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The role of entrepreneurial resource mobilization for the effectiveness of strategic orientations in small ventures: A configurational perspective

Martina Battisti
Corresponding author
Grenoble Ecole de Management
martina.battisti@grenoble-em.com

Shuangfa Huang
University of Sheffield
shuangfa.huang@sheffield.ac.uk

Isabella Hatak
University of St. Gallen
isabella.hatak@unisg.ch

Haibo Zhou
University of Nottingham Ningbo China
haibo.zhou@nottingham.edu.cn

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Abstract

Strategic orientations have been highlighted as important drivers of venture performance. While sustainable and innovative strategic orientations may contribute to venture performance, pursuing them entails complex resource demands that are challenging to address, particularly for small ventures. In this study, we argue that it depends on the entrepreneurial resource mobilization approach whether small ventures can realize the potential performance benefits from pursuing sustainability orientation and innovativeness as strategic alternatives or complements. Following a three-stage configurational theorizing approach, we applied fuzzy-set qualitative comparative analysis to a sample of 403 UK ventures. Our findings advance understanding of the role of entrepreneurial resource mobilization for the effectiveness of strategic orientations in small ventures. Specifically, we contribute to theorizing of entrepreneurial resource mobilization as a cognitive-behavioural approach by disentangling the role of resource-induced coping heuristics and by highlighting how they interact with bricolage to address the complex resourcing demands of sustainability orientation and innovativeness.

Keywords

Sustainability orientation, innovativeness, bricolage, resource-induced coping heuristics, fsQCA, venture performance, small ventures

INTRODUCTION

Strategic orientations are the principles underlying the activities of a venture and are important drivers of its performance (Gatignon & Xuereb, 1997). As strategic orientations are distinct in focus, they can be pursued on their own (i.e., as strategic alternatives), or in combination (i.e., as strategic complements). When combined, the distinct focus of each orientation can complement the other to result in superior venture performance (Hakala, 2011). However, to realize the superior performance potential of strategic orientation complementarity, mobilizing resources is critical (Holcomb, Holmes & Connelly, 2009; Schweiger et al., 2019) to ensure that the venture's resources are aligned with its strategic orientations (Deutscher et al., 2016; Ketchen, Hult & Slater, 2007). Yet, despite this recognized importance of resource mobilization, our understanding of *how* resources are mobilized to realize this performance potential remains limited (Clough et al., 2019; Zahra, 2021).

Sustainable innovation in small ventures provides a relevant strategic context to explore the role of resource mobilization. Being sustainable and innovative creates more complex resource demands than other combinations of strategic orientations (Alerasoul et al., 2022) as small ventures need to achieve economic as well as environmental and social performance, in the short as well as the long term (Bos-Brouwers, 2010; Cillo et al., 2019). This can make business processes more complex and costly (Chistov et al., 2023), thus exceeding the already limited resources of small ventures (Aldrich & Auster, 1986). In such a context, the entrepreneur's approach to mobilizing resources becomes decisive to realize potential strategic advantages (DiVito & Ingen-Housz, 2021). Since the implementation of strategic orientations is inherently resource dependent (Deutscher et al., 2016), this creates a tension between the ambition for sustainable innovation and the practical limitations of resourcing, one that entrepreneurs often find difficult to navigate (Cillo et al., 2019; Chistov et al., 2023; DiVito & Ingen-Housz, 2021). Rather than pursuing the two orientations in combination, entrepreneurs might therefore need to trade-off allocating limited resources to either sustainability or innovative orientation (Alerasoul et al., 2022), thereby foregoing the performance potential of strategic orientation complementarity and risking suboptimal economic, social and environmental outcomes. In fact, empirical evidence shows

that combining sustainable and innovative orientations does not necessarily translate into superior performance for small ventures (Chistov et al., 2023). To conclude, the more complex resource demands of sustainable innovation, combined with the inherent resource limitations of small ventures, make the combination of sustainable and innovative orientations a relevant strategic context where the entrepreneur's resource mobilization approach is particularly critical. Examining this context allows us to better understand *how* entrepreneurs mobilize resources to realize the performance potential of combining these two strategic orientations.

Bricolage - the behavioural practice of creatively recombining existing resources (Baker & Nelson, 2005) - is an entrepreneurial resource mobilization approach well recognized for its capacity to nurture innovativeness (Baier-Fuentes et al., 2023, Beltagui, Sesis & Stylos, 2021; Senyard et al., 2014; Witell et al., 2017). However, its focus on temporarily “making do” (Baker & Nelson, 2005) by relying on informal, low-cost inputs (Steffens et al., 2023), can undermine venture performance in the long-term (Fisher, 2012) making it less effective to address the resource demands of sustainability which require a future-oriented alignment of resources (Alerasoul et al., 2022). As entrepreneurs do not know a priori which resources will be needed in the future (Zahra, 2021), heuristics, i.e., cognitive mechanisms that help entrepreneurs “fill information voids” (Lanivich et al., 2023, p.4), can assist entrepreneurs in making decisions and enable effective action (Busenitz & Barney, 1997). Indeed, heuristics have been identified as particularly relevant to anticipate and meet these complex resource demands associated with sustainable innovation (Alerasoul et al., 2022). *Resource-induced coping heuristics (RICH)* introduces such a cognitive mechanism to entrepreneurial resource mobilization. RICH are experience-based heuristics that entrepreneurs deploy when facing complex resource demands (Lanivich, 2015). These heuristics enable entrepreneurs to anticipate the acquisition, protection, and development of resources to support the venture's strategic orientations (Adomako, 2021). We therefore argue that RICH can help entrepreneurs anticipate which resources matter most to sharpen the “making do” focus of bricolage, directing entrepreneurs toward resource re-combinations that better align with the resource demands of sustainable and innovative orientations.

However, our understanding of how bricolage and RICH *interact* to enable effective resourcing is still limited and merits exploration (Baier-Fuentes et al., 2023). This is important as it can help advance theorizing on cognitive-behavioural mechanisms of entrepreneurial resourcing (Williams, Li & Zhao, 2025), as well as address the problem of small ventures struggling to effectively realize the performance potential of sustainable and innovative orientations (Chistov et al., 2023). This study therefore explores *how entrepreneurial resource mobilization (i.e., bricolage and RICH) interacts with sustainability orientation and innovativeness to explain small venture performance*.

Following the three-stage configurational theorizing approach by Furnari et al. (2021), we first conduct a comprehensive literature review to *scope* relevant conditions, i.e., sustainability orientation, innovativeness, bricolage and RICH that might influence small venture performance. We then *link* the identified conditions in a configurational framework, highlighting how they might interact with each other in multiple ways to explain small venture performance. Next, we apply fuzzy-set qualitative comparative analysis (fsQCA, Ragin, 2008) to a sample of 403 small ventures. FsQCA is considered an ideal approach to examine strategic orientations (Khizar et al., 2022) as it can capture complex interactive effects of theory-based conditions (Kraus, Ribeiro-Soriano & Schüssler., 2018, p. 33). Last, we *name* each of the identified pathways, discuss them and develop theoretically relevant propositions.

This study makes three key contributions to entrepreneurship research. First, we contribute to the understanding of entrepreneurial resource mobilization as a cognitive-behavioural approach by showing that effective resourcing in small ventures arises from the interplay between cognition and behaviour (Williams, Li & Zhao 2025). Prior research viewed bricolage typically as temporary behavioural response to limited resources (Baker & Nelson, 2005), yet our findings show that when anchored in resource-induced heuristics, bricolage becomes a cognitively guided resource mobilization approach (Busch & Barkema, 2021). By identifying three distinct resource mobilization pathways that combine heuristics and bricolage, we contribute to theorizing of entrepreneurial resourcing at the intersection of cognition and behaviour (Clough et al., 2019; Reypens, Bacq & Milanov, 2021; Williams, Li & Zhao, 2025; Zahra, 2021). Second, the study advances understanding how entrepreneurial resource

mobilization helps small ventures realize the performance potential of their strategic orientations (Adomako, 2021; Amini Sedeh, Caiazza & Pezeshkan, 2023). In the strategic context of our study, findings highlight the important role of entrepreneurial agency. Specifically, we show that the performance potential of sustainable and innovative orientations is not determined solely by structural resource limitations in small ventures (Chistov et al., 2023) but depends on *how* entrepreneurs think about resources before bringing them into use. Each of the three pathways represents a distinct resource mobilization approach that demonstrates *how* entrepreneurs can mobilize resources to achieve strategic alignment. Third, findings advance understanding of entrepreneurial resource mobilization for sustainable entrepreneurship (DiVito & Ingen-Housz, 2021) by identifying distinct resource mobilization approaches depending on whether sustainability orientation is pursued as a strategic alternative or as a complement to innovativeness. This distinction is relevant as it highlights that sustainability orientation needs different approaches to resourcing depending on the broader strategic context in which it is pursued. Given the range of unprecedented global challenges, including climate change, natural resource depletion and social inequalities (World Economic Forum, 2025), the need to understand the conditions under which sustainable and innovative small ventures can thrive, is now more important than ever (He et al., 2024).

