Unfolding entrepreneurial resourcefulness: a systematic literature review

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Abstract

Purpose – Literature on entrepreneurial resourcefulness (ER) has grown constantly in the last two decades. ER is a construct that describes the specific behavior of entrepreneurs, focusing on the generation and deployment of resources to pursue an opportunity. Since the ER literature has expanded and diversified, the purpose of this study is to integrate its findings with existing knowledge about the construct.

Design/methodology/approach – The study applies a systematic literature review approach, following the methodology of Tranfield *et al.* (2003). The authors identify and synthesize 31 studies focusing on ER.

Findings – The literature on ER can function on four different levels: (1) individual, (2) organizational, (3) contextual, and (4) effectual level. Studies on ER concentrate on either the individual or the organizational level, with the contextual and effectual levels appearing as additional study categories for the studies. Behind this categorization, research views ER either as an antecedent influencing a specific effect or as an outcome resulting from a particular context.

Originality/value — This paper is the first of its nature, structuring the existing ER research and proposing a research agenda on ER with seven concrete research avenues and their research questions. Based on the systematic literature review, the authors develop a framework consolidating the interrelations of the different levels.

Keywords Resourcefulness, Entrepreneurship, Systematic literature review **Paper type** Literature review

Introduction

In the realm of entrepreneurship, three main research streams exist (Stevenson and Jarillo, 2007). Firstly, *why* do entrepreneurs act, e.g. by investigating the role of founders and their capabilities (e.g. Lee and Herrmann, 2021; Salmony and Kanbach, 2022; Burger *et al.*, 2023; Glade *et al.*, 2023). Secondly, *what* happens when entrepreneurs act, precisely the results of actions, for example, business performance outcomes (Hughes *et al.*, 2007; Hughes and Morgan, 2007; Singh, 2020; Salmony *et al.*, 2022). Thirdly, *how* do entrepreneurs act. The latter bridges the two previous streams and elaborates on the entrepreneur's actions. Thereby, entrepreneurial resourcefulness (ER) serves as a concept



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New England Journal of Entrepreneurship Emerald Publishing Limited 2574-8904 DOI 10.1108/NEJE-09-2023-0078 able to explain *how* individuals get more from less by using and deploying resources to capture or create value (An *et al.*, 2018; Michaelis *et al.*, 2021).

Due to its interdisciplinary nature, the general concept of resourcefulness captures the attention and interest of scholars and researchers from different research fields. While resourcefulness has been a central element in numerous business research studies (e.g. Bradley, 2015; Kanungo and Misra, 1992; Misra and Kumar, 2000; Thomas, 1996) another branch of research acknowledges the embedment of resourcefulness in the field of psychology and health science. In that context, numerous scholars explore resourcefulness on the individual level and within the framework of cognitive behavioral theory (e.g. Rosenbaum, 1983). Conversely, other scholars originate investigating resourcefulness in the realm of business ethics, revealing the interconnectedness of ethical and resourceful behaviors (Kuratko and Goldsby, 2004). However, upon reviewing the existing literature, it becomes evident that scholars attribute a wide range of interpretations to resourcefulness, especially in the realm of entrepreneurship research. This study will exclusively concentrate on ER.

Research on ER has grown in the last years as examined in detail by the descriptive analysis later in this study. Researchers still express concerns about the fragmented and diverse theoretical landscape of ER (Reypens et al., 2021; Williams et al., 2021; Michaelis et al., 2022; Moss et al., 2022). In 2021, the Journal of Business Venturing published a special issue on the topic of ER. The researchers Williams et al. (2021) open this volume with a conceptual article guiding through the theoretical landscape of ER and its interrelations to other concepts and theories. They note the general lack of cohesion and specificity in research on ER as well as the development of fragmented, parallel streams concerning research on ER, which does not clearly differentiate ER from related concepts as for example, bricolage, effectuation, or resource-seeking (Williams et al., 2021). Moreover, there is an ongoing debate regarding the perspective on ER, with some researchers considering it as a comprehensive overarching concept that embraces entrepreneurially resourceful behaviors and traits (Michaelis et al., 2022), while others emphasize the role of external factors stimulating ER (e.g. Ge et al., 2022). Ultimately, some researchers consider ER as a process (Moss et al., 2022). This emphasizes the fact that ER has been researched via different theoretical lenses ranging from psychological theories to organizational ones. Conflicting views exist on the impact of ER in entrepreneurship; while the majority consider it a pivotal factor for success, some critical voices challenge the notion of ER contributing positively to entrepreneurial outcomes (Kuratko and Goldsby, 2004; Michaelis et al., 2021). These topics may result from the contrast in the comprehensive coverage of ER in practitioner literature compared to its more fragmented presentation in academic publications (Williams et al., 2021).

Therefore, it is crucial to organize emerging topics, evaluate existing knowledge, and identify opportunities for scholars to contribute to this research field (Lee *et al.*, 2023). Additionally, the construct of ER would benefit from more content validity (Misra and Kumar, 2000; Bradley, 2015). The interdisciplinary nature of ER led us to the decision to scrutinize ER from different levels, allowing us to better disassemble the development of this phenomenon. Therefore, we developed the following research question:

RQ1. In the academic literature, how has the understanding of ER evolved across different research levels?

The study conducts a systematic literature review (SLR) on ER, to harmonize diverse approaches, synthesize current knowledge, and prevent further confusion regarding the concept of ER by following a common approach of reviews in the field (Tranfield *et al.*, 2003; Kraus *et al.*, 2022, 2024; Sauer and Seuring, 2023).

