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THE BIRTH OF RESILIENCE ENTERPRISE: A DYNAMIC APPROACH TO ABSORPTIVE AND ADAPTIVE RESILIENCE CAPABILITIES

Rafał DREWNIAK **

Faculty of Economic Sciences and Management, Nicolaus Copernicus University in Torun, Gagarina 13a, 87-100 Torun, Poland

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Abstract. The dynamics and complexity of the environment make the ability to build adaptation processes by anticipating negative consequences a priority firm's capability. Among the solutions indicating the attempts of enterprises to resist threats is the search for the designations of building and strengthening resilience, which would enable strategic revitalization of contemporary enterprises. Based on the methodology of a systematic literature review, areas of empirical exemplification were identified that emerge a cognitive gap in the field of building and strengthening enterprise resilience. The article presents a conceptual framework for a dynamic model of resilience that takes into account the impact of absorptive and adaptive resilience capacities over time. The agenda of the planned research project is also presented.

Keywords: resilience, robustness, absorptive capabilities, adaptation, strategic revitalization.

JEL Classification: D81, L21, M20.

Introduction

Both theoreticians and practitioners, pointing to the characteristics of market-successful enterprises, mention, among others, their innovation, customer orientation, creation of new markets and flexibility of operation. All these attributes undoubtedly co-create the competitiveness of an enterprise understood in the traditional way. Turbulence in times of uncertain economic conditions and geopolitical risks, however, forces the need to redefine the designees of resilience of modern enterprises to crisis situations. Adhering to the views of most researchers (Porter, 2008; Drucker, 2012; Stankiewicz, 2005; Hamel & Prahalad, 1996; Barney, 2001a) it would be appropriate to define competitiveness as the ability of a company to present a more favorable offer relative to market rivals, based on well-defined sources of competitive advantage. However, in times of extraordinary risks, such an approach seems incomplete and insufficient, and the concept of resilience can be an important complement to this attitude. A review of the literature on corporate resilience, does not sufficiently include studies that analyze corporate resilience from a dynamic perspective. While the consideration of absorptive and adaptive

capabilities in building resilience is known, what is lacking is a holistic view of the process through the prism of two pathways of building resilience: adaptive and absorptive before, during and after the occurrence of a threat, and based on the use of internal indicators of resilience to integrate them. In light of current publications in the field of business management, this study aims to develop and examine the paradigm of an enterprise resilient from a dynamic perspective. To conduct this study, a literature assessment of key works on resilience was conducted and a conceptual framework for organizational resilience was developed.

The dynamics and complexity of the conditions in which companies operate make it important to have the ability to build processes of adaptation to these conditions by anticipating negative consequences (including through various forms of innovation). These are becoming priority capabilities of contemporary enterprises. The imperative for the effectiveness of a company's response to the challenges of environmental volatility is the continuity of adaptation processes. These situations are complicated by the fact that they involve an increasingly short period of time. Knowing an important part of the risks of a global nature, companies – wishing to survive and

^{*} Corresponding author. E-mail: rafald@umk.pl

maintain their competitiveness – can prepare for them. Among the main threats to businesses in unpredictable times are the following (Covey et al., 2013, pp. 10–11):

- Incomplete implementation of tasks: despite the established strategy and anticipation of the crisis, not all people in the company are doing what they should;
- Confidence crisis: the level of trust in financial institutions; the effectiveness of central operations decreases in uncertain times, and uncertainty among employees results in a loss of confidence in their enterprises;
- Deconcentration: less focus and lower quality of multiple tasks performed simultaneously as a result of relatively scarce personnel resources;
- All-pervasive fear: economic recession causes a mental crisis due to fear of losing jobs, reducing savings, resulting in less commitment.

The aforementioned risks occur simultaneously, often reinforcing each other: a crisis of confidence causes fear, which in turn leads to distraction.

Resilience refers to an organization's flexibility and ability to revitalize (regenerate) strategically under conditions of extraordinary threats. Resilience in direct translation means resistance, flexibility, robustness, endurance, ability to regenerate strength. Attempts to adapt the concept of resilience in the economic sciences have referred it to primarily to ensure sustainability, defining it as the ability of a system to cope with disturbances without losing its functionality (Parker & Ameen, 2018; Perrings, 2006). Thus, it is the ability to withstand market or environmental shocks without losing the ability to efficiently allocate resources (functionality of the market and supporting institutions) or provide essential basic services (functionality of the production system). In contrast, with regard to regional/ local policy, Regibeau and Rockett (2013) define resilience as the ability of an economy, society, organization or individual to successfully recover from an unexpected shock. Empirical research on corporate resilience is gaining popularity, as evidenced by the growing number of publications over the past decade (Hillmann & Guenther, 2021; Mierzejewska & Romanowska, 2015; Baggio et al., 2015; Woods, 2015; Linnenluecke, 2017; Ozdemir et al., 2022; Negri et al., 2021). Nevertheless, the search for the construct of enterprise resilience along with the factors determining its level and the analysis of the literature in this area confirm that the conceptualization of enterprise-level resilience within the management discipline (e.g., risk management, organizational studies, strategy and entrepreneurship) is still fragmented (Bhamra et al., 2011; Linnenluecke, 2017). This term is used interchangeably in different research streams, but without a specific definition for each field. Therefore, there is no unambiguously accepted definition of resilience. Instead, resilience explanations from other research fields, especially economics, ecology and engineering, are accepted, referring to the most frequently cited manuscripts. In accordance with one definition, resilience encompasses