SUSTAINABILITY ORIENTATION, INNOVATIVENESS, AND SMALL VENTURE PERFORMANCE

Sustainability orientation refers to the principles that guide activities associated with balancing economic with environmental and social value creation (Kuckertz & Wagner, 2010). *Innovativeness* also represents a strategic orientation (Lomberg et al., 2017), defined as the “tendency to engage in and support new ideas, novelty, experimentation, and creative processes” that can result in the introduction of new products and services (Lumpkin & Dess, 1996, p. 142). By combining sustainable and innovative strategic orientations, ventures aim to achieve “innovations in which the renewal or improvement of products, services, technological or organizational processes not only delivers an improved economic performance, but also an enhanced environmental and social performance, both in

the short and long term” (Bos-Brouwers, 2010, p. 422). The potential for complementarity between these strategic orientations arises from their distinct *performance focus* (i.e., economic as well as social and environmental performance) as well as *temporal focus* (i.e., short-term as well as long-term perspective) (Cillo et al., 2019). However, realizing this complementarity also introduce more complex resource demands, as ventures must simultaneously address immediate market pressures and anticipate future societal needs (Alerasoul et al., 2022).

As for performance focus, sustainability-oriented ventures need to carefully balance economic performance against social and environmental performance, i.e., the so-called triple bottom line (Elkington, 1998). For these ventures, generating economic returns is not enough, but they also need to generate positive societal impact (Kuckertz & Wagner, 2010). Stakeholder engagement therefore tends to be more inclusive and broad-based, focusing not only on customers and investors, but also governments, regulatory bodies and local communities (Matarazzo, Oduro & Gennaro, 2025; Khizar et al., 2024). Each of these stakeholders has different expectations, which makes engagement more complex and costly for small ventures (Kautonen et al., 2020). This often exceeds the existing resources of small ventures (Chistov et al., 2023), requiring significant *additional resource* investments (Hoogendoorn, van der Zwan & Thurik, 2019). By contrast, innovative ventures engage more narrowly with stakeholders - predominantly customers and investors - who are more directly tied to the venture's economic performance (Narver, Slater & MacLachlan, 2004). Small innovative ventures therefore do not need to respond to the same multi-dimensional performance demands and diverse stakeholder expectations that sustainability-oriented ventures need to. As a result, empirical evidence suggests that small ventures can capitalize on innovativeness by recombining their *existing resources* (Senyard et al., 2014). As for temporal focus, sustainability orientation focuses on longer-term positive societal change that requires a forward-looking perspective (Khizar et al., 2022). As social and environmental impacts often only materialize in the long-term (Schaltegger & Wagner, 2011), small sustainability-oriented ventures need to anticipate *future resource demands* (Hoogendoorn, van der Zwan & Thurik, 2019). By contrast, innovativeness addresses current market opportunities and competitive pressures to gain first-

mover advantages (Reyes-Gómez, Lopez & Rialp, 2025) to which small ventures respond through extemporaneous resourcing behaviour that addresses more *immediate resource demands* (Senyard et al., 2014). Table 1 summarizes the different resource requirements for sustainability orientation and innovativeness.

Table 1: Resource requirements for sustainability orientation and innovativeness

	Sustainability orientation	Innovativeness
Performance focus	Balances economic, social, and environmental outcomes requiring broad stakeholder engagement	Focuses primarily on economic outcomes requiring more narrow stakeholder engagement
Temporal focus	Addresses societal change in the long-term	Addresses more immediate market opportunities or competitive pressures
Resource requirements	Need to anticipate future resource demands; requires additional resources	Need to respond to immediate resource demands; sufficient to use existing resources

While pursuing sustainable and innovative orientations in combination might allow small ventures to develop more radical innovation (Schaltegger & Wagner, 2011), the discussion highlights that this combination of strategic orientations also creates more complex resource demands (Alerasoul et al., 2022). This is problematic, as small ventures have limited internal resources and they face difficulties acquiring external resources as their small size signals limited gains from scale economies, enhancing uncertainty, information asymmetry and moral hazard (Farè, Dejardin & Toulemonde, 2024). Specifically, these ventures struggle to communicate their multi-dimensional performance focus (i.e. triple bottom line) to professional investors who prioritize economic returns over wider social and environmental returns (Vismara, 2019). As a result, empirical evidence shows that combining sustainable and innovative orientations does not necessarily translate into superior performance for small ventures (Chistov et al., 2023).

THE ROLE OF ENTREPRENEURIAL RESOURCE MOBILIZATION

Resource mobilization has long been acknowledged as being critical to realize the superior performance potential of strategic orientation complementarity (Holcomb et al., 2009; Schweiger et al., 2019) as it ensures that the venture's resources are aligned with its strategic orientations (Ketchen, Hult & Slater, 2007; Deutscher et al., 2016). Small ventures pursuing sustainable innovation face greater

difficulties achieving this alignment (Chistov et al., 2023; Peng et al., 2020) as being sustainable and innovative creates more complex resource demands (Alerasoul et al., 2022). Yet, small ventures have limited internal resources and face difficulties accessing external ones (Aldrich & Auster, 1986; Vismara, 2019), thereby rendering the entrepreneur's role in mobilizing resources particularly pivotal. In other words, it is the entrepreneur who brings to life the potential of sustainable and innovative orientations through resource mobilization (DiVito & Ingen-Housz, 2021). Depending on *how* entrepreneurs mobilize resources, small ventures might pursue the two orientations in combination, or they might need to trade-off allocating limited resources to either sustainable or innovative orientation (Alerasoul et al., 2022) thereby risking suboptimal economic, social and environmental outcomes. Yet, despite this recognized importance of entrepreneurial resource mobilization (Clough et al., 2019, Zahra, 2021), we lack a fine-grained understanding of *how* entrepreneurs actually mobilize resources to realize the performance potential of strategic orientation complementarity.

Bricolage is a well-established entrepreneurial resource mobilization approach, recognized for its effectiveness in fostering innovativeness (Baier-Fuentes et al., 2023, Beltagui, Sesis & Stylos, 2021; Senyard et al., 2014; Witell et al., 2017). Grounded in a social constructivism (Berger & Luckmann, 1967), Baker and Nelson (2005, p. 333) define bricolage as “making do by applying combinations of resources at hand to new problems and opportunities”. Bricolage enables entrepreneurs to respond flexibly and extemporaneously to immediate resource demands by recombining whatever resources are available (Baker & Nelson, 2005; Lanivich et al., 2023). However, bricolage typically does not involve anticipating future resource needs or deliberately acquiring new resources (Lanivich et al., 2023). Its reliance on low-cost, informal inputs (Clough et al., 2019) can produce “second-best solutions” and a “tinkering trap,” increasing compromises (Steffens et al., 2023) that may ultimately hamper longer-term performance (Baker & Nelson, 2005; Kickul et al., 2018). Thus, while bricolage supports innovativeness by being responsive to immediate market pressures, it might have limitations in preparing small ventures for longer-term challenges associated with sustainability.

To counter these limitations, researchers have called to examine bricolage alongside complementary resource mobilization approaches (Baier-Fuentes et al., 2023; Reypens, Bacq & Milanov, 2021). Specifically, a growing stream of research highlights that resourcing occurs at the intersection of behaviour and cognition (Williams, Li & Zhao, 2025). As entrepreneurs do not know a priori which resources they will need in the future (Zahra, 2021), they use heuristics to help them make decisions (Busenitz & Barney, 1997). Indeed, heuristics have been identified as particularly relevant to anticipate and meet the complex resource demands associated with sustainable innovation (Alerasoul et al., 2022).

Resource-induced coping heuristics (RICH), grounded in Conservation of Resources (CoR) Theory (Hobfoll, 2011), introduces such a cognitive mechanism to resource mobilization. Heuristics assist entrepreneurs by helping them “fill information voids” to enable effective action (Lanivich et al., 2023, p.4). In turn, heuristics have been shown to be a robust predictor of venture performance (Lanivich, 2015). RICH refers to the cognitive mechanism that precedes the acquisition, development, and protection of resources. The acquiring resources heuristic represents the cognitive process that allows entrepreneurs to attract resources without necessarily owning them physically. The developing resources heuristic allows entrepreneurs to put effort into making existing resources more valuable or useful. Lastly, through the protecting resources heuristic entrepreneurs can keep resources safe from loss.

