fresh produce from Rivervale, it was not as strategically committed to these suppliers as ReCo. ReCo3 managers thus did not engage in *exploring* practices and instead were *absent* from the area.

In sum, five of our case study companies were motivated to explore community resilience in a focal area by the existence of firm- and place-specific resources that were at risk due to social-ecological changes, while two comparative case companies were not (as summarised in Fig. 1 and Table 3). This gives rise to our first proposition:

P1 The existence of firm- and place-specific resources at risk due to social-ecological changes in a particular community will motivate managers to explore the area and its social-ecological trends and their impact on the corporate value chain.

Focusing and Partnering

During their exploration process, managers in our four focal case study companies realised that the social-ecological risks to their place- and firm-specific resources are amenable to influence at the community level, and that no other actor was addressing these risk drivers decisively. They thus *focused* on a point of leverage in the local social-ecological system, in which they could make a difference, and they engaged in *partnering* by enrolling other actors with whom they could do so. Identifying and focusing on a point of leverage was important because managers needed to develop a sense of efficacy in the otherwise overwhelming complexity of social-ecological system dynamics. In our cases, this went hand-in-hand with partnering with one or more key organisations to work with, because even though focusing on a leverage point enhanced efficacy, it still surpassed the corporation's ability to make a difference independently.

In the InCo case, managers' exploration concluded that climate change was contributing to the increased frequency and severity of droughts, intense rains, and storm surges in this region. There was clearly very little that InCo managers could do about climate change as an ultimate driver of increased risk, and they also soon realised that options to influence clients' behaviours to reduce risk were exhausted or constrained. They realised that their highest impact was

likely to be in helping to mitigate what they called the “proximate risk drivers.” These are community level social-ecological trends that exacerbated the risks emanating from extreme weather events, such as the growth of alien vegetation, which increased fire loads; or old or broken-down fire trucks, which increased fire fighters’ response times and decreased their effectiveness; or broken or clogged drainage systems that increased flood risks. As argued by one of the scientists working with InCo on their study: “It’s not about the rains—it’s about the drains!” (IC-R1).

Many of these proximate risk drivers are within the mandates of government agencies, especially the local municipality. However, it was apparent that the municipality was overwhelmed with many of its basic responsibilities, similar to many South African municipalities (Siddle and Koelble 2013). InCo managers thus decided that their point of leverage in local social-ecological systems lay in working together with the local municipality and specifically its Disaster Risk Management (DRM) department. As one InCo manager explained, “We have a high concentration of assets in the district... with high risk exposure, [so we are seeking] to assist the Coastland municipality and to reduce risk exposure to the assets we underwrite” (IC-M1). The resulting *partnering* process entailed negotiating what these contributions would look like, and this was stipulated in a Memorandum of Understanding early in the partnering process.

In the case of ReCo, the initial exploring process showed that most local farmers were already remarkably water efficient, and that instead the most serious problems were at the catchment level. In particular, the amount of water available to farmers was seriously depleted by a proliferation of alien vegetation in the upper reaches of the catchment. The government had programmes in place to combat this spread, but they were clearly inadequate. ReCo managers thus identified this problem of alien vegetation as its leverage point. A ReCo manager explained this as follows:

Obviously, water is a critical issue for our business. It’s been a good shift; for a long time, we’ve done work on our own operations, even on our suppliers... But [now we are in] the slightly uncomfortable space where you’re working across a much bigger area. Water doesn’t respect our boundaries, so it is a much more complex issue, managing across a bigger area of space; getting involved in... alien clearance across the whole catchment (RR-M1).

ReCo managers decided that the best way to address this focus on alien vegetation clearance was to work in partnership with the NGO EnvOrg, which had developed significant knowledge about water security—both generally and in the Rivervale area—and it also had relational networks in Rivervale. ReCo also collaborated with diverse other

organisations in the area, such as farmers’ associations, but the partnership with EnvOrg was its main mechanism for engaging in Rivervale.