Conceptual background on entrepreneurial resourcefulness

Scholars and practitioners have shown increasing interest in understanding how entrepreneurs effectively manage resources for launching and expanding their ventures. In this discussion, we consider resourcefulness as significantly impacting the survival and performance of new ventures. Scholars have viewed ER through various behavioral concepts that embrace, for example, bricolage, bootstrapping, co-opting resources, causation, and effectuation. These perspectives stress the significance of entrepreneurs as *getting more from less* amid resource constraints (Michaelis *et al.*, 2021). Accordingly, resourcefulness is the personalized answer to situational constraints (Bradley, 2015).

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This section presents attempts to define ER in the literature. Generally, Misra and Kumar (2000) conceptualize entrepreneurial behavior as a product of ER. Misra and Kumar (2000) defined ER "as the ability to identify opportunities in the environment and regulate and direct behaviour [sic] to successfully cope with the task of creating and managing an organization to pursue the opportunity" (p. 144). The authors propose three overarching competencies of ER: cognitive, affective, and action-oriented competencies. They understand competencies as mental capabilities facilitating coping and adoption in response to external challenges in the environment. Each of the three competencies embraces a sub-set of components contributing to ER (listed in Misra and Kumar, 2000, p. 146). First, cognitive competencies relate to the proficient handling of thought processes, beliefs, and expectations. Second, affective competencies aim to regulate emotional arousal. Third, action-oriented competencies manage intentions and action orientations. The perspective presented by Misra and Kumar (2000) defines ER through both psychological and organizational lenses, emphasizing the execution of a behavior geared towards the explicit pursuit of entrepreneurial opportunities. The focal points in their definition of ER revolve around the creation and management of an organization. By portraying ER as an ability grounded in specific competencies, they do not explicitly categorize it as a behavior, highlighting their inclination towards viewing ER as a set of competencies rather than observable actions.

Bradley (2015) approaches ER from a less technical perspective. From his point of view, ER assists in handling problematic situations that often appear during the pursuit of opportunities. The researcher describes ER as "learned behavioral, financial, and social repertoires for dealing with problems, especially those of novelty, in the pursuit of an opportunity" (Bradley, 2015, p. 2). An association exists between these problems and the liability of newness, e.g. finding a niche market, creating reliable concepts for goods and services, and building social relationships (Stinchcombe, 1965). Bradley (2015) predominantly approaches ER from an organizational standpoint, encompassing various repertoires. However, ambiguity arises regarding whether the definition pertains more to the entrepreneur or the organization. The researcher concentrates on the step of creating a business stressing the liability of newness. While the definition acknowledges the goal of realizing an opportunity, it neglects the environmental aspect. In general, the definition lacks clarity, especially regarding the use of the term repertoires.

Williams *et al.* (2021) crafted a definition to unify the fragmented theoretical landscape of ER and extensively elaborated on the different components of the definition. They define ER as a "boundary-breaking behavior of creatively bringing resources to bear and deploying them to generate and capture new or unexpected sources of value in the process of entrepreneurship" (Williams *et al.*, 2021, p. 2). This comprehensive and contemporary definition synthesizes the various but strongly related components of ER. The researchers apply a psychological perspective by defining ER as a kind of behavior. In contrast to the other definitions Williams *et al.* (2021) accentuate the element of creativity and there is a shift in terminology from merely pursuing opportunities to undertaking concrete and tangible actions, specifically converting resources into value. This definition encompasses the whole process of entrepreneurship

rather than concentrating on single steps (e.g. venture creation), but it misses the concrete inclusion of the aspect of the external environment.

Summarizing, ER is portrayed as a dynamic response to environmental challenges, embodying problem-solving behavior in an entrepreneurial context. All the definitions have in common that ER aims to achieve a specific goal, precisely pursuing an opportunity or generating value. However, the definitions share a common ambiguity regarding the specific stages at which ER operates within the entrepreneurial process. This uncertainty raises questions about the continuity and timing of ER throughout the entrepreneurial journey. Overall, as a flexible and partly creative behavior essential for navigating environmental challenges and realizing entrepreneurial objectives, ER research necessitates greater coherence to unlock its full potential in elucidating the intricacies of entrepreneurial behavior throughout the venture creation process (Williams et al., 2021).

Methodology

Research setting

The SLR is a widely adopted and well-established method for creating a comprehensive and reproducible examination and content analysis of a compiled set of articles (Kraus *et al.*, 2022; Öztürk *et al.*, 2024). To effectively address the research question, we applied the evidence-based SLR approach that Tranfield *et al.* (2003) outlined, following guidance from Kraus *et al.* (2022) and emphasizing five key elements: type, focus, considerations, method, and contribution.

Regarding its type, this systematically conducted review falls under the category of an SLR. The review centers on the concept of resourcefulness within the field of entrepreneurship, aligning best with the focus category of "domain-focused hybrid". A set of criteria that the next section precisely explains reflects the considerations in developing the corpus of the literature. The descriptive analysis offers an informative overview of the literature. The method involves a thematic content analysis of the corpus. To enhance transparency in this part of the analysis, the study uses the inductive qualitative approach for concept generation that Gioia *et al.* (2013) proposed. Ultimately, the primary contribution of this research is to provide a synthesized overview of current knowledge pertaining to the various levels of ER.

Sample selection

The two-fold sample selection process led to a final sample of 31 articles. Phase 1 included a clarification of the fundamental elements of the search process and the definition of the search databases, keywords, fields, source types, publication stage, search period, and language. In phase 2, we applied a quality threshold and various screening procedures to refine the search results.

First, we collected the data from the electronic search databases *Web of Science Core Collection (WoS)* and the *Elton B. Stephens Company Business Source Ultimate (EBSCO)*.

The choice to utilize the two databases aimed to reduce bias in outcomes by addressing potential variations in their coverage scopes. Consequently, we used the search keywords "entrepreneur*" and "resourceful*" connected via the Boolean Operator "AND." We entered both search keywords to cover the title, abstract, and keywords independently, to ensure comprehensive coverage of the literature focusing on ER.

