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NURTURING ORGANIZATIONAL RESILIENCE: EXPLORING THE INTERPLAY OF LEADERSHIP AND DYNAMIC MANAGERIAL CAPABILITIES

Introduction

The Covid-19 pandemic, which has profoundly impacted the global economy in recent years, has precipitated a significant number of companies into failure or deep financial crisis. Consequently, organizational resilience, defined as the capacity to weather such storms, has garnered unparalleled attention from the media, scholars, and managers alike [Ingram, Wieczorek-Kosmal, Hlavacek, 2023]. While researchers have explored various facets of organizational resilience [Linnenluecke, 2017], a common consensus among scholars is the ongoing quest to understand the multitude of factors that enable organizations to not only survive but also thrive in new and challenging conditions [Williams et al., 2017]. Despite the extensive body of research on the topic, uncertainties persist regarding how best to manage organizations to safeguard their well-being amidst crises.

Organizational resilience is increasingly viewed through the lens of the firm's abilities or capabilities, with scholars emphasizing its strong relationship with dynamic capabilities. However, recent research has increasingly turned its focus to the microfoundations of organizational resilience, particularly investigating the interplay between individual and organizational resilience and elucidating the impact of the former on the latter. Against this backdrop, the question arises: How do dynamic

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managerial capabilities, essentially dynamic capabilities at the organizational level, drive resilience in organizations? Yet, empirical evidence on whether and how these capabilities facilitate the creation of organizational resilience remains limited [Martinelli, Tagliazucchi, Marchi, 2018]. What is known, however, is that managers and leaders wield direct influence over the resilience of organizations as a whole [Yu et al., 2019]. Nonetheless, understanding how different types of leadership contribute to organizational resilience in times of crisis remains a relatively underexplored area, albeit the potential of spiritual leadership in aiding organizations facing adversities has been noted [Ahmed, Khan, Rachman, 2023], with empirical studies in this domain being scarce.

Given the challenging conditions precipitated by crises, it is argued that managers possess the potential to effectively counter adversities through inspiration and support provided to employees [Shani, 2020], which lies at the core of benevolent leadership [Ghosh, 2015]. To complicate things even more, the effects of dynamic managerial capabilities on organizational resilience are subject to the pressures exerted by the organization's environment, particularly environmental dynamism and hostility, which may either hinder or foster the effectiveness of actions resulting from dynamic managerial capabilities in developing organizational resilience [Do et al., 2022].

In summary, our literature research on the drivers of organizational resilience shows that the knowledge in the field is dispersed, and the theoretical understanding of this phenomenon is still evolving. Also, it shows the value of studies on organizational resilience for organizational practice facing discontinuity and change. The literature reveals a significant gap in understanding the relationships between dynamic managerial capabilities, particularly regarding the role of benevolent leadership within this context. While existing studies highlight the importance of environmental dynamism, research remains inconclusive about how environmental factors impact the internal relationships between dynamic capabilities, leadership, and organizational resilience. To contribute to our understanding of the drivers of organizational resilience, we focus on studying the impact of managerial dynamic capabilities on organizational resilience, with benevolent leadership mediating and environmental dynamism and hostility moderating this relationship. The aim of this paper is to examine the impact of dynamic managerial capabilities on organizational resilience, with a focus on the mediating role of benevolent leadership and the moderating effects of environmental dynamism and hostility in these relationships. In doing so, we aim to enrich the growing body of knowledge on the antecedents of organizational resilience, with a specific emphasis on cross-level interactions.

Based on our review of the literature, we formulated the following research questions: (1) How do dynamic capabilities influence organizational resilience? (2) What role does benevolent leadership play in the relationship between dynamic capabilities and organizational resilience? (3) What effects do environmental dynamism and

hostility have on the relationship between dynamic capabilities and organizational resilience? From this literature review, we developed research hypotheses corresponding to these research question. They are as follows:
H1: Dynamic managerial capabilities have a positive impact on organizational resilience;
H2: Dynamic managerial capabilities have a positive impact on benevolent leadership;
H3: Benevolent leadership has a positive impact on organizational resilience;
H4: Benevolent leadership mediates the relationship between dynamic managerial capabilities and organizational resilience;
H5a: Environmental dynamism moderates the relationship between dynamic managerial capabilities and organizational resilience;
H5b: Environmental hostility moderates the relationship between dynamic managerial capabilities and organizational resilience.

To achieve our objective, the subsequent sections provide a brief literature review, followed by the development of hypotheses. Subsequently, drawing on data from 379 Polish companies, we present the empirical findings of our study. Finally, we discuss the implications for theory and practice, suggest future research directions, and acknowledge the limitations of our study.