the ability to be ready during a crisis and to maintain superior organizational performance (Pal et al., 2014) and to configure resources in innovative ways to meet the demands of a crisis event (Li et al., 2015; Pal et al., 2014). In this definition, resilience is interpreted as the capacity developed in a company before an external event occurs. Other authors point to the essence of adaptability during a crisis (Sarta et al., 2021). In this context, resilience refers to a company's ability to survive in the face of significant changes in the business and economic environment and/or its ability to withstand disruptions and catastrophic events (Acquaah et al., 2011). It is defined by four characteristics: diversity, efficiency, adaptability and consistency (Penades et al., 2017), and thus refers to the ability to adapt during the occurrence of extraordinary disruptions (Sarta et al., 2021), thanks to which the company is able to remain in a stable state maintaining or increasing its income and number of employees despite the disruptions (Bogodistov & Wohlgemuth, 2017; Sin et al., 2017). It is, therefore, a company's ability to cope with and respond to change as a result of emergencies (Su & Linderman, 2016) and to adapt well despite the risks experienced (Luthar, 2006; Burnard & Bhamra, 2019). This refers to an increased ability to adapt in the face of external difficulties, which would enable a return to pre-crisis productivity levels (Tracey & French, 2017; Bishop & Hydoski, 2010, p. 23). Finally, enterprise resilience should be viewed in process terms as the ability to dynamically reinvent business models and strategies as circumstances change, to continually anticipate and adapt to changes that threaten their core ability to make money - and to change before that need becomes desperately obvious (Morais-Storz & Nguyen, 2017; Carvalho et al., 2016; Herbane, 2019). In other words, it is the ability to recover quickly, withstand shocks and avoid them in the future (Blanco & Montes-Botella, 2017; Gray & Jones, 2016).

1. A research gap revealed

The research conducted so far on corporate resilience has contributed to the exploration of the issue of building and strengthening resilience, contributing to further insightful empirical research on the determinants of ensuring long-term and dynamic corporate resilience in times of uncertainty and risks. There are review works, largely developed based on the methodology of systematic literature review (Conz & Magnani, 2020; Hussen et al., 2021; Kamalahmadi & Parast, 2016; Rahi, 2019; Kantur & Say, 2015; Hillmann & Guenther, 2021; Luthar et al., 2000), on specific issues related to the concepts, typology, scope and determinants of corporate resilience. The existing body of work on developing dynamic organizational capabilities is based on the model proposed by Teece, Pisano, and Shuen (1997). It identifies three dynamic capabilities as necessary for an organization to meet new challenges: the ability of employees to learn quickly and build new strategic assets; the integration of these new strategic assets, including capabilities, technology and customer feedback, into the company's processes; and finally, the transformation or reuse of existing assets that have depreciated. However, this approach is equated with the ability to flexibly adapt a company's offerings to customer expectations (Wilden et al., 2013). This is also confirmed by recent scientific studies on the formation of dynamic capabilities of the enterprise relate them to the creation of customer value mainly through the use of digital networks and innovative solutions (Zahra et al., 2006) and the operationalization (Wheeler, 2002) and qualitative and quantitative measurement (Basiouni et al., 2019) of such capabilities (routines, knowledge, analytical skills). Nevertheless, it should be emphasized that ordinary and dynamic capabilities are needed in different contexts (Qaiyum & Wang, 2018), namely building and strengthening resilience or creating value for customers. Meanwhile, by carefully analyzing the literature on building enterprise resilience, several areas can be identified in the design of future empirical research in the described issue. In fact, an analysis of the items in the systematic literature review of resilience-building management and resilience enhancement in dynamic terms indicates several areas of potential empirical exemplification that emerge a cognitive gap in this area.

Indeed, it is suggested firstly, both from a theoretical and methodological point of view, to take into account the temporal dimension in building and strengthening the resilience of enterprises. In this sense, it is reasonable to undertake research on the timeframe for creating a resilient response as a consequence of an event that changes the balance of the enterprise. This, therefore, relates to a dynamic view of resilience: before the crisis (explaining the accumulation of differentiated resources/capabilities), during the crisis (defining the absorptive and adaptive characteristics in terms of resilience and adaptive capacity), and their relationship to agile/ flexible response during the post-disruption period (indicating the extent of strategic revitalization through which the effects of the crisis/shock can be countered). This underscores the need for future research explaining to what extent the knowledge and competencies accumulated by a company after recovery from a shock can contribute to the implementation of new skills useful in preparing for potentially new critical events. For all of the aforementioned research opportunities, retrospective and real-time data will need to be triangulated consistently. Second, it is suggested that future research based on qualitative and quantitative designs could explore the distinction between adaptive and absorptive pathways in greater depth, by gaining deeper insights into how core capabilities can be measured and tested, and especially how they are developed and deployed by companies to achieve resilience in each time phase along each pathway. This includes clarifying the mechanisms that can lead to translating absorptive capabilities into agile response and adaptive capabilities into resilience. Specifically, empirical studies examining the absorptive resilience pathway