Table 2: Comparison between bricolage and RICH

	Bricolage	RICH
Theoretical foundation	Social constructivism (Berger & Luckmann, 1967)	Conservation of Resources Theory (Hobfoll, 2011)
Mechanism	Behavioural (Baker & Nelson, 2005; Baier-Fuentes et al., 2023)	Cognitive (Lanivich, 2015; Ryan & Deci, 2017; Lanivich et al., 2021)
Resource focus	Recombining existing resources (Baker & Nelson, 2005)	Heuristically attending to the acquisition, protection and development of resources (Lanivich, 2015)
Time	Extemporaneous, responding to immediate resource demands (Baker & Nelson, 2005; Reypens, Bacq & Milanov, 2021; Lanivich et al., 2023)	Anticipatory, expecting potential future resource demands (Lanivich, 2015)

In sum, although the scholarly debate indicates that bricolage and RICH have the potential to complement each other in enabling entrepreneurs to realize the performance potential of combining sustainable and innovative strategic orientations (see Table 2 for a summary), empirical evidence remains lacking. To address this gap, we examine the interplay between RICH and bricolage to better understand how entrepreneurs mobilize resources to realize the performance potential of strategic orientations (Adomako, 2021; Baier-Fuentes et al., 2023).

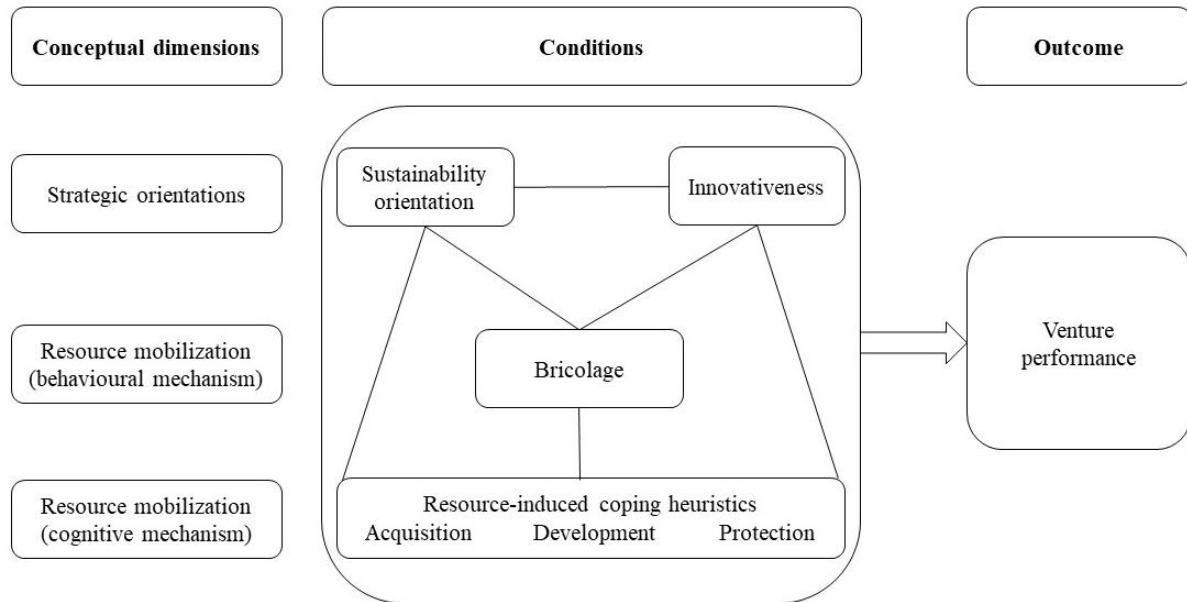
CONFIGURATIONAL FRAMEWORK

Figure 1 shows the configurational framework for the present study following recommendations for visual representation by Beynon et al. (2021). Based on the scoping of the literature, we conceptualize sustainability orientation and innovativeness as strategic orientations that, in the context of small ventures, might act as strategic complements or not, contingent on the entrepreneurs' approach to resource mobilization.

Specifically, by conceptualizing entrepreneurial resource mobilization as a cognitive-behavioural approach (Adomako, 2021; Baier-Fuentes et al., 2023; Lanivich et al., 2023; Reypens, Bacq & Milanov, 2021; Williams, Li & Zhao, 2025), we argue that RICH serve as a cognitive precursor that enables the successful practice of bricolage. RICH provide entrepreneurs with the cognitive foresight to anticipate the acquisition, protection, and development of resources needed for long-term societal impact (Lanivich, 2015), while bricolage offers behavioural flexibility, allowing entrepreneurs to recombine existing resources to meet immediate demands (Baker & Nelson, 2005). In other words, the cognitive processes involved in developing existing resources to make them more valuable or useful lay the foundation for entrepreneurs to creatively recombine resources. Moreover, the acquiring and protecting heuristics may help entrepreneurs mitigate the risks associated with bricolage. Specifically, heuristically attending to acquiring new resources and protecting existing ones from loss might allow entrepreneurs to escape the “second-best solution” and “tinkering trap” that can result from bricolage (Steffens et al., 2023). Understanding how RICH interact with bricolage will provide novel insights into how entrepreneurs can effectively align resources to reconcile the short-term resource demands of

innovativeness with the future-oriented requirements of sustainability orientation, thereby enhancing the likelihood that strategic orientation complementarity translates into superior venture performance.

Figure 1: Configurational framework



METHODS

We adopted a configurational approach using fuzzy-set qualitative comparative analysis (fsQCA). From a configurational theorizing perspective a system “can reach the same final state from different initial conditions and by a variety of different paths” (Katz & Kahn, 1978, p. 34). FsQCA allows us to explore how resource mobilization approaches may interact with a venture’s strategic orientations to explain venture performance (causal conjunction), how the same outcome can be explained through multiple pathways (equifinality); and how the conditions explaining the presence of the outcome might not mirror those for the absence of the outcome (asymmetry), thus addressing recent calls to examine strategic orientations based on a configurational approach (Khizar et al., 2024). Given that fsQCA can help to capture the causal complexity that often characterize organizational phenomena (Furnari et al., 2021), it has become increasingly relevant in strategy, entrepreneurship, and organizational research (for recent reviews and best practices, see Di Paola et al., 2025; Kumar et al., 2022; Furnari et al., 2021; Greckhamer et al., 2018). As complex combinations like the ones suggested are still under-explored, we follow an inductive approach to configurational theorizing (Di Paola et al., 2025).

Sample and data collection

Using a repeated survey design, we collected data through Prolific, an online crowdsourcing platform for research that has been shown to provide superior sample and data quality compared to other platforms (Peer et al., 2021). From the population of individuals residing in the UK who were running their own ventures for at least seven months, we enlisted 600. After eliminating 20 cases due to missing data on focal condition, as well as outliers related to firm size (i.e., more than 50 employees) as well as response time we ended up with a final sample size of 403 cases of small ventures across three survey waves. Data was collected using Qualtrics with the link being distributed to survey participants via Prolific.

We focus on small ventures in the UK for two reasons. First, small ventures are more likely to have a limited resource base, which in turn may limit the effectiveness of their strategic orientations (Chistov et al., 2023). As such, the implications of resource mobilization on venture performance tend to be more prominent in small than large ventures. Second, it is important to consider the factors that influence the performance of small ventures given that they account for 99.2% of the total business population in the UK (Department for Business & Trade, 2024). The characteristics of the ventures concerning size, age, and industry sector are detailed in Appendix 1.

Measures

Appendix 2 summarizes the survey items for the outcome condition venture performance and the six causal conditions including sustainability orientation, innovativeness, bricolage as well as acquiring, developing and protecting resource heuristics from the RICH. The average of the survey items was used to represent each of the conditions.

Outcome condition. Venture performance was measured by inviting the participants to rate the performance of their ventures during the past months, compared to their main competitors on four dimensions: profits, sales development, cash flow (liquidity), and market value (Wiklund & Shepherd, 2005). This measure allows us to capture the different aspects of venture outcome related to both financial and product market performance (Richard et al., 2009). We used subjective performance

measure because objective data is scarce, and evidence has shown moderate correlation between subjective and objective measures (Wall et al., 2004). This approach is consistent with prior research using cross-industry samples of small, independently owned ventures (Deutscher et al., 2016). Specifically, we used a time-lagged approach by measuring venture performance in three waves covering 18 months (i.e., wave 1 covers the last 12 months, waves 2 and 3 cover the last 3 months each) to smooth out fluctuations in performance due to the pandemic. The average of the data collected from all three waves of survey was used to represent venture performance.