The research concentrated on articles published in academic journals with a final publication stage, to ensure a qualitative standard in the selected literature. Consequently, we excluded other source types and gray literature. Moreover, we included only Englishlanguage literature. To produce a review that inclusively reflected ER, the time period of

articles was not constrained and the review contained articles published through September 2023.

At the end of phase 1, the initial data set contained 118 articles, 39 of which came from the WoS database and 79 from the EBSCO database, with 35 duplicates identified and excluded.

Phase 2 of the data collection process included quality assessment and screening procedures. Therefore, the authors decided to include articles from peer-reviewed journals according to their ranking by SCImago *Journal and Country Rank* (SJR) and the German Academic Association of Business Research (VHB). The dataset concentrates on articles published in journals ranked in Q1 or Q2 (SJR ranking) or journals ranked A, B, or C (VHB ranking), resulting in a comprehensive collection of 83 studies. Excluding 25 articles based on quality assessment led to assessing 58 articles as eligible.

Then, we excluded studies based on unfit content. Reading the abstracts and the conclusions led to the removal of 12 articles. After full-text screening of the remaining 46 articles, we determined that 15 articles did not fit the topic.

To make our selection process more tangible, we stressed two examples that led us to the decision to exclude them from our sample. First, the paper "International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility," by Zahra and Garvis (2000), does not focus on resourcefulness, though the word appears in the abstract. Second, the study "Toward a theory of supply chain entrepreneurial embeddedness in disrupted and normal states," by Ketchen and Craighead (2021), considers resourcefulness as one business capability in one very short paragraph, leading us to decide to exclude this paper from the final sample, due to the lack of ER focus.

We derived a final sample of 31 articles with an ER focus. Figure 1 shows an overview of all the steps of the sample-selection process.

Descriptive analysis

Figure 2 displays a chronological arrangement of the 31 selected articles' respective publication years. Notably, in 2021, there was a substantial surge in academic articles on ER, largely driven by the *Journal of Business Venturing* special issue on resourcefulness, which featured six articles. For 2023, this analysis considered only publications prior to September.

Additionally, the 31 studies appeared across 19 different journals, adhering to the quality criteria set for ranked journals (described above). The *Journal of Business Venturing* stands out, with nine articles. Meanwhile, the *Journal of Business Venturing Insights, Journal of Enterprising Communities: People and Places in the Global Economy, Journal of Business Economics*, and *Strategic Entrepreneurship Journal* each contributed two articles. The remaining 14 journals featured one article each on ER.

With no single dominant author emerging in the field, diverse authorship characterize the academic landscape surrounding ER. However, three authors—namely Timothy L. Michaelis, Jon C. Carr, and Jeffrey M. Pollack—have made significant contributions with three studies, published in 2020, 2021, and 2022, respectively.

The final corpus revealed a relatively balanced distribution of research methods. Among the 31 articles, 12 (39%) employed a quantitative approach, 10 (32%) conducted qualitative research, and nine (29%) adopted a conceptual approach.

Thematic analysis

Thematic analysis of the literature aimed to identify and develop themes based on the scan of the literature. To increase transparency, we followed the method of Gioia *et al.* (2013) to construct the conceptual framework. Collectively, we collaborated to discern recurring patterns inherent in the coding of first-order concepts, illuminating the underlying data and resolving issues of comprehensiveness. In the second step, each researcher created a first



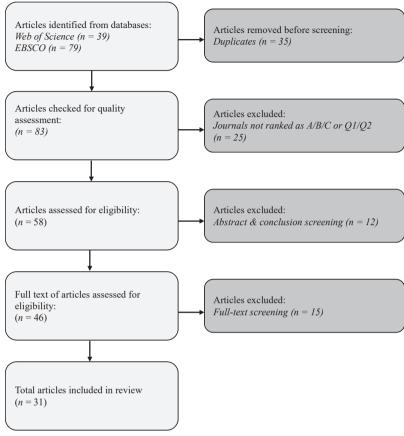


Figure 1. Literature search process



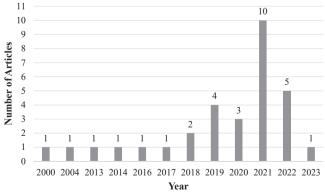


Figure 2. Publications on ER per year

Source(s): Own illustration

draft of a Gioia *et al.* (2013) framework by themselves, to systematically discuss in the next round with all researchers. Addressing coding disparities constituted a pivotal step in the data analysis process. We conducted several "cycle rounds". First, we presented their respective provisional Gioia *et al.* (2013) frameworks, identifying commonalities and differences. Then, we collaboratively arranged second-order themes, newly developed from the inputs. Third, we identified the four aggregate dimensions based on the data and previous consensus-building. Throughout the process, we ensured transparency and traceability by surveying and documenting the different drafts. In the research meeting, we discussed, synthesized, and reflected on the findings, enhancing the study's rigor and trustworthiness. With this collaborative and cyclical approach, we developed a comprehensive analysis leading to robust results: The 29 first-order categories are closely related to the literature, which we condensed into ten second-order themes. Accordingly, we consolidated those into the four aggregate dimensions.

The data analysis process appears in Figure 3, visualizing an overview of the 31 incorporated studies. As a result, the following section thoroughly elaborates on the aggregate dimensions evolving from the literature: the *individual level (IL)*, *organizational level (OL)*, *contextual level (CL)*, and *effectual level (EL)*.

Results

Individual level

Research on ER at the individual level (IL) focuses on personal and resourceful behaviors and actions (e.g. Manzano and Ayala, 2013; Welter *et al.*, 2018; Fisher *et al.*, 2021). Based on the literature analysis, this level reflects sub-categories (second-order themes), namely, *behaviors* of ER, actors in individual settings, and cognitive factors. Each of the sub-categories is elucidated in the following section. However, a sub-category posit each level to a more detailed degree, to holistically capture an understanding of the level.