Similar *focusing and partnering* practices were observed in the BanCo and MinCo cases. In the case of ReCo2, however, managers’ exploration practices gave rise to decisions *not* to invest in community resilience in the focal area and rather to *withdraw*. ReCo2 had participated in exploring practices with ReCo in Rivervale, as mentioned above. When this exploration process led ReCo to commit to community resilience building in the area, ReCo2 managers concluded that the ReCo-EnvOrg partnership was grappling with water risks in the area and ReCo2 might better focus its own efforts elsewhere. In combination, these findings give rise to our second proposition:

P2 If social-ecological risks to a corporation’s place- and firm-specific resources are amenable to influence at the community level, and no other actor is addressing these risk drivers decisively, managers focus on a point of leverage in the local social-ecological system and partner with other actors to do so.

Contributing

By this point in the process, following their *exploring* and their *focusing and partnering* practices, managers in InCo, ReCo, BanCo, and MinCo committed themselves to *contributing* to community resilience by providing valuable resources to the partnership. However, we discovered that these contributions took different forms. InCo and MinCo managers contributed in what we labelled a *direct* way, while ReCo and BanCo managers contributed *indirectly*. The key contingent factors that shaped the corporations’ mode of contributing had to do with who within the partnership had access and control over resources that were valuable in fulfilling resilience building objectives. If the corporation had resources that were important in influencing the leverage point and that were unavailable and not easily transferable to other committed stakeholders, then the corporation became *directly* engaged, contributing these valuable resources to the partnership. We again refer to such a resource as *firm-specific*, given that “there are significant costs to separating [it] from the firm that possesses [it]” (Ghemawat and del Sol 1998, p. 28), even though it is specific to the firm relative to its partners pursuing community resilience, rather than other firms participating in factor markets. On the other hand, if the corporation did not have such valuable and firm-specific resources for influencing the leverage point in the local system, it became *indirectly* involved, contributing more generic resources, commonly finance.

The former contingency was represented in our InCo and MinCo cases. In the InCo case, recall that managers and

their collaborators had identified the need to address “proximate risk drivers” in the landscape. One way of achieving this was to provide a firm-flexible resource—funding—to another stakeholder to address these drivers. Indeed, this option was included in InCo’s partnership agreement with the municipality’s DRM department, so that InCo contributed finances, for instance, for equipment and training for local fire stations. However, managers’ dialogue with diverse stakeholders and especially their municipal partner brought forth a shared view that the company had firm-specific resources that were particularly valuable in achieving shared community resilience objectives. One set of these firm-specific, valuable resources was networks and convening capacity. InCo managers thus played a bridging role in connecting officials in the municipal partner organisation to national networks focused on community resilience. This allowed these officials to gain insights from and even some influence on national policy-making processes. The municipal disaster risk manager noted,

InCo is in a different sphere that they can address and that can help. I was invited to speak at [a government association]; they got my name from [InCo]. It was good that I could speak there; there were changes in legislation (IC-O5).

A related resource was convening capacity. InCo managers thus helped bring together diverse role-players to share ideas and resources, especially after a particularly devastating fire in the area. One of the researchers involved in the initial exploration study highlighted the significant “convening power of the insurance industry in Coastland: we were trying to have meetings there for ages, but then when the insurance company came along people came” (IC-R2). InCo thus made important contributions by convening meetings to improve information sharing and collective learning among local stakeholders, and this was so in both our InCo case studies. In Bushland, a municipal official described one such convening example: “It was a 2-day event funded partly [by InCo]. It was so successful... we had new councillors, it opened their eyes in terms of what is disaster management” (IB-O2).

Another important set of firm-specific resources was knowledge and data. As a short-term insurance company, InCo managers had significant insights and information about changing social-ecological risks in the Coastland district. For example, they had sophisticated digital elevation models in Geographic Information Systems that could help predict flooding risk in the area. This could help Coastland municipal officials better anticipate and react to floods, and it could also reduce vulnerabilities by influencing land-use planning and zoning. It is apparent that such risk assessment data were an important asset for InCo. Sharing this data was thus possible only once the partnership with the municipal

DRM department had built up sufficient trust among both partners. The municipal disaster risk manager explained:

A lot of local municipalities do not have flood lines and no proper storm-water master plans because we don’t have a digital elevation model... InCo has [such] a risk assessment; they have a hazard rating [of the landscape]. I said, you are sitting on this; I will not give it away, but we need this for our spatial development framework. They’ve shared this data with us (IC-O5).