can collect qualitative and quantitative data, according to each time phase, on the capabilities needed by companies to achieve stability, control, optimization and resilience to shocks. In contrast, studies focusing on the adaptive resilience pathway can analyze capabilities such as reorganization, flexibility, the ability to create knowledge, and learning to cope with and manage uncertainty. The latter point is particularly important, as the literature is unclear whether companies will also need to implement certain "strategic attitudes" in order to build resilience. This issue requires further in-depth research, which the team believes presents an intriguing opportunity to integrate the body of knowledge about corporate resilience with that developed in the entrepreneurship, organization studies and strategic management literatures. This will allow a better understanding of the links and potential connections between resilience development and strategy under uncertainty. Third, there are currently few insights into how cognitive, entrepreneurial and innovative capabilities - although these three elements are sometimes cited in the literature as related to firm resilience - are linked to resilience and how their combination can lead to a more effective resilience response. Such capabilities and their impact on corporate resilience can be explored and tested by combining findings, theories and insights from other areas, particularly entrepreneurship, behavioral research and innovation management. Currently, research mainly addresses resilience outcomes and results, such as sustainability or competitiveness. Future empirical studies may show which resilience path (absorptive or adaptive) is more suitable for maintaining competitiveness during critical events. In general, the importance of external variables (e.g., geographic context) and the impact of company characteristics (size, age, industry) on the resilience pathway should be considered when studying resilience outcomes. Fourth, future research directions on building and strengthening resilience would understand whether resilient companies are in turn able to outperform "non-resilient" ones. This could be done by creating databases to compare resilient companies (or, rather a better way, those previously identified as operating in a resilient manner) with non-resilient companies. Admittedly, this step requires monitoring enterprises over a long period of time, and identifying critical shocks. Such research could then provide a more practical protocol for identifying the characteristics of "resilient" and "nonresilient" enterprises.

2. Indicators of organizational resilience

As highlighted earlier, the concept of the company resilience should be viewed as a dynamic process and analyzed on a timeline. For instance, Yuan, Luo, Liu, and Yu (2022) investigated the organizational resilience of platform-based enterprises at three different stages. Their findings demonstrate how continuous absorptive capacity influences organizational resilience from a dynamic perspective. In fact, they discovered that absorptive ability is

essential for developing resilience as an adaptive strategy. The concept of resilience is mainly defined in two ways in the business field. On the one hand, organizational resilience is a company's ability to bounce back from crisis or adversity and cope with survival and resilience (Iborra et al., 2020). Organizational resilience is getting growing popularity in corporate management to describe the process of recovery and survival before, during, and after adversity (Hillmann & Guenther, 2021). On the other hand, research on viewing resilience as the ability to recover from crisis and create competitive advantage through continuous business improvement (Morais-Storz et al., 2018) to preempt uncertainty is becoming more common. Nevertheless, the two concepts do not contradict each other, but can be seen as two complementary approaches. While one takes a more operational point of view, the other follows more of the strategic attributes of resilience. The conceptualization of the presented model in terms of resilience indicators takes into account the importance of principles and attributes for enhancing organizational resilience based on the ISO 22316 standard developed by The International Consortium For Organizational Resilience (2023). It points to certain characteristics and behaviors of organizations that have survived and prospered in times of change and uncertainty. These

A. Leadership and Strategy:

A.1 Shared vision: members/employees have a clear understanding of the organization's purpose, vision and values:

A.2 Understanding the context: there is a comprehensive understanding of both the internal and external dimensions of the organization;

A.3 Effective leaders: leaders are effective and empowered, trusted and respected, and leadership is dispersed throughout the organization;

B. Organizational culture and behavior:

B.1. Healthy culture: the existence of core values and behaviors that promote the health and well-being of employees, foster creativity and enable them to communicate effectively;

B.2 Information sharing: information and knowledge are shared to enable effective decision-making, learning from experience and from others is encouraged and valued, and is recognized as a critical resource of the organization;

B.3 Continuous improvement: performance is continuously monitored and a culture of continuous improvement is encouraged;

C. Preparation and Risk Management:

C.1 Available resources: resources are adequate and available as needed to ensure adaptability to changing circumstances.

C.2 Risk management: risks are managed throughout the organization, and management systems are in place as needed;

C.3 Change management: the ability to anticipate, plan and respond to changing circumstances and events.