At the IL, ER predominantly functions as a behavior characterized by different manifestations. Studies at this level propose different conceptual categories, as the following description elaborates.

The first sub-category appeared with research on the IL we labeled *behaviors of ER*, which can include bricolage, bootstrapping, or effectual networks (Martina, 2019). Martina (2019) investigates entrepreneurs' affordable-loss heuristics, finding that ER increases their ability, which, in turn, is one part of the two components of affordable loss (Martina, 2019). Another often-researched concept in the context of ER posits "entrepreneurial resilience" (Manzano and Ayala, 2013; Ayala and Manzano, 2014; Lin, 2018; Rani *et al.*, 2019; Cheng *et al.*, 2021). Entrepreneurial resilience integrates the behaviors of the entrepreneurs to overcome adverse events in challenging environments (Ayala and Manzano, 2014). Resourcefulness and other components for example purposefulness, hardiness, and optimism, describe entrepreneurial resilience, while resourcefulness positively influences entrepreneurial resilience (Manzano and Ayala, 2013; Ayala and Manzano, 2014; Lin, 2018). ER can pose a catalyst for resilience as researched by Cheng *et al.* (2021) and the researchers Rani *et al.* (2019) identified ER as the most important factor *during* a crisis.

Cognitive factors display another significant sub-category on the IL. Here, research on factors concerning the individual occurs. Michaelis et al. (2020) integrate the concept of frugality and ER, using this concept to explain why entrepreneurs act resourcefully, regardless of environmental constraints. One year later, Michaelis et al. (2021) deepened that knowledge by investigating frugality in combination with the entrepreneur's strategic mindset or meta-cognitive framework, against the background of ER. Their findings suggest that frugality can significantly influence an entrepreneur's effort and innovation, depending on their strategic mindset.

Aggregate Dimension		Individual level			Organizational level			Сопехны јече		Effectual level
2nd Order Themes	Behaviors of ER	Actors in individual setting	Cognitive factors	Forms of ER	Parties in organizational setting	Organization-related factors	Environmental conditions	Sociodemographic conditions	Internal effects	External Effects
1st Order Concepts	Ability as one component of affordable loss is fostered by ER. Bricolage and bootstrapping are predominantly reviewed as behaviors of ER. ER is mostly viewed as a catalyst or predictor of entrepreneural resilience.	Research concentrates on singular actors and resourceful behaviors (e.g., self-reliant, or individual-based ER). Research focuses on plural actors and resourceful behaviors (e.g., joint or family resourcefulness).	Entrepreneurial frugality as explanation of resourceful behaviors regardless of environmental conditions. The entrepreneur's strategic mindset influences ER and the development of new ventures. The resourceful narrative of an entrepreneur will significantly impact the ability to mobilize support.	Resource seeking and bricolage are viewed as resourceful behaviors. Research underlines the resourceful role organization can play in the entrepreneurial process. Stretching is considered as an aspect of FR.	The social capital in organizations is an important component to develop resource ful behaviors. Community resource fulness considered as complementary perspective emphasizes "getting more from many." Research indicates that fostering partnership-based behaviors necessitates specialized capacity building for ER.	High levels of informal organizational structure stimulate aspects of FR. Research on ER often considers the form of the organization (e.g., social enterprise).	ER is researched in relation to sociocultural, spatial, and institutional crisis or a crisis, such as COVID-19. Research investigates in rural or urban environments and their effect on ER. ER as process that mediates the relationship between nonmarket logics and informal governance.	Studies research the influence of entrepreneur's social class and social background on ER. Research investigates the aspect of migrant entrepreneuship and ER. Research considers living conditions (e.g., growing up in poverty) as important aspect of fostering ER.	ER is a predictor of success or failure of a venture. ER influences positively entrepreneurial behavior and innovative behaviors. Aspects of ER foster the technology advancement in early-stage ventures.	Community resourcefulness determines the success or failure of communities. ER increases the probability to access grants and get framacial support. Resourceful behaviors or narratives stimulate the chance to get support.

Source(s): Gioia et al. (2013)

Figure 3.
Data analysis following Gioia *et al.* (2013)

Another study concerning cognitive factors of the individual states that the entrepreneur's resourceful narrative can significantly influence the capacity to get support by convincing resource owners to provide it (Fisher *et al.*, 2021).

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The third sub-category—actors in individual settings—delved into the aspect of resourceful behaviors and how they relate to the number of people involved. This subcategory can take two distinct forms: one involving a singular actor and the other involving multiple actors. On the one hand, self-reliance ER and individual-based ER are forms of resourceful behavior concentrating on one actor (Michaelis et al., 2022). On the other hand, research explores various actors and their resourceful behaviors, particularly joint or family resourcefulness (Michaelis et al., 2022; Evansluong et al., 2023).

Organizational level

The analysis of the literature corpus includes the identification of an organizational level (OL). Studies aligned with this dimension concentrate on organizations and study how and why they are resourceful or not. This dimension comprises the sub-categories *forms of ER*, *parties in organizational settings*, and *organization-related factors*, aiming to comprehensively encompass ER research.

The first sub-category, forms of ER, summarizes the conceptual context in which ER research occurs and the interconnections between organizational components and ER. Interestingly, the concept of bricolage appears on this level as well (Davidsson et al., 2017; Reypens et al., 2021). Bricolage involves the ability to use resources at hand and create something new in resource-scarce environments (Levi-Strauss, 1966). Complementing the concept of bricolage, researchers view resource-seeking as the acquisition of standard resources (Baker and Nelson, 2005) for the market price (Revpens et al., 2021). Both, bricolage and resource-seeking, function as forms of resourceful behaviors (Revpens et al., 2021). Another concept relating to ER posits entrepreneurial stretching as a strategic business approach that prioritizes efficient and prudent resource utilization, regardless of access to capital, to ensure long-term survival. Stevenson et al. (2021) considered entrepreneurial stretching as one aspect of ER. Consequently, bricolage, resource-seeking, and entrepreneurial stretching are different forms of resource acquisition, mobilization, and utilization. The concepts overlap and examining their relationships cannot involve considering them in isolation. Moreover, research underlines that organizational structure (e.g. informal organizational structure) positively influences ER in the entrepreneurial process (Fultz and Hmieleski, 2021). Fultz and Hmieleski (2021) discovered that considering organizational improvisation as a form of ER supports the identification of new opportunities and realizes performance advantages.