Causal conditions: Strategic orientations. Sustainability orientation was measured based on six items adapted from Kuckertz and Wagner (2010). Using a five-point scale (1= completely inaccurate and 5= completely accurate), participants were invited to indicate their level of agreement with six statements concerning environmental protection and social responsibility. The scale captures entrepreneurs' beliefs in integrating environmental and societal considerations in operating a venture. It has been found to be widely used in empirical studies concerning sustainability orientation in a recent systematic review (Khizar et al., 2022). Innovativeness was measured based on the three items adopted from Covin and Slevin (1989) concerning the strategic innovation orientation of their venture.

Causal conditions: Resource mobilization. Bricolage was measured based on the eight items developed by Senyard et al. (2010). Using a five-point scale (1= never and 5=always), participants were invited to indicate the extent to which a series of statements represent how they go about doing business. The RICH scale concerning acquiring, protecting, and developing resources was developed by Lanivich (2015). The scale includes 16 items, with five items concerning acquiring resources, five measuring protecting resources, and six covering developing resources. Using a seven-point scale (1=strongly disagree and 7=strongly agree), participants were invited to indicate the extent to which they agree or disagree with each of the statements.

Measure assessment

We performed a series of tests to assess the reliability and validity of the outcome and causal conditions. As shown in Appendix 2, all factor loadings were above 0.60. The Cronbach's alpha (α)

and composite reliability (CR) were above the recommended value of 0.70, and the average variance extracted (AVE) were above the recommended level of 0.50 (Hair et al., 2014). We then performed a confirmatory factor analysis (CFA) based on the outcome and causal conditions. The measurement model shows good model fit with the confirmatory fit index (CFI) = 0.93 (>0.90), the root mean squared error of approximation (RMSEA) = 0.05 (<0.08), the normed $\chi^2 = 2.09$ (chi-square value 1270.64 divided by the degrees of freedom 608), which is acceptable (Hair et al., 2014). Taken together, these results demonstrate good reliability and validity of the conditions used in our study.

DATA ANALYSIS AND RESULTS

Data calibration

To prepare for the fuzzy-set analysis, we transformed the original Likert scale values into fuzzy membership scores from 0 to 1, a process known as data calibration (Ragin, 2008). This process requires first setting three anchoring points: full membership (1), cross-over point (0.5), and full non-membership (0). In line with previous studies (Stroe et al., 2022; Huang et al., 2022), we used 90th, 50th, and 10th percentile to represent the three anchoring points for all conditions because there is no strong theoretical or empirical basis for applying different calibration thresholds. Table 3 shows the descriptive statistics, correlations, and data calibration thresholds.

Analysis of necessary conditions

We first conducted a necessity analysis to assess if any of the causal conditions is a necessary condition for the outcome to present. Previous research suggests that a condition is considered as a necessary condition when the consistency score is above 0.90 (Schneider & Wagemann, 2012) and the coverage score is above 0.65 (Muñoz et al., 2022). The results in Table 4 show that none of the causal conditions is a necessary condition for the presence or the absence of superior venture performance as the consistency and coverage scores are all below the recommended threshold.

Table 3: Descriptive statistics, correlations, and calibration thresholds

Conditions	Descriptives		Correlations						Fuzzy set calibrations		
	Mean	SD	1	2	3	4	5	6	Fully in	Cross-over	Fully out
1. Sustainability orientation	3.86	0.72							4.83	4.00	3.00
2. Innovativeness	3.57	1.45	.11*						5.33	3.67	1.67
3. Bricolage	3.49	0.78	.20**	.24**					4.38	3.50	2.50
4. Acquiring resources	4.06	1.17	-0.05	.23**	.20**				5.60	4.20	2.40
5. Protecting resources	5.30	0.96	-0.01	0.01	.14**	.44**			6.60	5.40	4.00
6. Developing resources	4.65	1.02	0.08	.27**	.31**	.56**	.45**		6.00	4.67	3.33
7. Venture performance	2.47	0.91	0.01	.21**	.38**	0.07	-0.05	.11**	3.08	2.50	1.75

** p < 0.01; * p < 0.05

Analysis of sufficient conditions

The sufficiency analysis is used to identify the configuration of conditions that are sufficient to explain venture performance. We performed the sufficiency analysis in several steps. First, we constructed a truth table with 2^k rows, where k refers to the number of causal conditions examined. Given that this study includes six conditions, the truth table contains 64 logically possible rows. Each row represents one potential configuration of causal conditions that might (or might not) be associated with the outcome condition. Second, we reduced the truth table by removing rows that contain less than three empirical cases to increase the parsimony of the results. This is in line with the suggestion that a superior frequency threshold should be used when the sample size is large (e.g., ≥ 150 cases) (Kraus, Ribeiro-Soriano & Schüessler, 2018; Ragin, 2008). After the reduction process, over 97% of the cases were retained, above the suggested 75% minimum (Ragin, 2008). Third, we coded the outcome of the remaining rows as 1 or 0 based on the consistency threshold of 0.80 (Ragin, 2008) and a proportional reduction in inconsistency (PRI) threshold of 0.60 as the literature suggests significant inconsistency occurs when configurations with PRI scores below 0.50 (Greckhamer et al., 2018). The truth tables are provided in Appendix 3. As a final step, we used the fsQCA 3.0 software to perform the analysis based

on the model: *Venture performance* = *f* (*Sustainability orientation, Innovativeness, Bricolage, Acquiring resources, Protecting resources, and Developing resources*).

The results from sufficiency analysis are shown in Table 5, left panel; the results in the right panel are discussed in the robustness tests section. The analysis derives three solutions based on how the logical remainders, rows that contain no empirical cases, are treated: complex, parsimonious, and intermediate solutions (Ragin, 2008). We reported the results based on the complex solution, meaning logical remainders are avoided in the analysis as we lack strong theoretical and empirical evidence to make assumptions about the logical remainders. The overall solution consistency is above the threshold of 0.80 (Ragin, 2008), suggesting the identified configurational pathways can consistently explain the outcome. The overall solution coverage score is 0.42, demonstrating that the identified pathways explain a substantial proportion of the cases.

Table 4: Analysis of necessary conditions for the presence and absence of superior venture performance

Causal conditions*	Presence		Absence	
	Consistency	Coverage	Consistency	Coverage
Sustainability orientation	0.60	0.64	0.57	0.61
~Sustainability orientation	0.63	0.59	0.66	0.63
Innovativeness	0.61	0.62	0.59	0.60
~Innovativeness	0.60	0.60	0.62	0.62
Bricolage	0.69	0.66	0.59	0.57
~Bricolage	0.55	0.57	0.64	0.67
Acquiring resources	0.61	0.61	0.61	0.62
~Acquiring resources	0.63	0.62	0.62	0.61
Protecting resources	0.62	0.63	0.60	0.62
~Protecting resources	0.62	0.61	0.63	0.62
Developing resources	0.64	0.63	0.61	0.61
~Developing resources	0.60	0.60	0.63	0.63

* ~ sign refers to absence of the causal condition

Table 5: Pathways for the presence and absence of superior venture performance

Causal conditions	Presence				Absence		
	P1	P2	P3	P4	A1	A2	A3
Sustainability orientation		●	●	⊗	⊗	●	⊗
Innovativeness	●	⊗	●	⊗	●	⊗	⊗
Bricolage	●	●	●	●	⊗	⊗	⊗
Acquiring resources	⊗	⊗	●	●	⊗	⊗	⊗
Protecting resources		●	⊗	●	⊗	⊗	●
Developing resources	●			⊗	⊗	⊗	●
Consistency	0.83	0.86	0.84	0.88	0.86	0.83	0.88
Raw coverage	0.27	0.21	0.21	0.18	0.21	0.22	0.17
Unique coverage	0.07	0.04	0.04	0.03	0.07	0.07	0.04
Overall solution consistency	0.82				0.83		
Overall solution coverage	0.42				0.35		

Note: ● (⊗) represents the presence (absence) of the condition

The left panel of Table 5 shows that superior venture performance is explained by four pathways i.e., P1 to P4. P1 shows that superior venture performance can be explained through innovativeness as a strategic orientation in combination with bricolage and developing resource heuristics, despite acquiring resource heuristics being absent and sustainability orientation and protecting resource heuristics not being relevant. P2 shows that sustainability orientation, bricolage, and protecting resource heuristics explain superior venture performance, despite innovativeness and acquiring resource heuristics being absent and developing resource heuristics not being relevant. Given that sustainability orientation and innovativeness act as strategic alternatives in these two pathways, we label P1 “Innovation-driven resource mobilization” and P2 “Sustainability-driven resource mobilization”. P3 shows that sustainability orientation, innovativeness, bricolage, and acquiring resource heuristics explain superior venture performance, despite protecting resource heuristics being absent and developing resource heuristics not being relevant. Given that innovativeness and sustainability-orientation complement each other in this pathway, we label it “Sustainable innovation-driven resource mobilization”. Lastly, in P4 both strategic orientations are absent, while bricolage, acquiring resource

heuristics, and protecting resource heuristics are present to explain superior venture performance. It is likely that ventures representing this pathway pursue strategic orientations beyond those explored in this study. For this reason, we are naming this pathway “Residual resource mobilization approach” and exclude it from further discussion.