1. Literature review

1.1. Conceptualizing the influence of managerial dynamic capabilities on organizational resilience

The concept of organizational resilience, rooted in the early 1980 s [Linnenluecke, 2017; Staw, Sanderlands, Dutton, 1981], finds its theoretical foundation in the evolutionary theory of organizations. This perspective encompasses mechanisms of change, selection, and survival, alongside learning processes [Meyer, 1982; Weick, Roberts, 1993]. In 1992, Diamond contributed to management literature by introducing the term "organizational resilience," positing it as an inherent capability for adaptive leadership. Subsequently, Hind, Frost, and Rowley [1996] emphasized resilience as a visible attribute arising from the necessity to swiftly adapt to novel circumstances and glean insights from experiences. Similarly, Mallak [1998] defined resilience as an organizational capacity rooted in a constructive interpretation of experiences that broadens the scope of decision-making, and employs organizational bricolage – crafting innovative solutions using available resources. Further insights from Paton, Smith and Violanti [2000] underscored resilience as a response strategy to incidents or disruptive external events, echoing Weick's concept of sensemaking. Lastly, Coutu [2002] elucidated organizational responses to crises, exemplified by the aftermath of the WTC terrorist attacks, emphasizing the importance of confronting reality, seeking

meaning amidst adversity, and leveraging available resources through ritualized creativity. According to Williams et al. [2017], we define organizational resilience as a process in which an actor (the organization) builds and uses capabilities to interact with the environment in a manner allowing for positive adjustment and continuous operation before, during, and after the disturbance (an external shock).

When organizations face unpredictable, changing markets, of the available resources are often insufficient to maintain a competitive advantage. The dynamic capability approach seeks to understand and explain how organizations can achieve and sustain competitive advantage over time. Dynamic capabilities are recognized as a firm's ability to change its resource base in response to rapidly changing environments [Teece, 2007]. In conducted research, it has been argued that dynamic capabilities include the ability to sustain constant change; as a result, they are very difficult to observe and even more challenging to replicate by other organizations. Consequently, they have been associated with sustainable competitive advantage, particularly in environments characterized by change [Ambrosini et al., 2009]. Similarly, Teece [2007] identified three dynamic capabilities: detecting and shaping opportunities and threats, exploiting opportunities, and maintaining competitiveness by strengthening, combining, protecting, and, if necessary, reconfiguring the intangible and legal values of the enterprise. This raises the question of how such capabilities develop. The key role of leaders in this process, depending on their adopted leadership style [Salleh, Grunewald, 2013] can be noted. Ambrosini et al. [2009] emphasized the significant role of leadership in environmental perception during the process of defining these dynamic capabilities, while Helfat et al. [2007] indicated that managerial behaviors and leadership styles are critical factors triggering dynamic capabilities, as managers play an essential role in identifying best practices and encouraging their subordinates to undertake specific tasks.

Recent research provides increasing evidence that dynamic capabilities significantly influence the development of firms – enhancing their performance and productivity [Henderson, Cockburn, 1994; Mol, Birkinshaw, 2009], driving sales growth [Evangelista, Vezzani, 2010], and enabling organizations to respond to new market requirements [D'Este, 2002]. Moreover, since capabilities must be utilized at the right time, speed is an essential element of organizational flexibility dynamics [Volberda, 1996]. Dynamic capabilities empower companies to recognize opportunities and threats and to respond effectively by modifying and/or creating ordinary capabilities that facilitate change. In fact, these capabilities are often considered a determining factor in an organization's success or failure [Bratnicki, 2010]. This is all the more important as organizations' pursuit of immortality, measured by the sustainability of sources of competitive advantage, can be lethal because it hinders the disposal of inefficient resources [Bratnicki, 2003].

A lot of research in the field emphasizes the crucial, strategic role of managers in this endeavor [King, Tucci, 2002; Zahra et al., 2006]. However, management rigidity limits the creation of dynamic capabilities [Danneels et al., 2017], and thus the efficiency of the company. Teece [2016] points out that managers are pillars of dynamic capabilities. The concept of entrepreneurship management emphasizes the strategic role of managers [Augier, Teece, 2009] in shaping dynamic capabilities. These actions involve selecting desired resources and skills and promoting organizational learning to capture external knowledge [Zahra et al., 2006]. Dynamic capabilities highlight organizational capabilities to accept and extend existing core competencies that enhance the creation of new management practices and structures in two ways. In particular, dynamic capabilities give priority to management teams that sense changes in their competitive environment, such as technological changes, customer requirements, regulations, etc. [Harreld et al., 2007].

Teece and Rosenbloom found that some managers may possess certain dynamic capabilities that contribute to the initiation of strategic changes [Teece, Pisano, Shuen, 1997]. The concept of dynamic managerial capabilities transposes the concept of organizational dynamic capabilities [Eisenhardt, Martin, 2000] to the individual level, that is, a specific manager and their impact on the team [Augier, Teece, 2009]. However, clear empirical evidence regarding the impact of dynamic managerial capabilities on the implemented leadership style is still lacking [Roberts, Campbell, Vijayasarathy, 2016].