Similarly, in the MinCo case, company managers came to realise that they had vital firm-specific resources that were needed to achieve the resilience building objectives they identified in dialogue with stakeholders. Like in the InCo case, these included relational networks and convening capacity, but they also included project management skills. MinCo managers thus committed themselves to designing and managing the agriculture development project, and they used their networks to commit a beverage company to purchase the crop and thus reduce marketing risks. For instance, one of the MinCo interviewees highlighted the corporation’s direct involvement and the central role it was playing in facilitating the resilience building partnership and in making sure it would achieve its objectives:

“We realised that we needed to provide project management... We are the ones who have to hold it all together... When [one of the partners] wanted to run away, we had to persuade them to come back” (MF-M1).

On the other hand, the ReCo and BanCo cases were characterised by a more *indirect* role for the companies, because in these cases, the managers’ dialogue with stakeholders led to the identification of other role-players with resources and capabilities that could help achieve community resilience objectives. In the ReCo case, this included EnvOrg, an NGO with an established track record in working on catchment management initiatives. Together, ReCo and EnvOrg managers agreed that a vital contribution to these efforts would be funding for a dedicated, full-time professional, who would play a bridging function between the various stakeholders, including in particular local farmers and the government departments involved in agricultural extension, water management, and alien vegetation clearance. The company had few firm-specific resources to add to this, nor were they needed because EnvOrg assumed responsibility for managing this new bridging function. A ReCo manager explained, “We really rely heavily on EnvOrg to implement much of the work... This allows us not to be as hands-on. We focus more on long-term goals, making processes sustainable, and finance decisions” (RR-M1).

Similarly, in the BanCo case, managers' dialogue with diverse stakeholders led to the identification of an NGO, DevOrg, that had developed a community empowerment process design, and which also had existing networks in the focal community. BanCo managers thus committed to contributing funding to support DevOrg in implementing its process in this community. Though BanCo managers sometimes participated in the local meetings hosted as part of this process, these contributions were not as vital for the initiative as the funding that enabled DevOrg to implement the process. As explained by a BanCo manager, "Ultimately, we are the enabler, we are not the spatial planning experts, but we see why it's important for South Africa to have these implementing agencies doing this kind of work" (BB-M2).

Our third proposition thus focuses on why corporations may take different approaches to contributing to community resilience:

P3 If the corporation has scarce, firm-specific, and valuable resources for building community resilience, managers will likely become directly engaged, contributing these resources to the partnership. If the corporation does not have such valuable and firm-specific resources, managers likely become indirectly involved, contributing more generic resources, such as finance.

Discussion

Our motivation for this research was an initial encounter with strategically motivated and enacted corporate community resilience initiatives, for which we found incomplete explanations in the literature. There has been some research on business organisations building their own resilience (Linnenluecke 2015) and on businesses considering community empowerment as part of their "base of the pyramid" efforts (e.g., Ansari et al. 2012), but this could not explain the efforts we observed. Nor could predominant resource-based or institutional theoretical explanations for corporate social or environmental responsiveness (see, e.g., Hart 1995; Bansal and Roth 2000; Aguinis and Glavas 2012), because we saw neither competitive motives commonly associated with resource-based theory, nor institutional pressures on these companies. We thus studied four companies' community resilience building efforts in detail, and we also included in our analysis three other companies that did not embark on or fulfil such a process. This analysis gave rise to our model of corporate contributions to community resilience, which identifies three sets of practices—*exploring*, *focusing* and *partnering*, and *contributing directly or indirectly*—and three sets of contingent factors that precipitate or explain each of these practices. This model makes two contributions: one to the management literature on community resilience,

and another to the broader conversation about social-ecological responsiveness in the context of grand challenges.

Explaining Corporate Contributions to Community Resilience Building

Our first contribution is to nascent management scholarship on the role of business in community resilience by explicating under what conditions, and in what ways, corporations may seek to strategically—as opposed to philanthropically—build community resilience. Most resilience research in management literature to date has focused on how companies seek continuity during disasters or how businesses provide philanthropic or other relief after disasters. Apart from a few exceptions, such as Mcknight and Linnenluecke's (2016) theoretical framework, there has been little scholarly work on companies building community resilience, which is arguably a domain where some corporate practitioners' engagement with social-ecological environments is well ahead of scholarship (Winn and Pogutz 2013).