Table 6 provides a summary of pathways and their respective labels, representing the third stage of the configurational theorizing approach advocated by Furnari et al. (2021).

Table 6: Naming of pathways

Pathway	Naming of pathway	Strategic orientation	Resource mobilization approach
P1	Innovation-driven resource mobilization	Innovativeness as strategic alternative	<i>Resource-developing</i> approach through bricolage and developing resource heuristic
P2	Sustainability-driven resource mobilization	Sustainability orientation as strategic alternative	<i>Resource-protecting</i> approach through bricolage and protecting resource heuristic
P3	Sustainable innovation-driven resource mobilization	Sustainability orientation and Innovativeness as strategic complements	<i>Resource-expanding</i> approach through bricolage and acquiring resource heuristic
P4	Residual resource mobilization approach	Neither sustainable orientation nor innovativeness	Bricolage and acquiring and protecting resource heuristic

Robustness tests

We performed a series of robustness checks through analysing pathways explaining the absence of the outcome, adjusting calibration thresholds, and frequency thresholds following fsQCA best practices (Greckhamer et al., 2018; Douglas, Shepherd & Prentice, 2020). First, we performed additional sufficiency analyses to uncover pathways for the absence of superior venture performance as the outcome condition. It allows us to assess the potential issue of contradictory solutions between the pathways for the presence and absence of the outcome. The results shown in Table 5 right panel indicate that three pathways can explain the absence of superior venture performance. A1 and A2 show that innovativeness or sustainability orientation alone might result in the absence of superior venture performance when other conditions are absent. A3 show that protecting and developing resource heuristics are not sufficient to compensate for the absence of all other conditions. The pathways

explaining the absence of venture performance are all distinct from those explaining its presence, meaning there are no contradictory solutions.

Second, we re-adjusted the calibration thresholds to assess the stability of our results. Specifically, we calibrated our conditions using mean $\pm$ 1 standard deviation points to represent the three anchoring points for all conditions, following the suggestions proposed by Douglas, Shepherd and Prentice (2020). The results are provided in Appendix 4, Table 4.1. As shown in the table, three of the pathways are identical to those identified in our baseline results, and the remaining two pathways are largely consistent with our baseline results. Third, we raised the frequency threshold from three to four cases. The results are provided in Appendix 4, Table 4.2. The results show that two of the pathways are identical to our baseline results. The remaining two pathways are also consistent with our baseline results. Together, these results show that our analysis is not overly sensitive to the set calibration and frequency thresholds thus providing further support to our main results (Ragin, 2008).

Lastly, to assess potential firm size effects, we performed another set of data analysis with firm size as a new causal condition. The results are shown in Appendix 4, Table 4.3. The results show that firm size is not relevant in pathways P1 to P3, where P2 is identical to our baseline results with only minor changes in P1 and P3. Specifically, in P1 sustainability orientation and protecting resources go from irrelevant to absent and present, respectively; in P3, developing resources goes from irrelevant to present. As such, the interpretation of the results and the naming of resource mobilization approaches remain largely unchanged. Interestingly, the results also reveal that the importance of acquiring resources might depend on firm size. For example, P6 shows that acquiring resources is needed when firms are smaller, whereas P5 and P7 show that acquiring resources can be absent when firms are larger.

DISCUSSION AND IMPLICATIONS

The purpose of this study was to explore how entrepreneurial resource mobilization, specifically bricolage and RICH, interacts with sustainability orientation and innovativeness to explain small venture performance. Our findings reveal that small ventures can pursue innovativeness (P1) and sustainability orientation (P2) as *strategic alternatives* or combine them as *strategic complements* (P3),

to achieve superior performance. Importantly, we show that strategic orientations alone are not sufficient to explain superior performance. Instead, their effectiveness hinges on how entrepreneurs mobilize resources to address the distinct resource demands that arise from pursuing these orientations as strategic alternatives or complements.

When innovativeness and sustainability orientation are pursued as strategic alternatives, the findings underscore the importance of aligning resources with the temporal and performance focus of each orientation. For small ventures prioritizing innovativeness (P1), bricolage - when combined with a developing resources heuristic - enables entrepreneurs to flexibly adapt existing resources to emerging opportunities. This *resource-developing approach* supports behavioural agility (Baker & Nelson, 2005) while embedding cognitive foresight that enhances the utility of existing resources (Lanivich et al., 2023). The developing resource heuristic acts as a cognitive scaffold that sharpens the improvisational nature of bricolage by guiding entrepreneurs in how to recombine resources through adaptation and learning (Bush & Barkema, 2021). That bricolage drives innovativeness has long been recognized (Baier-Fuentes et al., 2024, Beltagui, Sesis & Stylos, 2021; Senyard et al., 2014; Witell et al., 2017). However, our findings extend this understanding by showing that the “making do” emphasis of bricolage (Baker & Nelson, 2005) overlooks the cognitive precursor to its behavioural flexibility (Bush & Barkema, 2021). Entrepreneurs do not simply “make do” in an ad hoc fashion; rather, this behaviour is grounded in a developing resources heuristic that helps them decide how to “make do” effectively. This insight reframes bricolage not as a reactive improvisation, but as a cognitively guided resource mobilization approach. Finally, recent evidence indicates that micro ventures are important actors in innovation (Audretsch, Kritikos & Schiersch, 2020; Farè, 2022). We extend this research by identifying the underlying resourcing mechanism that helps entrepreneurs in these ventures to translate innovativeness into superior venture performance.

By contrast, to realize the performance potential of sustainability orientation as a strategic alternative (P2), entrepreneurs integrate bricolage with a protecting resources heuristic, while the acquiring resources heuristic is notably absent. As the strategic focus of sustainable small ventures is

on protecting long-term societal and environmental value (Khizar et al., 2022), these ventures often rely on intangible resources - such as community goodwill, certifications, and specialized knowledge - that are embedded in the venture's identity and stakeholder relationships (Chen, 2008; López-Gamero et al., 2011). Our findings suggest that in this strategic context, the imperative is not to expand the resource base, but to safeguard these mission-critical resources from loss. The protecting resource heuristic thus enables entrepreneurs to anticipate and mitigate risks to these resources, aligning them with the long-term societal and environmental goals of sustainability orientation. This pathway highlights that entrepreneurs can leverage bricolage to meet the longer-term resource requirements of sustainability orientation when cognitively directed toward resource protection. In doing so, our findings show that sustainable small ventures can perform well without being innovative (Reyes-Gómez, Lopez & Rialp, 2025), provided entrepreneurs apply a *resource-protecting approach*.

When sustainability orientation and innovativeness are pursued as strategic complements (P3), resource demands become compounded (Alerasoul et al., 2022). Entrepreneurs must simultaneously address short-term market pressures and long-term societal goals, which significantly increases the complexity of business processes (Chistov et al., 2023). This strategic context requires a heuristic that enables resource acquisition, not merely resource protection (Busch & Barkema, 2021) reflecting the need to reconcile the venture's limited resources with the broader resource demands of sustainable innovation. Our findings show that to realize the superior performance potential of sustainable innovation entrepreneurs adopt a *resource-extending approach* that combines bricolage with an acquiring resources heuristic. Bricolage enables the reconfiguration of existing assets to meet immediate resource demands, while the acquiring resource heuristic - a form of planning cognition - enables entrepreneurs to assess future resource needs, structure their resourcing efforts, and develop appropriate resource acquisition plans (Lanivich et al., 2023). Without such planning, ventures may struggle to signal competence and preparedness to external resource providers (Huang et al., 2022) which might explain documented failures of small ventures to acquire new resources, such as finance, for sustainable innovation (Cumming et al., 2024; Vismara, 2019; Farè, Dejardin & Toulemonde, 2024).

This pathway highlights that strategic complementarity between sustainability and innovativeness is possible in small ventures, but is contingent on entrepreneurs' ability to expand venture resources by anticipating the acquisition of additional resources. This finding also extends to the growing stream of resource mobilization in the context of digitalization (Audretsch & Belitski, 2024; Inceoglu, Vanacker & Vismara, 2024), which represents an increasingly relevant strategic complement for sustainability-oriented ventures (Holzmann & Gregori, 2023).