The second sub-category—organizational factors—embodies characteristics or structures influencing the resourceful behavior of organizations. Some studies direct their attention to social enterprises and how resourceful they are (Barraket et al., 2019; Günzel-Jensen et al., 2020; Qu et al., 2022). Accordingly, the form of the organization plays a crucial role in ER research at this level as organization structure may influence ER. Fultz and Hmieleski (2021) showed that high levels of informal organizational structure stimulate aspects of ER. Another important factor is social capital, which plays an important role in ER for organizations (Barraket et al., 2019; Qu et al., 2022).

Involved parties represent the third sub-category for research on the OL, stressing the importance of the number of parties involved in resourceful behaviors in one or more organizations. Social capital plays a central role in this sub-category since it is indispensable for developing resourceful behaviors between different parties (Qu et al., 2022). One form of ER engaging more than one actor is community resourcefulness, emphasizing the approach of "getting more from many" (Hertel et al., 2021). Community resourcefulness embraces

several resource providers from a community in which entrepreneurs accomplish or exceed their resource mobilization goal by accessing a greater base of resource providers (Hertel *et al.*, 2021). This approach is a complementary perspective rather than an opposite perspective to the already-known approach of "getting more from less" (Hertel *et al.*, 2021).

Partnership-based behavior is another concept that includes various stakeholders and positively influences ER. Here, the organization requires specialized capacity building to execute resourceful behaviors in the partnership (Moss *et al.*, 2022). Accordingly, Moss *et al.* (2022) conceptualized partnership-based resourcefulness as an approach to achieving greater results, by creatively and innovatively acquiring, assembling, or deploying resources through collaboration among multiple parties.

Contextual level

The contextual level (CL) dimension consolidates the literature reporting the research on the external setting of the individual or the organization and its effect on their resourceful behaviors. Specifically, the surroundings of the entrepreneur or the venture affect ER differently. We separated this dimension into two sub-categories, namely: *environmental conditions* and *sociodemographic conditions*.

Environmental conditions relate to studying the external setting of an individual or an organization. In this scenario, researchers often direct attention to crises and their effects on the ER. Korsgaard et al. (2016) introduced a new alternative to bricolage and ER, re-sourcing, since both are insufficient to explain entrepreneurial responses to economic, environmental, and sociospatial crises. The article by Purnomo et al. (2021) viewed ER and firm-level strategies as critical for business survival and growth during the COVID-19 pandemic. Rani et al. (2019) investigated the importance of ER in a crisis. Other studies stress the specific environment influencing ER. Rural and urban environments pose a particular form relevant to the development of ER (Barraket et al., 2019). Qu et al. (2020) emphasize a particular focus on ER in rural tourism. Barraket et al. (2019) explore the resourceful practices of small- to medium – sized social enterprises in rural and urban environments and their influence on community development.

Last, ER research occurs in the context of market mechanisms and governmental structures. In this case, ER functions as a process that mediates the relationship between nonmarket logics and informal governance (Moss *et al.*, 2022).

The second sub-category on of CL, labeled *sociodemographic conditions*, refers to the context in which the individual functions and the development of ER occurs. Ge *et al.* (2022) examined the social class and social background of entrepreneurs and how they become resourceful, especially with regard to the resource of time. Other studies directed their attention to migrant entrepreneurship and ER as the conceptual framework for comprehending migrant entrepreneurs' family resourcefulness (Evansluong *et al.*, 2023). Lin (2018) concentrated on Chinese street vendors moving from rural to urban regions, symbolizing a migrant sub-group. The last aspect of this sub-category stresses the importance of living conditions touching the extent of ER. Cheng *et al.* (2021) found that experiencing energy poverty during childhood increases ER, subsequently increasing the likelihood of becoming a founder later in life.

Effectual level

The fourth dimension, effectual level (EL), summarizes research focusing on the effects of ER and comprises two sub-categories, precisely, *internal* and *external effects*.

The sub-category *internal effects* concentrates on the impact concerning entrepreneurs themselves or the venture itself. Research has considered ER as a predicting factor for the success or failure of a venture (Manzano and Ayala, 2013; Ayala and Manzano, 2014; Qu *et al.*, 2022). Other studies conclude that ER positively influences the entrepreneurial or innovative

behavior of the entrepreneur or the organization (Yamta and Akinniyi, 2020; Michaelis *et al.*, 2021; Stevenson *et al.*, 2021). Reypens *et al.* (2021) provided insights into the combination of resourceful behaviors at certain times and how these advances technological developments in early-stage ventures. Besides those positive effects, resourceful behaviors can cause rule-breaking and unethical behavior by respective individuals (Kuratko and Goldsby, 2004). The study by Kuratko and Goldsby (2004) is one of the few that critically reviewed the effects of resourceful behaviors.

The second sub-category of the EL, external effects, delves into how the ER impacts the external level. These effects reach out to the environment by causing social or institutional change (Baker and Powell, 2019). Community resourcefulness in particular significantly determines the success or failure of communities in a specific area (Barraket et al., 2019). Furthermore, Stevenson et al. (2021) explored the relationship between resourceful behaviors and access to public sponsorship and grants. Fisher et al. (2021) gathered insights into the entrepreneur's ability to communicate. Specifically, they discovered that resourceful narratives of entrepreneurs increase their chances of getting support for their businesses.