Therefore, it should be assumed that these attributes enable a company to enter one of the paths that determine organizational resilience. Given the multidimensional nature of crisis events and the diverse architecture of enterprises (size, industry, age), I assume that these attributes determine the ability to build resilience and incorporate one of the conceptualized resilience paths into the strategy. Thus, they are the designators of the organization's strategic skills, which initiate the entire process of building enterprise resilience. The final element that cocreates the resilience concept is the strategic revitalization of the enterprise. The process of revitalization is equated with strategic change (Floyd & Lane, 2000, p. 155). This change in the enterprise's orientation requires a new look at human resource management and enterprise organization (renewing). This means that the renewing process is carried out in two cases: the formation of a strategic gap and the anticipation of the formation of a strategic gap between the organization's competencies and the requirements of the environment. An agile strategic revitalization of an enterprise should potentially bring it not only an improvement in efficiency, but also an improvement in its competitive position in the market, the establishment of better relations with customers, changes in the organizational structure that promote its flexibility of response, an increase in the scope of delegation of authority, the adaptation of activities (processes) to the requirements of customers, the development of new skills and key competencies, the optimization of the value chain, the establishment of cooperation, etc. Thus, there is a close relationship between an organization's resilience, flexibility or agility and the ability of strategic revitalization. In this study, I assume that strategic revitalization can follow an absorptive or adaptive path.

3. The conceptual framework of enterprise resilience model

A review of the scientific literature on the concept and essence of resilience reveals a surprising lack of consensus regarding the adoption of a consistent definition of the phenomenon. In general, management scholars seem to pay little attention to how to specifically define resilience and overcome this lack by borrowing definitions from other fields and from other authors (Crane et al., 2021; Luthar & Zelezo, 2003). This raises implications for the level of analysis, as definitions often come interchangeably with conceptualizations of resilience at the level of individuals, cities, regions or nations. In addition, a review of the literature and research findings on resilience to date has failed to conceptualize corporate resilience as a process over time. Hence, it is reasonable to seek answers to the research questions articulated earlier. To overcome the above weaknesses, the following definition of corporate resilience can be adopted: "Resilience is a dynamic attribute of a business, characterized by (a) a proactive phase at time (t-1); an absorptive or adaptive phase at time (t); and (b) a reactive phase at

time (t+1), where (t) is the time when an unexpected event occurs that changes the balance of the business" (Conz & Magnani, 2020). This approach has appeared in several previous studies (Weick & Sutcliffe, 2007; Hollnagel et al., 2011; Ambulkar et al., 2015; Morais-Storz & Nguyen, 2017; Conz & Magnani, 2020) emphasizing the dynamic nature of the resilience-building process, consisting of absorptive and adaptive capabilities. It follows that resilience emphasizes the time dimension. The conceptualization of resilience as a dynamic cycle implies continuous adaptation and deployment of capabilities that determine resilience to threats caused by shocks (demand, supply, but also resulting from unexpected pandemic or geopolitical threats). It is therefore a dynamic process over time, characterized by the interaction of a set of proactive resilience capabilities (possessed at time (t-1), i.e. before the event); they are predictors of absorptive and adaptive capacities (capacities deployed at time (t), when the event occurs) and absorptive and adaptive resilience capacities (deployed at time (t); contribute to the development of reactive capacities; resilience needed at time (t+1), after the event occurs) and reactive resilience capacities (made visible at time (t+1); these are capacities that build resilience and become the basis for strengthening future proactive capacities). The conceptual framework of the enterprise resilience model is shown in Figure 1.

This model (Figure 1) identifies two dynamic paths of resilience (adaptive and absorptive), which develop over three periods (t-1), (t) and (t+1). This approach defines resilience as the ability of a system to adjust its functioning before, during and after the occurrence of threats (changes). Conceptualizing the model for this project thus contributes to the discipline of management science and quality by:

 consideration of two resilience responses: adaptive and/or absorptive; according to these two paths, companies can be resilient to crises through absorption or adaptation to shock conditions (or through both simultaneously);

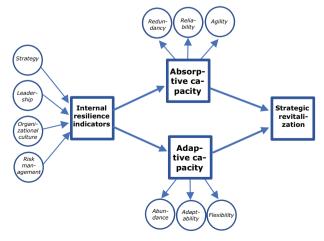


Figure 1. The conceptual framework of dynamic resilience paths

- pointing to the importance of organizational capabilities in building resilience; these represent strategic organizational capabilities (traits, behaviors) that are important in building adaptive and absorptive capacity in times of uncertainty and risks;
- targeting resilience building for strategic revitalization that ensures the strengthening of proactive capabilities and the creation of resilient strategic postures.