Overall, our findings identifying three distinct pathways of entrepreneurial resource mobilization that help small ventures translate sustainability orientation and/or innovativeness into superior venture performance. We summarize the discussion as follows:

Proposition 1: When innovativeness and sustainability orientation serve as strategic alternatives, entrepreneurs can realize innovativeness's performance potential by integrating bricolage with a developing resources heuristic without an acquiring resources heuristic.

Proposition 2: When innovativeness and sustainability orientation serve as strategic alternatives, entrepreneurs can realize sustainability orientation's performance potential by integrating bricolage with a protecting resources heuristic without an acquiring resources heuristic.

Proposition 3: When innovativeness and sustainability orientation serve as strategic complements, entrepreneurs can realize their performance potential by integrating bricolage with an acquiring resources heuristic without a protecting resources heuristic.

Implications for theory

Findings from our study make three distinct contributions that advance understanding of entrepreneurial resource mobilization and its role in realizing the performance potential of strategic orientations, specifically sustainability orientation and innovativeness, in small ventures.

First, we advance understanding of entrepreneurial resource mobilization as a cognitive-behavioural approach by demonstrating *how* effective resourcing in small ventures emerges from the interaction between cognition and behaviour (Williams, Li & Zhao, 2025). Prior research has emphasized bricolage as a temporary behavioural response to immediate resource demands (Baker &

Nelson, 2005), often warning against its overuse due to risks of second-best solutions or the “tinkering trap” (Steffens et al., 2023; Fisher, 2012). Our findings challenge this view by showing that when bricolage is anchored in a resource-induced coping heuristic, it becomes a cognitively guided resource mobilization approach capable of addressing both immediate and future resource demands (Busch & Barkema, 2021). This insight contributes to theorizing of entrepreneurial resource mobilization as a cognitive-behavioural approach (Clough et al., 2019; Lanivich et al., 2023; Reypens, Bacq & Milanov, 2021; Williams, Li & Zhao, 2025; Zahra, 2021) by identifying three distinct pathways that illustrate *how* cognition (i.e., heuristics) and behaviour (i.e., bricolage) interact to enable effective entrepreneurial resourcing.

Second, we advance understanding of the role of entrepreneurial resource mobilization in realizing the performance potential of strategic orientations (Adomako, 2021; Amini Sedeh, Caiazza & Pezeshkan, 2023). Specifically, our study helps opening the “black box” of entrepreneurial resource mobilization (Clough et al., 2019) by demonstrating that the effectiveness of strategic orientations depends on *how* entrepreneurs mobilize resources. Importantly, our study was motivated by a particularly relevant strategic context to examine the role of entrepreneurial resource mobilization: sustainability orientation and innovativeness - especially in combination - create more complex resource demands (Alerasoul et al., 2022), yet small ventures operate with inherently limited resources (Aldrich & Auster, 1986). Empirical evidence shows that small ventures often fail to realize the performance potential of these orientations in combination because the resource demands exceed their existing capacity (Chistov et al., 2023). Our findings show that despite these constraints, small ventures can succeed when entrepreneurs align their resource mobilization approach with the strategic orientation pursued. Specifically, we identify three distinct resource mobilization pathways that demonstrate how entrepreneurs can match bricolage with distinct resource heuristics - developing, protecting, or acquiring - to the strategic orientation pursued. This underscores the role of entrepreneurial agency in resource mobilization (DiVito & Ingen-Housz, 2021). Small venture performance is not determined solely by structural resource limitations, but by how entrepreneurs think

about resource demands before acting on them. As a result, our study offers prescriptive insight i.e., helping entrepreneurs make informed decisions about which resource heuristics to apply depending on their strategic orientation. This contributes to a more granular understanding of strategic orientation effectiveness, one that accounts for the complex interaction between strategic orientations, entrepreneurial resource mobilization and venture performance.

Third, we contribute to sustainable entrepreneurship by showing that sustainability orientation in small ventures operates through two distinct strategic pathways, each requiring a different entrepreneurial resource mobilization approach. When pursued on its own (P2), sustainability orientation reflects a low-resource strategic context, where performance is achieved by safeguarding intangible resources (Chen, 2008; López-Gamero et al., 2011) through a protecting resources heuristic. This resource-protecting approach enables small ventures to uphold their sustainable mission without acquiring new resources. However, when sustainability orientation is pursued in combination with innovativeness (P3), it represents a high-resource strategic context. The venture must simultaneously meet short-term market demands and long-term societal goals (Bos-Brouwers, 2010; Cillo et al., 2019), creating more complex resource demands (Alerasoul et al., 2022). Here, the protecting heuristic is insufficient. Instead, entrepreneurs must cognitively anticipate the acquisition of new resources to support potential complementarity between sustainability orientation and innovativeness. This requires a resource-expanding approach, where performance depends on the entrepreneur's ability to anticipate additional resources (Lanivich et al., 2023; Busch & Barkema, 2021). This distinction advances understanding of entrepreneurial resource mobilization in sustainable entrepreneurship (DiVito & Ingen-Housz, 2021) by highlighting that sustainability orientation requires different entrepreneurial resource mobilization approaches depending on whether it is pursued as a strategic alternative or as a complement to innovativeness.

Implications for practice

Findings provide valuable practical implications for practitioners. Specifically, entrepreneurs, but also stakeholders including VCs, should recognize that resource mobilization is critical to realize the

potential performance benefits from pursuing strategic orientations such as sustainability orientation and innovativeness. However, there is no one-size-fits-all approach to resource mobilization, and it is imperative to tailor the resource mobilization approaches (Zhao & Lounsbury, 2016) based on the strategic orientation(s) pursued by the venture. Bricolage is a necessary resource mobilization approach that is best used in combination with selected other resource mobilization approaches (Reypens, Bacq & Milanov, 2021). In particular, our findings point towards the importance of resource-induced coping heuristics to accompany bricolage as a behavioural approach. While it is often challenging for ventures to configure resources effectively to pursue multiple strategic orientations (Wry & York, 2017; York & Venkataraman, 2010), bricolage in combination with resource-induced coping heuristics can mitigate the more complex resource demands by anticipating the demands rather than reacting to them when they arise. Our findings highlight the need for flexibility and adaptability to apply different resource mobilization approaches in response to the resource demands created by different strategic orientations.

Our findings also provide implications for entrepreneurship educators. While bricolage is now widely used in entrepreneurship education as part of theoretical introductions, case studies and practical simulations to illustrate the relevance of entrepreneurial resourcing behaviour (Neck, Greene & Brush, 2014), cognitive resource mobilizations such as RICH are less discussed. Educators can thus help students cultivate a cognitive predisposition to address complex resource demands. As most business schools now integrate sustainability principles throughout all programs including entrepreneurship programs, it seems relevant to not only raise awareness of the importance of sustainability orientation, but also the multi-dimensional performance requirements and additional resource demands that might come with it. As entrepreneurship educators increasingly encourage their students to think about sustainability as well as sustainable innovation, helping them to develop a mindset that prioritizes heuristics related to resource acquisition, protection, and development as a proactive response to complex resourcing needs seems relevant – even for a pure innovation-driven venture as indicated by our research. Fostering entrepreneurial behaviour such as bricolage needs to be complemented by

fostering the equivalent resource-coping mindset to help students understand, develop, and apply different resource mobilization approaches.

Limitations and avenues for future research

Notwithstanding our study's many strengths, it also has limitations. First, we use a convenience sample of entrepreneurs in the UK. Participants were financially rewarded, and study places were filled on a first-come, first-served basis, potentially resulting in rapid-responder bias. To counter these limitations, we have carefully assessed respondents' completion times and excluded outliers who have responded significantly faster than the average. We have also assessed response bias by comparing early with late respondents to detect any systematic differences in response patterns, the results of mean comparison on our variables of interest indicate that there are no systematic differences (t-value varies from -1.45 to 1.68, $p > 0.05$). The nature of the sample potentially limits the generalizability of our findings. As we collected data during a global pandemic which might have represented an extreme context for ventures, researchers might want to replicate our study in different contexts representing different degrees of dynamism. As the anticipatory nature of RICH might be particularly suited in highly dynamic environments (Adomako, 2021), future research could explore the role of the external environment including e.g. the industry on the effectiveness of resource mobilization approaches to advance understanding of boundary conditions.

Second, although we used a time-lagged approach to measuring venture performance to smooth out potential performance variations given the turbulence related to the global pandemic, we did not capture the temporal stability of pathways over time. Using for example panel fsQCA (see e.g., Beynon, Jones & Pickernell, 2020; Guedes et al., 2016) would allow capturing the dynamic interrelationship between strategic orientations, resource mobilization and performance that are reflective of complex processes evolving over time (Hakala, 2011). For example, it would be interesting to explore if the sustainable innovation-driven resource mobilization approach is viable in the long-term or if ventures are pursuing a dual strategic orientation only intermittently, i.e., that there are phases in which ventures are more oriented towards sustainability rather than innovation and vice versa. Better understanding the

sequencing of these two strategic orientations over time and their implications for resource mobilization allows identifying more dynamic patterns that are temporarily more sensitive. Relatedly, we encourage research that explores social and environmental orientation separately as recent research suggests that they reflect distinct resource demands as well as performance outlooks (Chistov et al., 2023).