Discussion

This section aims to integrate the literature corpus and offers a holistic picture. Creating a cross-section of the literature enabled us to identify research gaps and design avenues for further research.

Overall, the literature on ER illustrates two different perspectives, namely, *ER as antecedent* and *ER as outcome*. First, research studies consider ER as an antecedent influencing a specific result either on the IL or OL—for example, resourceful narratives (IL) positively leveraging the mobilization of resources from resource providers (Fisher *et al.*, 2021), or entrepreneurial behavior (OL) positing an important factor for the success or failure of a venture (Qu *et al.*, 2020). Second, research on ER suggests viewing ER as an outcome, implying that various factors from the outside environment or socioeconomic conditions affect the extent to which an individual or an organization is resourceful (e.g. Korsgaard *et al.*, 2016; Welter *et al.*, 2018). However, a synthesis of the perspective of ER either as an antecedent or as an outcome does not exist in the current ER literature. Figure 4 offers a condensed overview of the integration of the literature corpus in this study and demonstrates the interconnection as well as the gaps between the levels.

Another noteworthy observation pertains to the distribution of the studies across various levels. This study assigns each of the 31 studies to the IL or OL. The dimensions CL and EL are additional categories of research on ER and appear in conjunction with the IL or OL. Consequently, research on ER can be categorized into the following, various options: (1) solely on the individual level; (2) on the individual and contextual level; (3) on the individual and effectual level; (4) solely on the organizational level; (5) on the organizational and contextual level; and (6) on the organizational and effectual level. These variations emphasize the existing diversity of ER research. In Appendix, we include a comprehensive overview of all 31 studies, providing details on their research levels. This enhances the robustness of our analysis, offering information on the specific research level(s) relevant to each paper.

Given these observations, research on ER reveals a notable ambiguity. On the one hand, ER is perceived as an integral element within other theories, such as entrepreneurial resilience (Rani *et al.*, 2019). On the other hand, ER is frequently characterized as an overarching term to elucidate various entrepreneurial behaviors, as seen in examples like bootstrapping (Martina, 2019) or improvisation (Fultz and Hmieleski, 2021) being considered as forms of ER. While it is not uncommon for a concept to be both a component of other theories and a standalone

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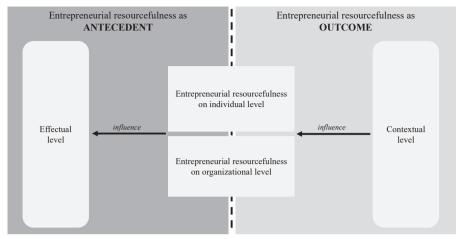


Figure 4. Holistic integration of academic literature on ER

Source(s): Own illustration

theory, this ambiguity necessitates further attention. This contributes to the lack of clarity and content validity within the concept of ER. On an individual level, ER encompasses concepts such as frugality, self-regulation theory, meta-cognition, strategic mindset, affordable loss heuristics, entrepreneurial resilience, entrepreneurial behavior, social background, bootstrapping, social cognitive theory, and risk affinity. On an organizational level, ER is explored through concepts like bricolage, serendipity, social enterprise, resourcing, resource seeking, unethical behavior, venture performance, and signaling theory. However, the broad scope and diverse interpretations of ER across different levels and contexts contribute to ongoing confusion and inconsistency in its definition and operationalization within entrepreneurship research. For instance, entrepreneurial resilience, a pivotal construct in entrepreneurial psychology, comprises traits such as hardiness, optimism, and resourcefulness (Manzano and Ayala, 2013; Ayala and Manzano, 2014). In parallel, improvisation emerges as a notable manifestation of resourcefulness (Fultz and Hmieleski, 2021). However, no definition of ER explicitly includes improvisation, highlighting the fragmented comprehension of ER in its various conceptualizations and manifestations.

Initially, we adhere to definitions that recognize ER as an individual's behavior or competency. However, research also extends the application of ER to an organizational level. We partially align with this perspective, acknowledging that ER can be examined from an organizational standpoint. As previously observed, there is currently no research combining the IL and OL. However, it is worth emphasizing that an organization is essentially an aggregate of its individuals. To clarify the existing dissonance, we highlight several gaps in the current definitions of ER. Firstly, Misra and Kumar's (2000) emphasis on the regulation and direction of behavior aligns with theories of self-control, suggesting that ER is a skill set that can be developed rather than an inherent trait. Secondly, the ambiguity surrounding Bradley's (2015) notion of "repertoires" underscores the need for a clearer definition and operationalization within the entrepreneurial context. Thirdly, the terms "boundary-breaking behavior" and "creatively bringing resources" by William *et al.* (2021) introduce innovative concepts, yet their precise meanings and implications for ER require further clarification. Specifically, understanding how ER challenges boundaries

and innovatively integrates resources is essential for a comprehensive grasp of this construct. Behind this background, ER should consistently be regarded as a psychological construct rather than an organizational trait and we call for research to precisely explain the components of ER.

After reviewing the literature and synthesizing our results, we derived seven avenues for further research with explicit research questions. These emerged from scanning the *further research* sections of the 31 studies to obtain additional insights, holistically examining the results of our SLR, and collaboratively brainstorming with a broad perspective on ER. Table 1 proposes an extensive and contemporary research agenda for ER.

The first avenue *exploring causal relationships of ER* involves investigating how various contextual conditions stimulate or hinder resourceful behavior and how this behavior influences outcomes. As previously outlined and visible in Figure 1, no research on ER exists simultaneously exploring the IL and OL. This gap demands a more differentiated understanding of the causal relationships between context, resourceful behavior, and its effects to unravel how entrepreneurs successfully navigate challenges and/or pursue opportunities.

The second avenue *ER* as independent subject aims to center research solely around *ER* without focusing on other concepts for example entrepreneurial resilience, bricolage, resource stretching, etc. to foster its theoretical clarity. This requires investigating the core principles of *ER* and identifying its distinct characteristics and different forms.