To sum it up, there are numerous studies emphasizing the importance of dynamic capabilities for organizational resilience, since dynamic capabilities are frequently perceived as a building block on which organizational resilience is constructed [Khan, Farooq, Rasheed, 2019]. However, there knowledge on the role of dynamic managerial capabilities in organizational resilience remains relatively scarce [Fainshmidt, Nair, Mallon, 2017]. However, on the basis of the apparent influence of dynamic capabilities on organizational resilience, we posit that the same effect can be attributed to dynamic managerial capabilities. Thus, we propose what follows:
H1: Dynamic managerial capabilities have a positive impact on organizational resilience.

1.2. Benevolent leadership as the mediator of relationship between dynamic managerial capabilities and organizational resilience

Global business activities, technological advancement, intense competition, and resulting uncontrolled corporate greed have led employees to expect slightly different behaviors from their leaders. The crisis of trust in leadership and uncertainty in which many employees find themselves operating have necessitated a rethinking and reconstruction of traditional leadership models and styles to more satisfactorily

address current challenges. An interdisciplinary approach requires leaders to apply models derived, for example, from positive psychology, business ethics, workplace spirituality, appreciation, and corporate social responsibility [Ghosh, 2015]. A new perspective on leadership style is seen in playing complex organizational roles, as well as the ability to constrain various behaviors implied by the organizational or environmental context. In the context of expectations facing contemporary leadership, it is essential to possess specific capabilities enabling adaptation to dynamic changes occurring within and beyond the organization.

Benevolence has emerged in leadership literature with authenticity, common good, and virtue as its main components [Yukl, Gordon, Taber, 2002]. The concept of benevolent leadership treats leadership as a process of creating a virtuous cycle of encouragement and initiating positive changes in organizations through ethical decision-making, creating a sense of purpose, inspiring hope, supporting courage for positive actions, and leaving a positive impact on the larger community [Ghosh, 2015]. Benevolent leaders are those who create visible benefits, actions, or outcomes for the common good. Common good in this sense is a benefit for all or the majority of community members [Teimouri, Hosseini, Adreshiri, 2018]. Benevolent leaders are examples of honest and authentic actions in work for the benefit of those around them. Benevolence is defined as a philosophical belief in human goodness and a corresponding belief that people are obligated to use their natural instincts and developmental attitudes of love and mercy – that they tend to do good, be kind, and behave benevolently.

Benevolent leadership is characterized as a leadership style that prioritizes individual and comprehensive care for the personal and family well-being of subordinates [Cheng et al., 2004]. According to Ghosh [2015], benevolent leadership is an act of initiating and promoting changes in companies through wise decision-making and honest communication to establish a cycle of virtues among employees. Its main goals are to bring benefits, transform, and provide favorable outcomes for all employees of the organization [Ghosh, 2015].

Karakas and Sarigollu [2012] proposed a conceptual model of benevolent leadership comprising four dimensions – morality, spirituality, vitality, and community [Karakas, Sarigollu, 2012]. The dimension of morality, derived from business ethics, refers to ethical decision-making by leaders [Ribeiro, Duarte, Fidalgo, 2020]. The concept of "ethical sensitivity" denotes a leader 's moral deliberation regarding what is good and what is bad within the organization [Karakas, Sarigollu, 2012]. The aspect of spirituality relates to understanding the spiritual needs of employees and searching for meaning. Spirituality provides leaders with a sense of purpose, meaning at work, and connections [Fry, Slocum, 2008]. The third stream in the model of benevolent leadership is vitality [Kernochan, McCormick, White, 2007]. The authors of the model refer in this aspect to positive psychology and positive organizational behaviors

[Luthans, 2002]. All these concepts focus on how a leader can create positive changes in their organizations, especially changes that increase employee potential. Thus, vitality refers to overcoming resistance to change, helping others in development, and unleashing creativity. When subordinates notice the positive engagement of leaders, they try to emulate them and show greater willingness to help others. The last stream in the model is community, based on the concept of CSR and corporate citizenship [Gariga, Mele, 2004]. The essence here is fulfilling social obligations by benevolent leaders. Their role is to be open to social issues regarding the environment, education, and ecology, or simply to develop the idea of sustainable development. The leader's involvement in solving social problems and contributing to the improvement of the social situation through organizational innovations is called "social responsiveness" [Matten, Crane, 2005]. The aspect of the "common good" of benevolent leaders must go beyond the boundaries of the organization.