Third, the use of subjective performance measures represents another potential limitation. We chose subjective over objective measures because objective performance data for privately held small ventures is scarce and often unavailable (Dess and Robinson, 1984). Importantly, comparing performance based on objective measures such as profitability and growth may not be appropriate, as our study involves ventures from different sectors, which are associated with different levels of profitability and growth potential. As Deutscher et al. (2016) noted, subjective performance measures are more appropriate in cross-sector studies, as they can help capture the relative performance of ventures from different sectors. Furthermore, subjective performance measures allow us to capture different aspects of venture outcomes related to both financial and non-financial performance (Richard et al., 2009). This is important because research has highlighted the need to consider various performance measures to avoid over- or underestimating the performance effects of strategic orientations (Schweiger et al., 2019). We expect the risk associated with using subjective venture performance measures to be low, as evidence has shown a moderate correlation between subjective and objective measures (Wall et al., 2004). We also performed further supplementary analysis using sales growth as an alternative outcome condition. The results from supplementary analysis (i.e., see Appendix 5) are broadly comparable with our main results, demonstrating the reliability of our findings.

Lastly, we focused on the combination of one behavioural (i.e., bricolage) and one cognitive (i.e., RICH) resource mobilization approach, but future research might look at different combinations of behavioural and cognitive approaches to identify resourcing alternatives (Williams, Li & Zhao, 2025). For example, recent research highlights the need to explore combinations of effectuation, bootstrapping and cognitive styles (Lanivich et al., 2023). Relatedly, our findings point towards different and complex patterns of interaction between acquiring, developing and protecting resource heuristics. Future

research could leverage experimental approaches to explore the combinations and trade-offs between the different heuristics which are still not well understood.

CONCLUSIONS

Although strategic orientations such as sustainability orientation and innovativeness may contribute to venture performance, our findings show that entrepreneurs need to complement them with entrepreneurial resource mobilization to achieve superior venture performance. Our study provides a nuanced understanding of how the performance benefits from sustainability orientation and/or innovativeness for small ventures depend on the different resource mobilization approaches entrepreneurs adopt. It also underscores the importance of both behavioural and cognitive resource mobilization approaches, offering a more nuanced understanding of how bricolage and RICH complement each other to address the more complex resourcing demands of sustainability orientation and innovativeness. The identified pathways provide valuable insights into the different resource mobilization approaches entrepreneurs can use when pursuing different strategic orientations.

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Appendix 1 Sample characteristics

Table 1 Sample characteristics

<i>Number of ventures</i>	403
<i>Firm size</i>	
0–10 employees	386
11–50 employees	17
<i>Firm age (years)</i>	7.12
<i>Industry sector</i>	
o Services	269
o Construction and manufacturing	21
o Trade (Wholesale/Retail)	65
o Other	48

Appendix 2 Questionnaire items

Table 2 Questionnaire items

Measures	Items	Factor loading
<i>Sustainability orientation (SO) $\alpha = 0.88$; CR = 0.88; AVE = 0.55</i>		
SO1	Businesses should take an internationally leading role in the field of environmental protection.	0.80
SO2	Businesses that are environmentally oriented have advantages in recruiting and retaining qualified employees.	0.63
SO3	The environmental performance of a business will in future be considered more and more by financial institutions.	0.62
SO4	Social responsibility should be part of the foundations of each business.	0.81
SO5	I think that environmental problems are one of the biggest challenges for our society.	0.71
SO6	I think that entrepreneurs and businesses need to take on a larger social responsibility.	0.86
<i>Bricolage (BR) $\alpha = 0.92$; CR = 0.92; AVE = 0.55</i>		
BR1	We have confidence in our ability to find workable solutions to the new challenges arising from the Covid-19 crisis by using our existing resources.	0.75
BR2	Compared to others with similar resources, we are able to deal with a broader range of challenges arising from the Covid-19 crisis.	0.74
BR3	We use any existing resource that seems useful in responding to a new problem or opportunity arising from the Covid-19 crisis.	0.80
BR4	We deal with new challenges arising from the Covid-19 crisis by applying a combination of our existing resources and other resources inexpensively available to us.	0.78
BR5	When dealing with new problems or opportunities related to the Covid-19 crisis, we take action by assuming that we will find a workable solution.	0.82
BR6	By combining our existing resources in new ways, we master different challenges arising from the Covid-19 crisis.	0.85
BR7	When faced with new challenges arising from the Covid-19 crisis, we put together workable solutions from our existing resources.	0.81
BR8	To deal with the new challenges arising from the Covid-19 crisis, we combine resources that were originally meant to do something else with.	0.64
<i>Acquiring resources (AR) $\alpha = 0.89$; CR = 0.89; AVE = 0.62</i>		
AR1	My initial reaction to things I value is to make them my own.	0.64
AR2	I instinctively put myself in situations to gain resources.	0.72
AR3	When I see something of value I go after it without much thought.	0.84
AR4	Instinctively, I obtain things.	0.90
AR5	I collect things of potential value without giving it much thought.	0.83
<i>Protecting resources (PR) $\alpha = 0.90$; CR = 0.90; AVE = 0.65</i>		
PR1	I am quick to protect the things I have.	0.79
PR2	I instinctively maintain the things I have.	0.79
PR3	I safeguard the things I have against harm or loss.	0.85
PR4	It is important to me that I retain the things that I have.	0.76
PR5	I instinctively protect my stuff.	0.85
<i>Developing resources (DR) $\alpha = 0.91$; CR = 0.91; AVE = 0.62</i>		
DR1	Without much thought, I find new ways to use my resources.	0.68
DR2	I increase the value of things I have.	0.74
DR3	I encourage the growth and development of the things I have without much thought.	0.79
DR4	I automatically think to make things stronger or more useful.	0.89
DR5	I instinctively improve the things I have.	0.90
DR6	I develop new resources from old resources.	0.72
<i>Innovativeness (IN) $\alpha = 0.74$; CR = 0.76; AVE = 0.52</i>		

	In general, in my business we favour...			
IN1	A strong emphasis on the marketing of tried-and-true products or services.	1 to 7	A strong emphasis on R&D, technological leadership and innovation.	0.63
IN2	How many new lines of products or services has your firm marketed in the past five years (or since its establishment)?			
	No new lines of products or services.	1 to 7	Very many new lines of products or services.	0.60
IN3	Changes in product or services lines have been mostly of a minor nature.	1 to 7	Changes in product or service lines have usually been quite dramatic.	0.89
<i>Firm Performance (FP)</i>				
Please rate the performance of your firm during the last year (wave 1) or three months (waves 2 and 3), compared to your main competitors:				
FP1	Profits			0.92
FP2	Sales development			0.89
FP3	Cash flow (liquidity)			0.92
FP4	Market value			0.85

Notes: α = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted

Appendix 3 Truth table

Appendix Table 3.1 Truth table for the presence of venture performance

Sustainability orientation	Innovativeness	Bricolage	Acquiring resources	Protecting resources	Developing resources	Number of cases	Venture performance	Raw Consist	PRI Consist
1	0	1	0	1	1	8	1	0.87	0.65
0	1	1	0	0	1	3	1	0.88	0.64
1	0	1	0	1	0	10	1	0.86	0.63
1	1	1	1	0	1	12	1	0.86	0.63
1	1	1	0	0	1	9	1	0.86	0.62
0	1	1	0	1	1	6	1	0.86	0.62
1	1	1	0	1	1	5	1	0.86	0.61
0	0	1	1	1	0	3	1	0.88	0.60
1	1	1	1	0	0	5	1	0.85	0.60
1	0	1	0	0	0	12	0	0.85	0.59
1	1	1	1	1	0	6	0	0.85	0.59
1	1	1	1	1	1	28	0	0.81	0.59
1	1	1	0	1	0	4	0	0.85	0.59
1	0	1	0	0	1	3	0	0.86	0.58
1	0	1	1	0	1	5	0	0.86	0.57
0	1	1	0	1	0	3	0	0.86	0.56
1	0	1	1	0	0	3	0	0.86	0.56
1	0	1	1	1	1	15	0	0.82	0.56
0	0	1	0	1	0	3	0	0.86	0.56
0	0	1	1	0	0	3	0	0.87	0.55
0	1	1	1	0	0	4	0	0.84	0.55
1	1	1	0	0	0	11	0	0.83	0.55
0	1	1	1	1	1	19	0	0.81	0.54
0	0	1	1	1	1	7	0	0.85	0.54
0	1	1	1	1	0	4	0	0.84	0.54
0	1	1	1	0	1	11	0	0.82	0.54
0	1	1	0	0	0	4	0	0.84	0.52
1	0	0	1	1	1	7	0	0.83	0.52
1	1	0	0	1	0	3	0	0.84	0.52
1	0	0	0	1	1	4	0	0.83	0.51
0	1	0	1	1	1	10	0	0.83	0.51
0	0	1	0	0	1	4	0	0.85	0.50
1	1	0	0	0	1	6	0	0.84	0.50
1	1	0	1	1	1	6	0	0.83	0.49
1	0	0	0	1	0	8	0	0.80	0.49
0	0	0	1	1	0	9	0	0.84	0.49
0	0	1	1	0	1	3	0	0.84	0.48
0	0	1	0	0	0	10	0	0.82	0.48