A company's absorption path in the face of disruption is characterized by accumulation capabilities (redundancy), resilience (reliability) and agility. Redundancy is defined as the ability to accumulate and hold certain resources in reserve - e.g., safety stock; excess inventory to be used as needed (just-in-case). It refers to the resource capacity intentionally created within systems so that they can withstand disruptions, extreme pressures or the effects of demand/supply shocks. Of course, redundancy should be determined intentionally, characterized by cost-effectiveness and adopted as a high priority matter. Reliability (robustness) is the ability to withstand shocks by preventing and mitigating the effects of variables that can make a company vulnerable in its operational environment. It refers to well-conceived, constructed and managed physical assets that can withstand the impacts of hazardous events without significant damage or loss of function. Planned preventive measures reduce the occurrence of potential failures, which becomes predictable, safe and not disproportionate to the cause of occurrence. Agility is the ability to respond quickly to organizational turbulence, maintaining existing organizational structures and strategies (Rice & Sheffi, 2005; Ismail et al., 2011; Conz & Magnani, 2020). Redundancy is needed before a shock; reliability, on the other hand, is needed to resist a shock, reduce the company's vulnerability and respond in agile ways to unexpected threats. In an absorptive resilience pathway, resource accumulation is critical to a resilient, agile response and forms the basis of a proactive strategy; it must therefore be timed (t-1). A company's adaptive path in the face of disruption is characterized by abundance (resourcefulness), adaptability and flexibility of operation. Abundance is the ability to accumulate diverse assets and resources, such as financial, physical, human, technological, organizational and reputational (Pal et al., 2014). This means that organizations (but also people and communities) are able to quickly find different ways to achieve their goals or meet their needs during a shock or stressful situation. This can include investing in the ability to anticipate future conditions, prioritize and respond, such as by mobilizing and coordinating broader human, financial and physical resources. Robustness is critical to the ability to restore the functionality of critical systems, to adapt to situations of reduced operating conditions by reconfiguring existing resources. Adaptive capability refers to the ability to adjust a company's processes in relation to changing external conditions (Rodriguez-Sanchez et al., 2021; Sarta et al., 2021; Barney, 2001b; Folke et al., 2002). Adaptability also suggests flexibility, the ability to apply existing resources to new goals or for one function to assume multiple roles. Flexibility, on the other hand, is the ability to implement rapid decision-making processes, rapid internal communication and rapid learning to quickly adapt procedures and strategies to changing conditions. Flexibility means the ability to change, evolve and adapt in response to changing circumstances. This can foster decentralized and modular approaches to infrastructure or ecosystem management. Flexibility can be achieved by introducing new knowledge and technology as needed. It also means using existing knowledge and traditional practices in shaping new ways of using them. The ability to be flexible and adaptive during disruption depends on creativity and entrepreneurship (Simmie & Martin, 2010; Rodriguez-Sanchez et al., 2021) and can manifest itself in developing new plans, taking new actions or modifying behaviors, operations, the size of operations or in the use of machinery and material flows (Acquaah et al., 2011; Chesbrough, 2020; Ziębicki, 2010), but also in the arrangement of financial, information, strategic management, manufacturing or marketing subsystems (Hussain & Papastathopoulos, 2022; Krupski, 2008, pp. 15-22) so as to better withstand disruption. Strategic organizational capabilities, on the contrary, are those that condition the company's adaptation to changing conditions in the environment. From a cognitive and utilitarian point of view, their co-occurrence is important (Urbanowska-Sojkin, 2021, p. 139). They determine the development of the enterprise, co-creating the results of its activities and determine the ability to meet the requirements of a rapidly changing environment, extremely complex and demanding for contemporary enterprises that intend to last and grow, create competitive and attractive values for customers and benefits for stakeholders. The essence of the capabilities in question derives from the organizational characteristics of the enterprise, primarily from the ways in which the enterprise is internally organized and from the links to the environment and contextual conditions. The expected result of strategic organizational capabilities is organizational flexibility (in terms of the product portfolio and its marketing characteristics, target segments, methods and ways of doing business, among others), ensuring adaptation to operating conditions. It is part of the management capability and the reactive and proactive actions taken towards the environment.

4. Conclusions and future research

Contemporary competitive conditions, including not only the rapid advancement of technology, the internalization of business activities, the ever faster and more frequent changing needs of customers, the development of the knowledge-based services sector or others resulting from globalization processes, but also – or perhaps mainly – the uncertainty of the economic situation resulting from operations in a post-pandemic world or the consequences of the geopolitical situation on a global scale, condition the development capabilities of enterprises, which are determined in turn by their ability to

adapt flexibly to changing economic conditions. The degree of this adaptation determines the resilience of enterprises in times of threats and uncertainty and affects the level of competitiveness and, at the same time, the market value of the enterprise, which in many cases is clearly higher than the value resulting from the accounting books (Drewniak, 2020). This, in turn, is determined by a number of factors: tangible (including resources, technology, infrastructure, capital), as well as intangible (including organizational culture, know-how, leadership, organizational reputation, employee commitment and their competences).

Very interesting results were obtained in bibliometric analysis. This quantitative analysis of a large body of literature using bibliographic data form Scopus database indicates what is the intellectual structure of the enterprise resilience field of research as well as what terms are frequently used in this field of research. This makes it possible to carry out a mapping of the literature on corporate resilience based on a bibliometric analysis of the field from recent decades and identify current research frontlines. Unfortunately, due to the limitations of the volume of this article, it is not possible to present a comprehensive bibliometric analysis (this can be done in an expanded version of the manuscript for publication).

The analysis of this paper can point to several directions for further research on corporate resilience. One of them, which will be pursued by the author of this study, will be: 1) determining the importance of the internal determinants of building organizational resilience, and 2) identifying the methods and tools used in the absorptive and adaptive path of strengthening resilience. Accomplishing this will require an in-depth literature study based on an in-depth systematic literature review of organizational resilience, and an analysis of resilience measurement methods based on the literature review. However, I consider that the appropriate approach would be the use the content validity method to build a measurement scale. In fact, the content validity is the degree to which an instrument has an appropriate sample of items for the construct being measured. In other words, when a new scale is developed, researchers following rigorous scale development procedures are expected to provide extensive information about the scale's reliability and validity. In order to realize the empirical objectives of the project, a minimum random sample of enterprises operating in Poland will be designed. Enterprises drawn from the latest editions of the "2000" list, which includes the largest enterprises (in terms of, among other things, sales revenue and profitability) supplemented by the "500" list of the most innovative enterprises in Poland, will be invited to participate in the study. Meanwhile, verification of relationships between variables will be carried out using statistical tests and structural equation modeling (SEM).