Our model advances this nascent conversation by explaining why and how companies seek to strategically build community resilience. The practices and contingent factors in our model are distinct from more established concepts and corporate efforts, such as corporate community development (Gold et al. 2018), because they are premised on the corporations' strategic motivations and managers' recognition of the underlying social-ecological system complexity. We thus explain why and how corporations adopt a strategic and systemic approach to community resilience building, which has been called for by scholars for some time (Gladwin et al. 1995; Winn and Pogutz 2013; Whiteman et al. 2013; Gold et al. 2018; Bansal 2019), but has scarcely been empirically analysed.

More specifically, the corporate efforts explained in our model were not motivated primarily by philanthropic or institutional factors, but by strategic reasons, given that valuable and firm-specific corporate resources were threatened by social-ecological changes in the focal areas. Furthermore, the corporate managers were aware of the complex interactions between social and environmental systems and their corporate value chain. These strategic motives and the social-ecological complexity necessitated the dedicated *exploring* practices described in our model. Once the corporation had committed to resilience building, the underlying system complexity meant that the intervention had to be carefully *focused* and could only be implemented by *partnering* with others. We thus help explain in some detail why and how some corporations strategically respond to their "interconnectedness [with] social-ecological systems... increasing [their] sustainability management on both environmental and social dimensions" (Winn and Pogutz 2013,

pp. 221, 223) and engaging with “communities as complex systems” (Gold et al. 2018, p. 664).

Expanding Resource-Based Explanations of Strategic Responses to Grand Challenges

Our second contribution is to the broader literature on organisational responses to grand challenges (Ferraro et al. 2015; George et al. 2016), by expanding and linking resource-based and institutional explanations of pro-environmental and pro-social corporate strategies. Like Oliver (1997), our analysis suggests that both resource-based and institutional reasons underpin strategic action, and these theories provide important points of departure to “deepen knowledge of organization–nature interconnections [...] and related] *strategic responses* of companies” (Winn and Pogutz 2013, p. 222, original emphasis). But to explain corporate contributions to community resilience as a strategic response to grand challenges we need to expand resource-based explanations beyond an assumed emphasis on competitive advantage, and we need to expand institutional explanations to recognise institutional complexity and limited statehood as a vital contextual driver. These expansions are necessary because the corporate behaviours that we analysed could not be explained with prevailing resource-based and institutional explanations for corporate pro-environmental or pro-social behaviours (Bansal and Roth 2000; Hart and Dowell 2011; Hoffman 1999).

The resource-based view (RBV) of the firm is clearly relevant because our analysis highlights the role of firm- and place-specific corporate resources in motivating and shaping corporate efforts to build community resilience. Our first expansion of the RBV is to specify the resource characteristics that influence strategic responses to grand challenges. The role of resource firm-specificity is well established in the RBV (Hart 1995; Ghemawat and del Sol 1998), but we complement this with an emphasis on the role of *place*-specificity, thus connecting with a nascent stream of work on the “enduring community influence” (Marquis and Battilana 2009, p. 283) on organisational behaviour even in the case of large corporations. Even though the ethos and identity of most corporations are antithetical to the idiosyncrasies of particular places, we identify how, in some circumstances, particular “communities of place” (Maida 2007) become especially salient for corporate strategy and for managers.

This place-specific salience also directs managerial attention. It is the combination of firm- and place-specificity of corporate resources that focuses managers’ attention on social-ecological processes in the focal area. We thus identify circumstances that precipitate managers devoting scarce attentional and other resources to social-ecological processes

that are otherwise often too small or large in scale to receive managerial attention (Bansal et al. 2018).

Second, our findings challenge some of the underlying assumptions of the RBV. Even when applied to pro-social and pro-environmental strategies, the RBV has largely focused on efficiency gains and product differentiation, premised on the overarching assumption that strategy is driven by firms’ quest for competitive advantage (Hart 1995; Russo and Fouts 1997; Chan 2005; Hart and Dowell 2011). Our analysis of corporations’ strategic efforts in building community resilience challenges this core assumption. These efforts were not driven by competitiveness motives, but by system viability concerns. That is, managers were concerned with the viability of the social-ecological systems, on which their value chains depend. If these systems collapse, even competitive companies fail.