0	1	0	0	0	1	3	0	0.84	0.48
1	1	0	0	0	0	11	0	0.80	0.47
0	0	0	1	0	0	4	0	0.83	0.47
1	0	0	0	0	1	3	0	0.82	0.46
0	0	0	1	1	1	13	0	0.81	0.45
0	0	0	1	0	1	4	0	0.83	0.45
0	1	0	1	0	1	7	0	0.81	0.44
1	1	0	1	1	0	5	0	0.81	0.44
0	0	0	0	0	1	3	0	0.82	0.41
0	1	0	1	0	0	5	0	0.80	0.41
0	0	0	0	1	0	11	0	0.77	0.40
0	0	0	0	0	0	16	0	0.76	0.39
0	1	0	0	0	0	11	0	0.78	0.39
0	0	0	0	1	1	6	0	0.81	0.39
1	0	0	0	0	0	13	0	0.73	0.38

Note(s): 0 represents non-membership in the set; 1 represents full membership in the set

Appendix 4 Robustness tests

Table 4.1: Pathways for the presence of superior venture performance (Mean +/- 1 SD for calibration)

Causal conditions	Presence				
	P1	P2	P3	P4	P5
Sustainability orientation		●	●	⊗	●
Innovativeness	●	⊗	●	⊗	⊗
Bricolage	●	●	●	●	●
Acquiring resources	⊗	⊗		●	⊗
Protecting resources		●	⊗	●	
Developing resources	●		●	⊗	⊗
Consistency	0.80	0.82	0.80	0.85	0.82
Raw coverage	0.20	0.15	0.17	0.12	0.18
Unique coverage	0.05	0.01	0.04	0.03	0.05
Overall solution consistency	0.79				
Overall solution coverage	0.38				

Note: ● (⊗) represents the presence (absence) of the causal condition

Table 4.2: Pathways for the presence of superior venture performance (4 cases frequency threshold)

Causal conditions	Presence			
	P1	P2	P3	P4
Sustainability orientation		●	●	●
Innovativeness	●	⊗	●	●
Bricolage	●	●	●	●
Acquiring resources	⊗	⊗	●	
Protecting resources	●	●	⊗	⊗
Developing resources	●			●
Consistency	0.84	0.86	0.84	0.84
Raw coverage	0.22	0.21	0.21	0.23
Unique coverage	0.05	0.06	0.01	0.02
Overall solution consistency	0.81			
Overall solution coverage	0.37			

Note: ● (⊗) represents the presence (absence) of the causal condition

Table 4.3: Pathways for the presence of superior venture performance (with firm size as causal condition)

Causal conditions	Presence						
	P1	P2	P3	P4	P5	P6	P7
Sustainability orientation	⊗	●	●	●	●	●	●
Innovativeness	●	⊗	●	⊗	●	●	●
Bricolage	●	●	●	●	●	●	●
Acquiring resources	⊗	⊗	●		⊗	●	⊗
Protecting resources	●	●	⊗	●	⊗		
Developing resources	●		●	●		●	●
Firm size				●	●	⊗	●
Consistency	0.86	0.86	0.86	0.88	0.86	0.82	0.87
Raw coverage	0.19	0.21	0.19	0.15	0.16	0.22	0.15
Unique coverage	0.04	0.05	0.01	0.01	0.02	0.03	0.00
Overall solution consistency	0.80						
Overall solution coverage	0.42						

Note: ● (⊗) represents the presence (absence) of the condition.

Appendix 5 Supplementary analysis

We performed further supplementary analysis using sales growth as an alternative outcome variable to assess the reliability of our findings. Sales growth was measured by asking respondents to indicate the percentage change in total sales since the start of the Covid-19 crisis (wave 1) and then over the last three months (waves 2 and 3). The average of the data collected from all three waves of the survey was used to represent sales growth, smoothing out fluctuations in sales growth due to the pandemic. The sample size was reduced from 403 cases to 389 cases due to missing data on the sales growth condition in 14 cases. The results are shown in Table 5.1, left panel. To aid comparison, we added the main results based on venture performance to the right panel of Table 5.1.

Table 5.1: Pathways for the presence of high sales growth and venture performance

Causal conditions	Left: Sales Growth			Right: Venture Performance			
	NP1	NP2	NP3	P1	P2	P3	P4
Sustainability orientation	⊗	●			●	●	⊗
Innovativeness	●	⊗		●	⊗	●	⊗
Bricolage	●	●	●	●	●	●	●
Acquiring resources		⊗	●	⊗	⊗	●	●
Protecting resources	●	●	⊗		●	⊗	●
Developing resources	●	●	●	●			⊗
Consistency	0.84	0.88	0.87	0.83	0.86	0.84	0.88
Raw coverage	0.26	0.17	0.28	0.27	0.21	0.21	0.18
Unique coverage	0.07	0.03	0.09	0.07	0.04	0.04	0.03
Overall solution consistency	0.83			0.82			
Overall solution coverage	0.40			0.42			

Note: ● (⊗) represents the presence (absence) of the causal condition

The results based on sales growth are comparable with our main results based on venture performance in four ways. First, both results suggest innovativeness and sustainability orientation can be pursued as strategic alternatives. For example, NP2 aligns with P2, the “sustainability-driven resource mobilization” pathway, as all conditions remain the same, except developing resources is now present rather than irrelevant. Similarly, NP1 aligns with P1, the “innovation-driven resource mobilization” pathway, as innovativeness, bricolage, and developing resources remain the same, although sustainability orientation becomes absent, acquiring resources is now irrelevant, and protecting resources is present. Second, both results demonstrate the important role of bricolage in explaining the outcome. For example, all pathways explaining sales growth (NP1 – NP3) and venture performance (P1-P4) entail the presence of bricolage. Third, both results show the important role of resource-induced coping heuristics in explaining the outcome. For example, all pathways explaining sales growth (NP1 – NP3) and venture performance (P1-P4) entail the presence of at least one resource-induced coping heuristic. Finally, both results contain one “residual resource mobilization approach” where sustainability orientation and innovativeness are either irrelevant (NP3) or absent (P4).

However, the new results based on sales growth differ from the main results based on venture performance, which suggests that, apart from serving as strategic alternatives (P1 and P2), sustainability orientation and innovativeness can also serve as strategic complements (P3). Two reasons may explain the difference. The first reason is that venture performance and sales growth capture different aspects of venture outcomes. Specifically, venture performance was measured based on multiple dimensions, including the perceived profits, sales development, cash flow (liquidity), and market value in comparison to main competitors. It captures different aspects of venture outcomes related to both financial and product market performance. Given that performance is multidimensional in nature (Richard et al., 2009), a single strategic orientation, such as sustainability orientation OR innovativeness, may not affect the different performance dimensions equally. Indeed, recent research on strategic orientations has highlighted the importance of considering various performance measures to avoid over or underestimating the performance effects of strategic orientations (Schweiger et al., 2019). This may explain why sustainability orientation AND innovativeness can complement each other to explain high venture performance (P3). By contrast, sales growth only captures changes in sales over a period. It can be achieved by innovativeness, which may result in the introduction of new products and services (Lumpkin & Dess, 1996), or sustainability orientation that may increase demand by attracting eco-conscious consumers. In other words, sales growth can be achieved without the joint presence of innovativeness and sustainability orientation.

The second reason is that the dataset for sales growth and venture performance are slightly different. Specifically, the results using sales growth as an alternative outcome are based on a smaller sample size due to missing data (14 cases) on the sales growth condition. The variation in the dataset between supplementary analysis and main analysis may also contribute to the slight differences in the results.

Overall, our supplementary analysis shows that the results based on sales growth as an alternative outcome condition are broadly comparable with our main results, which use venture performance as the outcome condition. The findings from supplementary analysis provide further support for the reliability of our main findings.