The third avenue *personality traits and ER* should focus on how individual personality traits and demographic influence ER. This knowledge is crucial to understanding how entrepreneurs develop and apply resources.

Fourth avenue *social capital and ER* concentrates on networks and relationships and their impact on ER. Social capital is essential for accessing networks, relationships, and mentorship, thereby providing resources (Burt, 1992), making its consideration with ER indispensable.

The fifth avenue *organizational attributes and ER* includes aspects such as organizational culture, structure, and leadership and its potential impact on the manifestation of ER. Establishing a nuanced understanding ensures a clear differentiation of ER on the IL and OL and helps to design ventures fostering resourcefulness.

There exist already several studies researching the influence of contextual factors on ER (e.g. Barraket *et al.*, 2019; Qu *et al.*, 2020; Purnomo *et al.*, 2021); however, we propose a sixth avenue *societal and macro-economic perspectives on ER* exploring how the social and economic context affects ER. This stream helps to understand how macro factors shape entrepreneurial behavior and outcomes.

The seventh avenue *negative effects of ER* pays attention to the potential adverse impacts of ER although it is generally seen as beneficial. Demonstrating these negative effects and developing strategies to mitigate them support the maintenance of healthy and sustainable entrepreneurial practices.

Based on our comprehensive review and synthesis of the literature on ER, three key practical implications emerge for entrepreneurs, organizations, and policymakers: First, entrepreneurs and organizations can gain a better understanding of ER as a concept, particularly whether it functions as an antecedent or an outcome, enabling them to categorize resourceful behaviors better and identify potential shortages. Accordingly, the second practical implication implies tailored training programs that can support the development of ER skills for entrepreneurs. These programs should consider developing cognitive aspects like strategic mindsets and resourceful narratives. By improving these skills, entrepreneurs can better navigate resource constraints and make a more effective use of available resources. Third, building and leveraging social capital is crucial for enhancing ER. Entrepreneurs should actively seek networking opportunities and mentorship to improve their resource

NEJE	Avenue	Proposed research questions
	Exploring causal relationships of ER	 How can the interrelations be characterized between the three aspects context, resourceful behavior, and its effect? Which facets of the three aspects cause which outcome and vice versa? What stimulates manifestations of resourceful behavior and how is this connected to a certain outcome? What specific resourceful behaviors are most effective in different contexts (e.g. new ventures, scale-up, social enterprises,)? Which resourceful behaviors drive long-term entrepreneurial success, and which are more effective for achieving short-term entrepreneurial
	ER as an independent subject	 what is the essence of ER and how can ER be described with the help of conceptual studies? What are the core elements that characterize ER? How can the impact of (various) resourceful behaviors on organizational performance be assessed? How can ER be differentiated from other concepts such as bricolage, effectuation, etc.? How can the various forms of ER (e.g. resource-seeking, resource-stretching,) clearly be distinguished from an organizational level? What are commonalities and differences between the forms? Is there a possibility to measure ER? And if yes, how can ER be measured? What methodologies can be employed to measure ER
	Personality traits and ER	 effectively? Can ER be learned from individuals or not? If learnable: How can individuals learn ER? What are the most effective teaching methods to develop ER? If not learnable: Which personality types are typically more resourceful than others? Are there personality attributes predicting ER? How does ER evolve and change over time for individuals? How do personal attributes (e.g. age or gender) or personality traits (e.g. openness, risk affinity, and adaptability) contribute and relate to ER? What role do life experience and career stages play in shaping individual ER?
	Social capital and ER	 ER? How does the quality and structure of an entrepreneur's social network influence their resourcefulness? In what ways can ER contribute to building and strengthening social capital within entrepreneurial networks? Under what conditions is collaborative ER most beneficial for entrepreneurial ventures? How do trust, reciprocity, and network density affect the efficacy of ER in multi-actor scenarios? What are manifestations of ER involving multiple actors or partners? What are the circumstances when these forms of ER are most beneficial?
	Organizational attributes and	What are the circumstances when these forms of EK are most beneficial How does organizational culture influence ER among employees? What load within attribute are most effective in properties ER within

organizations?

cultivate ER among employees?

ER?

Table 1. Proposed research agenda on ER

ER

How do organizational policies and practices impact the sustainability of ER initiatives?

How can organizational structures be designed to facilitate and support

How can organizations implement incentives and metrics to effectively

What leadership styles are most effective in promoting ER within

(continued)

Avenue	Proposed research questions	Journal of	
Societal and macro-economic perspectives on ER	 How does the economic system or the overall economic situation (e.g. economic downturns or geopolitical instability) affect ER? How do societal structures (e.g. income inequality and social mobility, or demographic factors) affect an entrepreneur's resourcefulness? What macroeconomic policies can support or hinder the development of ER in entrepreneurial ecosystems? How does ER contribute to economic resilience and recovery during periods of economic instability or crisis? 	Entrepreneurship	
Negative effects of ER	 What are the potential negative outcomes of ER on individual entrepreneurs (e.g. burnout, ethical dilemmas)? How can organizations recognize and address the negative effects of ER on their culture and operations? How can strategies be developed to mitigate potential negative effects of ER? What role do external stakeholders (e.g. investors, regulators) play in mitigating the negative impacts of ER? 		

New England

Table 1.

mobilization capabilities. Policymakers and support organizations should recognize the impact of contextual factors, such as rural versus urban environments, on ER. Realizing these implications can foster a more resourceful entrepreneurial ecosystem, ensuring the ability to navigate challenges and seize opportunities, ultimately contributing to sustainable and innovative business practices.