These viability concerns were explicitly pre-competitive or even a-competitive in our findings. In the InCo case, for example, managers continuously grappled with the challenge of justifying their community resilience investments to their senior colleagues, given that InCo’s competitors (such as InCo2) would benefit from the resulting decrease in risks to insured assets, without carrying any of the costs. In other words, not only was competitiveness absent as a primary motivation for InCo’s strategic investments in community resilience building, but these investments were made despite representing a possible competitive *disadvantage*. InCo managers’ main response to this challenge was to try to involve competitors in collective efforts to build community resilience, a response that was also supported by their local partners. Interviewees explicitly emphasised the pre-competitive interest in establishing such a collective approach. In the other case studies, competitive objectives were also discounted by our interviewees. In the ReCo case, for instance, managers were aware that their investments would benefit the company’s competitors (such as ReCo3), given that many farmers in the catchment were supplying these competitors.

We thus argue that the RBV has an important role in explaining organisations’ responses to grand challenges, but it needs to move beyond its prevailing assumption that strategic investments are necessarily or only focused on competitiveness gains. Given the growing threats to local and global social-ecological systems and the business risks resulting from corporate value chains’ dependence on these systems, corporate strategies will be motivated increasingly by systemic viability concerns, rather than only competitiveness.

These proposed expansions of the RBV in the context of grand challenges deserve more attention. For a start, our model invites further research into managers’ sensemaking

processes in identifying the valuable firm- and place-specific resources that are at risk due to social-ecological changes. Penrose (1959) suggested “there is a wide scope for judgment” in identifying and making use of resources, so even though our analysis framed the existence of firm- and place-specific resources in quasi-objective terms, further work should explore the sensemaking processes that managers go through in dialogue with stakeholders in identifying such resources and framing the corresponding risks as amenable to corporate intervention (Reinecke and Ansari 2016; Whiteman and Cooper 2011). Second, even though we argued that community resilience building is motivated by system viability concerns, competitiveness clearly remains an important objective for managers. Future work should explore the complementarities and tensions between system viability and competitiveness in business responses to grand challenges.

Expanding Institutional Explanations of Organisations’ Responses to Grand Challenges

Our analysis also calls for an expansion of institutional theory in explaining organisational responses to grand challenges. Institutional theorists have largely focused on regulatory and normative drivers of corporate pro-social and pro-environmental strategies (Bansal and Roth 2000; Hoffman 1999). But our analysis suggests that it is not so much the presence of institutional rules and collective action structures that motivate community resilience building, but their *absence*. This connects to a nascent conversation in the literature, in which some suggest that corporations will exploit “institutional voids” to diminish their social or environmental responsibilities (Luiz and Stewart 2014; Silvestre 2015), while others point to such voids as motivating corporate social or environmental action to shield against operational or reputational risks (Amaeshi et al. 2016; Börzel and Hamann 2013). This latter strand is further developed in our analysis. We found that corporations commit to community resilience building when firm- and place-specific resources are at risk, as outlined above, but only if there is a simultaneous absence of an institutionalised response to mitigate these risks. More specifically, corporate managers explaining their strategic community resilience building efforts explicitly pointed to the absence of the state as a reliable actor in mitigating social-ecological risks. Scholars have referred to this absence in terms of “institutional voids” (Mair et al. 2012; Luiz and Stewart 2014; Kistruck et al. 2015; Silvestre 2015; Amaeshi et al. 2016) or “limited statehood” (Börzel and Risse 2010; Börzel and Hamann 2013; Scherer et al. 2016), and they have pointed out that in such circumstances corporations become governance

agents and thus respond to and also perpetuate institutional complexity.²

We thus show that organisational responses to grand challenges are motivated and shaped by institutional complexity arising from states’ growing inability to effectively deal with the complexity of grand challenges (Ferraro et al. 2015; Reinecke and Ansari 2016; Dentoni et al. 2018; Gold et al. 2018). In their quest to maintain the viability of their value chains and business models, corporations face powerful incentives to fill governance gaps created by this lacking capacity of states. This is more likely the case in geographic “areas of limited statehood,” where states have limited capacity or willingness to provide and secure public goods (Börzel and Risse 2010), but because grand challenges also confront consolidated states with significant difficulties (e.g., Börzel and Hamann 2013; Wright and Nyberg 2017), our analysis is not limited to such regions.