The expected results will provide information on effective ways to build and strengthen the resilience of enterprises in the face of risks and uncertainty. Due to the innovative nature of the issue undertaken, the research will contribute to enriching the body of science in the area of enterprise management in the face of the pressures of changing business conditions. In this sense, this applies to solutions indicating the building of dynamic resilience of enterprises in the face of threats from the environment by seeking designations for building and strengthening resilience that would enable strategic revitalization. In the social context, the expected results will also indicate the importance of the so-called soft aspects of management in building intra-organizational relationships, which will have an impact on increasing awareness of the importance of adaptation processes in building organizational resilience.

Disclosure statement

The author does not have any competing financial, professional, or personal interests from other parties.

References

- Acquaah, M., Amoako-Gyampah, K., & Jayaram, J. (2011). Resilience in family and nonfamily firms: An examination of the relationships between manufacturing strategy, competitive strategy and firm performance. *International Journal of Production Research*, 49(18), 5527–5544.
 - https://doi.org/10.1080/00207543.2011.563834
- Ambulkar, S., Blackhurst, J., & Grawe, S. (2015). Firm's resilience to supply chain disruptions: Scale development and empirical examination. *Journal of Operations Management*, 33(34), 111–122. https://doi.org/10.1016/j.jom.2014.11.002
- Baggio, J. A., Brown, K., & Hellebrandt, D. (2015). Boundary object or bridging concept? A citation network analysis of resilience. *Ecology and Society*, 20(2), 1–2.
 - https://doi.org/10.5751/ES-07484-200202
- Barney, J. B. (2001a). Gaining and sustaining competitive advantage. Prentice Hall.
- Barney, J. B. (2001b). Is the resource-based view a useful perspective for strategic management research? Academy of Management Review, 26(1), 41–56. https://doi.org/10.2307/259393
- Basiouni, A., Hafizi, A., Akhtar, N., & Alojairi, A. (2019). Assessing Canadian business IT capabilities for online selling adoption: A Net-Enabled Business Innovation Cycle (NEBIC) perspective. Sustainability, 11(13), 3662.
 - https://doi.org/10.3390/su11133662
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, 49(18), 5375–5393. https://doi.org/10.1080/00207543.2011.563826
- Bishop, T., & Hydoski, F. (2010). Odporność korporacji. Zarządzanie ryzykiem nadużyć i korupcji. Studio Emka.
- Blanco, J. M., & Montes-Botella, J. L. (2017). Exploring nurtured company resilience through human capital and human resource development: Findings from Spanish manufacturing companies. *International Journal of Manpower*, 38(5), 661–674. https://doi.org/10.1108/IJM-11-2015-0196
- Bogodistov, Y., & Wohlgemuth, V. (2017). Enterprise risk management: A capability based perspective. *The Journal of Risk Finance*, 18(3), 234–251.
 - https://doi.org/10.1108/JRF-10-2016-0131

- Burnard, K. J., & Bhamra, R. (2019). Challenges for organisational resilience. *Continuity* & *Resilience Review*, 1(1), 17–25. https://doi.org/10.1108/crr-01-2019-0008
- Carvalho, A. O., Ribeiro, I., Cirani, C. B. S., & Cintra, R. F. (2016). Organizational resilience: A comparative study between innovative and non-innovative companies based on the financial performance analysis. *International Journal of Innovation*, 4(1), 58–69. https://doi.org/10.5585/iji.v4i1.73
- Chesbrough, H. (2020). To recover faster from Covid-19, open up: Managerial implications from an open innovation perspective. *Industrial Marketing Management*, 88, 410–413. https://doi.org/10.1016/j.indmarman.2020.04.010
- Conz, E., & Magnani, G. (2020). A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research. *European Management Journal*, 38(3), 400–412. https://doi.org/10.1016/j.emj.2019.12.004
- Covey, S., Whitman, B., & England, B. (2013). Przewidywalne rezultaty w nieprzewidywalnych czasach. Jak zwyciężać w każdych warunkach. Studio Emka.
- Crane, M. F., Falon, S. L., Kho, M., Moss, A., & Adler, A. B. (2021). Developing resilience in first responders: Strategies for enhancing psychoeducational service delivery. *Psychological Services*, 19(S2), 17–27.
 - https://doi.org/10.1037/ser0000439
- Drewniak, R. (2020). Strategic alliance and process innovation: The moderating role of the alliance duration and the firm size. In Bichler-Ripfel, H., & Kragulj, F. (Eds.), *Building future competences*. Challenges and opportunities for skilled crafts and trades in the knowledge economy, 2/2, 74–93.
- Drucker, P. (2012). *Managing the non-profit organization*. Routledge. https://doi.org/10.4324/9780080938493
- Floyd, S., & Lane, P. J. (2000). Strategizing throughout the organization: Managing role conflict in strategic renewal. *Academy of Management Review*, 25(1), 154–177. https://doi.org/10.2307/259268
- Folke, C., Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C. S., & Walker, B. (2002). Resilience and sustainable development: Building adaptive capacity in a world of transformations. *Journal of the Human Environment*, *31*(5), 437–440. https://doi.org/10.1579/0044-7447-31.5.437
- Gray, D., & Jones, K. F. (2016). Using organisational development and learning methods to develop resilience for sustainable futures with SMEs and micro businesses: The case of the "business alliance". *Journal of Small Business and Enterprise Development*, 23(2), 474–494.
 - https://doi.org/10.1108/JSBED-03-2015-0031
- Hamel, G., & Prahalad, C. K. (1996). *Competing for the future*. Harvard Business Review Press.
- Herbane, B. (2019). Rethinking organizational resilience and strategic renewal in SMEs. *Entrepreneurship and Regional. Development*, 31(5–6), 476–495.
 - https://doi.org/10.1080/08985626.2018.1541594
- Hillmann, J., & Guenther, E. (2021). Organizational resilience: A valuable construct for management research? *International Journal of Management Review*, 23(1), 7–44. https://doi.org/10.1111/ijmr.12239
- Hollnagel, E., Paries, J., Woods, D. D., & Wreathall, J. (2011). Resilience engineering in practice: A guidebook. Ashgate, Surrey.
- Hussain, M., & Papastathopoulos, A. (2022). Organizational readiness for digital financial innovation and financial resilience. *International Journal of Production Economics*, 243, 108326. https://doi.org/10.1016/j.ijpe.2021.108326_