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Source(s): Authors' own illustration

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Number	Author(s) and year	Title	Journal	Research level(s)		
1	Ayala and Manzano (2014)	The resilience of the entrepreneur. Influence on the success of the business. A longitudinal analysis	Journal of Economic Psychology	IL	EL	
2	Baker and Powell (2019)	Entrepreneurship as a new liberal art	Small Business Economics	OL	/	
3	Barraket <i>et al.</i> (2019)	Resourcefulness of locally-oriented social enterprises: Implications for rural community development	Journal of Rural Studies	OL	CL	
4	Cheng <i>et al.</i> (2021)	Energy poverty and entrepreneurship	Energy Economics	IL	/	
5	Davidsson <i>et al.</i> (2017)	A measure of entrepreneurial bricolage behavior	International Journal of Entrepreneurial Behavior and Research	OL	/	
6	Evansluong et al. (2023)	Guest editorial: Migrant entrepreneurship and the roles of family beyond place and space: towards a family resourcefulness across border perspective	Journal of Enterprising Communities-People and Places in the Global Economy	IL	CL	
7	Fisher <i>et al.</i> (2021)	Resourcefulness narratives: Transforming actions into stories to mobilize support	Journal of Business Venturing	IL	EL	
8	Fultz and Hmieleski (2021)	The art of discovering and exploiting unexpected opportunities: The roles of organizational improvisation and serendipity in new venture performance	Journal of Business Venturing	OL	EL	
9	Ge et al. (2022)	Rags to riches? Entrepreneurs' social classes, resourceful time allocation, and venture performance	Journal of Business Venturing	IL	CL	
10	Günzel-Jensen et al. (2020)	Do the United Nations' Sustainable Development Goals matter for social entrepreneurial ventures? A bottom-up perspective	Journal of Business Venturing Insights	OL	/	
11	Hertel <i>et al.</i> (2021)	Getting more from the many-A framework of community resourcefulness in new venture creation	Journal of Business Venturing	OL	/	
12	Korsgaard <i>et al.</i> (2016)	Entrepreneurship as re-sourcing Towards a new image of entrepreneurship in a time of financial, economic and socio- spatial crisis	Journal of Enterprising Communities-People and Places in the Global Economy	OL	CL	
13	Kuratko and Goldsby (2004)	Corporate Entrepreneurs or Rogue Middle Managers? A Framework for Ethical Corporate Entrepreneurship	Journal of Business Ethics	OL (contin	/	Table A1. Sample overview according to research levels

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Number	Author(s) and year	Title	Journal	Research level(s)		
14	Lin (2018)	"We work like ants we avoid being troublemaker"	International Journal of Sociology and Social Policy	IL	CL	
Manzano and Ayala (2013)		Psychometric properties of the Connor-Davidson Resilience Scale in a Spanish sample of entrepreneurs	Psicothema	IL	EL	
16 17	Martina (2019) Michaelis <i>et al.</i> (2020)	Toward a theory of affordable loss The frugal entrepreneur: A self- regulatory perspective of resourceful entrepreneurial behavior	Small Business Economics Journal of Business Venturing	IL IL	EL /	
18	Michaelis <i>et al.</i> (2021)	Metacognition and entrepreneurial action: The mediating role of a strategic mindset on promoting effort and innovative behavior in frugal entrepreneurs	Journal of Business Venturing Insights	IL	EL	
19	Michaelis <i>et al.</i> (2022)	An agentic perspective of resourcefulness: Self-reliant and joint resourcefulness behaviors within the entrepreneurship process	Journal of Business Venturing	IL	/	
20	Misra and Kumar (2000)	Resourcefulness: A Proximal Conceptualisation of Entrepreneurial Behaviour	The Journal of Entrepreneurship	IL	/	
21	Moss <i>et al.</i> (2022)	Partnerships as an enabler of resourcefulness in generating sustainable outcomes	Journal of Business Venturing	OL	CL	
22	Purnomo <i>et al.</i> (2021)	Entrepreneurial resilience during the Covid-19 pandemic: navigating survival, continuity and growth	Journal of Entrepreneurship in Emerging Economies	OL	CL	
23	Qu et al. (2020)	Community resourcefulness and partnerships in rural tourism	Journal of Sustainable Tourism	OL	CL	
24	Rani <i>et al.</i> (2019)	Identification of critical components of resilience during and after economic crises: the case of women food operators in kuala lumpur	Asian Academy of Management Journal	IL	CL	
25	Reypens <i>et al.</i> (2021)	Beyond bricolage: Early-stage technology venture resource mobilization in resource-scarce contexts	Journal of Business Venturing	OL	EL	
26	Singh <i>et al.</i> (2022)	Synthesizing research in entrepreneurial bootstrapping and bricolage: a bibliometric mapping and TCCM analysis	Management Review Quarterly	OL	/	
27	Stevenson <i>et al.</i> (2021)	Do policy makers take grants for granted? The efficacy of public sponsorship for innovative entrepreneurship	Strategic Entrepreneurship Journal	OL	EL	
28	Welter <i>et al.</i> (2018)	Entrepreneurial resourcefulness in unstable institutional contexts: The example of European Union borderlands	Strategic Entrepreneurship Journal	IL	CL	

Table A1. (continued)

Number	Author(s) and year	Title	Journal	Research level(s)		New England Journal of Entrepreneurship
29	Williams <i>et al.</i> (2021)	Breaking boundaries to creatively generate value: The role of resourcefulness in entrepreneurship	Journal of Business Venturing	IL	/	
30	Yamta and Akinniyi (2020)	Entrepreneurial behaviour, choice of finance and business size in Maiduguri Metropolis	International Journal of Contemporary Accounting Issues	IL	EL	
31	Zahra (2021)	The Resource-Based View, Resourcefulness, and Resource Management in Startup Firms: A Proposed Research Agenda	Journal of Management	OL	/	
	IL = Individual L s): Own illustration	evel, OL = Organizational Level, CL	= Contextual Level, EL = Effe	ctual L	evel	Table A1.

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