In our research, we found that corporations may respond to limited statehood in a variety of ways, including proactive support for challenged state agencies (as in the InCo cases) or contributions to and via other non-state actors (as in the ReCo case). Further research ought to elaborate the types, motivations, mechanisms, and outcomes of these varying responses to institutional complexity wrought by grand challenges.

Limitations

There are a number of limitations of our study, some of which suggest additional avenues for further research. First, we focused our data collection on corporations that made significant, overt investments into building community resilience. While we included three auxiliary cases for the sake of counterfactual analysis, we had limited data on these cases. Elaborating our model in Fig. 1 would thus benefit from further comparative analysis or even quantitative testing of hypotheses based on our propositions. Elaborating and substantiating our model is also practically relevant, because while our analysis highlights the innovative responses of some corporations to grand challenges, it cautions against too much optimism because it also provides at least an initial explanation for why many other corporations do not develop such responses.

Second, because of our sample size and study duration we are unable to discuss in any detail the outcomes or impacts of these efforts, even though the development of impact logic models (Wry and Haugh 2018) was an important part of our case analyses (and this was of particular interest to the

² We thus emphasise “limited statehood” as an important motivation in our model, rather than “institutional voids,” because it is more specific, and also because it is less burdened by possibly problematic assumptions (Bothello et al. 2019).

managers participating in our engaged scholarship project). Studying the impacts of companies' community resilience building efforts thus remains an important ambition, for both scholarly and practical reasons. More specifically, attention should be given to possible unintended consequences. In our research, we did give attention to two possible unintended consequences. We explored whether companies' contributions might replace and "crowd out" the state from fulfilling its constitutional responsibilities (cf. Hamann 2019), or whether they might create unjust outcomes in the form of benefits to well-off community members (e.g., InCo clients) at the expense of poor and vulnerable community members. Despite our probing we did not find evidence in our cases of these unintended consequences. Nevertheless, in the context of broader debate surrounding companies' contributions to filling governance gaps (e.g. Scherer and Palazzo 2011), these concerns deserve further consideration.

Conclusion

We explored why and how corporations seek to build community resilience as a strategic response to grand challenges. Our model highlights the role of firm- and place-specific resources, as well as limited statehood, in motivating and shaping such corporate efforts. We have thus tried to catch up with corporate efforts that have arguably outpaced scholars' efforts to empirically analyse organisational responses to grand challenges. We found in the process that well-worn theoretical perspectives still provide powerful platforms for explaining such innovative strategies, but they require notable expansions in their assumptions of corporations' strategic priorities and responses to institutional complexity wrought by grand challenges, with significant implications for both scholarship and practice.

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Compliance with ethical standards

Conflicts of interest This research has been supported by an engaged scholarship initiative, in which corporate members contribute an annual fee that is used to support research projects. Some of the case study companies included in research reported on in this paper are members of this initiative. The role of this engaged scholarship initiative has been described as an important component of our methodology in the paper.

Ethical approval All procedures were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

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Appendix: Basic Interview Protocol

The first-order questions (numbered) represent priority questions that we always posed in interviews, while the second-order questions (lettered) represent follow-up queries that we posed when interviewees responded in only a partial manner to the priority question.

1. What is the community resilience initiative trying to achieve?
2. Why and how was it set up?
3. Who are the participants and why are they involved?
 - a. Why are you and your organisation involved? What is the context within and outside your organisation that is motivating your involvement?
 - b. How would you characterise other participants' motivations to be involved?
4. Are there perhaps people or organisations who should participate in the initiative, but do not?
5. How is the initiative trying to achieve its objectives?
 - a. What are the different participants' roles and how were they determined?
 - b. Are these roles governed or monitored in some way?
 - c. Have these roles changed over time?
6. How would you characterise the participants' interactions?
7. To what extent is the initiative achieving its objectives?
 - a. What are intended and unintended outcomes and impacts?
 - b. How are these impacts assessed by participants or others?

8. Who benefits the most from this initiative?
9. Are there any people who should perhaps benefit, but do not?
 - a. Are there people who are perhaps negatively impacted?
10. As a result of the initiative, have you or others gained any particular insights or have you changed your perspective on any of the issues—and if so, how?
 - a. Have you been surprised about anything?
11. Do you have any questions on your mind about the initiative, or things you think we ought to focus attention on?
 - a. Do you have any questions about our research?
12. Can you recommend people or groups we should speak to?

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