- Hussen, M., Hagelaar, G., van der Velde, G., & Omta, S. W. (2021). Conceptualization of SMEs' business resilience: A systematic literature review. Cogent Business & Management, 8(1), 1938347. https://doi.org/10.1080/23311975.2021.1938347
- Iborra, M., Safón, V., & Dolz, C. (2020). What explains the resilience of SMEs? Ambidexterity capability and strategic consistency. Long Range Planning, 53(6), 101947. https://doi.org/10.1016/j.lrp.2019.101947
- International Consortium For Organizational Resilience. (2023). The model for increasing organizational resilience. https://www.build-resilience.org/OR-Model.php
- Ismail, H. S., Poolton, J., & Sharifi, H. (2011). The role of agile strategic capabilities in achieving resilience in manufacturing-based small companies. International Journal of Production Research, 49(18), 5469-5487.

https://doi.org/10.1080/00207543.2011.563833

- Kamalahmadi, M., & Parast, M. M. (2016). A review of the literature on the principles of enterprise and supply chain resilience: Major findings and directions for future research. International Journal of Production Economics, 171(1), 116-133. https://doi.org/10.1016/j.ijpe.2015.10.023
- Kantur, D., & Say, A. I. (2015). Measuring organizational resilience: A scale development. Journal of Business Economics and Finance, 4(3), 456-472.

https://dergipark.org.tr/en/pub/jbef/issue/32406/360419

- Krupski, R. (2008). Elastyczność organizacji. UE we Wrocławiu. Li, C., Coates, G., Johnson, N. D., & McGuinness, M. (2015). Designing an agent-based model of SMEs to assess flood response strategies and resilience. World Academy of Science, Engineering and Technology, International Journal of *Humanities and Social Sciences*, 9(1), 7–12.
- Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. International Journal of Management Reviews, 19(1), 4-30. https://doi.org/10.1111/ijmr.12076
- Luthar, S. (2006). Resilience development: A synthesis of research across five decades. In Cicchetti, D., & Cohen, D. (Eds.), Developmental psychopatology: Risk, disorder, and adaption (pp. 739-795). John Wiley & Sons, Inc.
- Luthar, S., & Zelazo, L. (2003). Research on resilience. An integrative review. In Luthar, S. (Ed.), Resilience and vulnerability (pp. 510-550). Cambridge University Press.

https://doi.org/10.1017/CBO9780511615788

Luthar, S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. Child Development, 71(3), 543-562.

https://doi.org/10.1111/1467-8624.00164

- Mierzejewska, W., & Romanowska, M. (2015). Przedsiębiorstwo odporne na kryzys. Wolters Kluwer.
- Morais-Storz, M., & Nguyen, N. (2017). The role of unlearning in metamorphosis and strategic resilience. The Learning Organization, 24(2), 93-106. https://doi.org/10.1108/TLO-12-2016-0091
- Morais-Storz, M., Stoud Platou, R., & Berild Norheim, K. (2018). Innovation and metamorphosis towards strategic resilience. International Journal of Entrepreneurial Behavior & Research, 24(7), 1181-1199.

https://doi.org/10.1108/ijebr-11-2016-0369

Negri, M., Cagno, E., Colicchia, C., & Sarkis, J. (2021). Integrating sustainability and resilience in the supply chain: A systematic literature review and a research agenda. Business Strategy and the Environment, 30(7), 2858–2886. https://doi.org/10.1002/bse.2776

- Ozdemir, D., Sharma, M., Dhir, A., & Daim, T. (2022). Supply chain resilience during the Covid-19 pandemic. Technology in Society, 68, 101847. https://doi.org/10.1016/j.techsoc.2021.101847
- Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in economic crises - an empirical study of Swedish textile and clothing SMEs. International Journal of Production Economics, 147(B), 410-428. https://doi.org/10.1016/j.ijpe.2013.02.031
- Parker, H., & Ameen, K. (2018). The role of resilience capabilities in shaping how firms respond to disruptions. Journal of Business Research, 88, 535-541.
 - https://doi.org/10.1016/j.jbusres.2017.12.022
- Penades, M. C., Núnez, A. G., & Canos, J. H. (2017). From planning to resilience: The role (and value) of the emergency plan. Technological Forecasting and Social Change, 121(3), 17-30. https://doi.org/10.1016/j.techfore.2016.12.004
- Perrings, Ch. (2006). Resilience and sustainable development. Environment and Development Economics, 11(4), 417-427. https://doi.org/10.1017/S1355770X06003020
- Porter, M. E. (2008). On competition. Harvard Business School Publishing.
- Qaiyum, S., & Wang, C. L. (2018). Understanding internal conditions driving ordinary and dynamic capabilities in Indian high-tech firms. Journal of Business Research, 90, 206-214. https://doi.org/10.1016/j.jbusres.2018.05.014
- Rahi, K. (2019). Indicators to assess organizational resilience a review of empirical literature. International Journal of Disaster Resilience in the Built Environment, 10(2-3), 85-98. https://doi.org/10.1108/IJDRBE-11-2018-0046
- Regibeau, P., & Rockett, K. (2013). Economic analysis of resilience: A framework for local policy response based on new case studies. Journal of Innovation Economics & Management, 11, 107-147. https://doi.org/10.3917/jie.011.0107
- Rice, J. B., & Sheffi, Y. (2005). A supply chain view of the resilient enterprise. MIT Sloan Management Review, 47(1), 41-48.
- Rodriguez-Sanchez, A., Guinot, J., Chiva, R., & Lopez-Cabrales, A. (2021). How to emerge stronger: Antecedents and consequences of organizational resilience. Journal of Management and Organization, 27(3), 442-459.
 - https://doi.org/10.1017/jmo.2019.5
- Sarta, A., Durand, R., & Vergne, J-P. (2021). Organizational adaptation. Journal of Management, 47(1), 43-75. https://doi.org/10.1177/0149206320929088
- Simmie, J., & Martin, R. (2010). The economic resilience of regions: Towards an evolutionary approach. Cambridge Journal of Regions, Economy and Society, 3(1), 27-43. https://doi.org/10.1093/cjres/rsp029
- Sin, I., Musa, N., & Ng, K. (2017). Building business resilience through incident management body of knowledge (IM-BOKTM): The amalgamated framework for total resilient capability. Global Business & Finance Review, 22(1), 38-50. https://doi.org/10.17549/gbfr.2017.22.1.38
- Stankiewicz, M. J. (2005). Konkurencyjność przedsiębiorstwa budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji. TNOiK.
- Su, H. C., & Linderman, K. (2016). An empirical investigation in sustaining high quality performance. Decision Sciences, 47(5), 787–819. https://doi.org/10.1111/deci.12210
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509-533. https://www.jstor.org/stable/3088148

- Tracey, N., & French, E. (2017). Influence your firm's resilience through its reputation: Results won't happen overnight but they will happen! *Corporate Reputation Review*, 20(1), 57–75. https://doi.org/10.1057/s41299-017-0014-7
- Urbanowska-Sojkin, E. (2021). *Sprawność przedsiębiorstw w warunkach niepewności. Teoria i praktyka.* Polskie Wydawnictwo Ekonomiczne.
- Weick, K. E., & Sutcliffe, K. M. (2007). Managing the unexpected: Resilient performance in the age of uncertainty (2nd ed.). Jossey-Bass.
- Wheeler, B. C. (2002). NEBIC: A dynamic capabilities theory for assessing net-enablement. *Information Systems Research*, 13(2), 125–146. https://doi.org/10.1287/isre.13.2.125.89
- Wilden, R., Gudergan, S. P., Nielsen, B., & Lings, I. (2013). Dynamic capabilities and performance: Strategy, structure and environment. *Long Range Planning*, 46(1–2), 72–96. https://doi.org/10.1016/j.lrp.2012.12.001

- Woods, D. D. (2015). Four concepts for resilience and the implications for the future of resilience engineering. *Reliability Engineering & System Safety*, 141, 5–9.
 - https://doi.org/10.1016/j.ress.2015.03.018
- Yuan, R., Luo, J., Liu, M. J., & Yu, J. (2022). Understanding organizational resilience in a platform-based sharing business: The role of absorptive capacity. *Journal of Business Research*, 141, 85–99. https://doi.org/10.1016/j.jbusres.2021.11.012
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955. https://doi.org/10.1111/j.1467-6486.2006.00616.x
- Ziębicki, B. (2010). Elastyczność jako kryterium efektywności organizacyjnej. *Acta Universitatis Lodziensis. Folia Oeconomica*, 234, 387–396. https://doi.org/11089/297