When organizations face unpredictable, changing markets, it turns out that the level of resources held is insufficient to maintain competitive advantage and remain resilient in the face of crisis [Oxtoby et al., 2002]. According to the concept proposed by Adner and Helfat, dynamic managerial capabilities consist of three fundamental resources: cognitive structures of managers, social capital, and human capital. These resources form the basis for changing behaviors and actions [Martin, 2011]. Cognitive structures of managers include mental models and personal beliefs (also referred to as "knowledge structures"), cognitive processes, and emotions. These actions involve the use of perceptual skills, reasoning, problem-solving, and communication abilities. Through these factors, managers can successfully organize their thoughts and process information from external sources. This perception influences strategic decisions [Adner, Helfat, 2003] through the identification of knowledge relevant in this context [Teece, 2016]. This perception allows gaining experience through the learning process.

The second dimension comprising dynamic managerial capabilities, according to the adopted concept, is "managerial social capital". This capital largely encompasses the nature of contacts established by the manager. Specifically, it concerns the characteristics of internal and external contacts of the manager, their frequency, strength, and scope [Cosaert, Volberda, 2016]. Given the importance of trust and engagement in employee management [Vaccaro, Parente, Veloso, 2010], the relationship between social capital and leadership seems to be very significant. Due to the significance of social capital for internal resources, researchers have called for the synthesis of social capital with internal networks [Yeoh, 2004]. In this context, social capital arises when, under the leadership, employees pursue the same vision, which can create a common goal and identity of a group with stable and lasting relationships [Ferragina, 2010]. However, social capital can only occur when leaders inspire trust among employees. It is based not only on the structure of relationships but also on

trust, reciprocity, and mutual benefit [Stone, Gray, Hughes, 2003]. Bolino et al. [2002] found that high-quality relationships between employees and management (i.e., social capital) are intangible, valuable, rare, and difficult to replicate, which can contribute to competitive advantage. The last dimension contributing to dynamic managerial capabilities is human capital. Human capital relates to acquired skills and knowledge developed through past experiences, training, and education. Recent works have expanded this approach, which now includes not only knowledge and skills but also psychological traits, cognitive abilities (general intelligence), and other skills (e.g., personality) [Wright, Coff, Moliterno, 2014]. Dynamic managerial capabilities, in this instance, manifest in leadership actions that shape the organization, stimulate others to act, and inspire employees to exceed expectations.

Finally, Ambrosini et al. [2009] emphasized the significant role of leadership in perceiving the environment in the process of defining these dynamic capabilities. Helfat et al. [2007] indicated that managerial behaviors and leadership styles are critical factors enabling the effective employment of dynamic capabilities, and it can be said that this is how managers can point out best practices, thereby encouraging their subordinates to undertake specific tasks. Thus, on this basis we formulate the following hypothesis:

H2: Dynamic managerial capabilities have a positive impact on benevolent leadership.

Finally, it is proven beyond doubt that leadership has a profound effect on organizational resilience [Suryaningtyas et al., 2019]. A lot of research in the field emphasizes the crucial, strategic role of managers in this endeavor [King, Tucci, 2002; Zahra et al., 2006]. However, management rigidity limits the creation of dynamic capabilities [Danneels et al., 2017], and thus the efficiency of the company. Teece [2016] explicitly points out that managers are pillars of dynamic capabilities. The concept of entrepreneurship emphasizes the strategic role of managers [Augier, Teece, 2009] in shaping organizational performance, and organizational resilience as well [Teo, Lee, Lim, 2017]. These actions involve selecting desired resources and skills and promoting organizational learning to capture external knowledge [Zahra et al., 2006]. Dynamic capabilities highlight organizational capabilities to accept and extend existing core competencies that enhance the creation of new management practices and structures in two ways. Firstly, dynamic capabilities give priority to management teams that sense changes in their competitive environment, such as technological changes, customer requirements, regulations, etc. [Harreld et al., 2007]. In particular, dynamic capabilities stimulate the organization to question existing practices and the status quo, resulting in managers being able to raise new assumptions about organizations in response to market changes. Through better learning, dynamic capabilities support organizational competencies, while members of the organization are more aware of the outcomes of their actions. Secondly, dynamic capabilities enable organizations to deploy resources to seize emerging opportunities. This process involves

reconfiguring, modifying, and integrating both tangible assets and intangible values – including legal rights – to effectively address challenges. These actions are carried out by leaders [Teece, 2006]. Although the evidence on the influence of benevolent leadership on organizational resilience is remains relatively scarce [Ahmed, Khan, ur Rachman, 2023], given the well-established impact of leadership on organizational resilience, we posit that benevolent leadership inherently facilitates the development of organizational resilience among employees. Based on this premise, we propose the following hypotheses:
H3: Benevolent leadership has a positive impact on organizational resilience;
H4: Benevolent leadership mediates the relationship between dynamic managerial capabilities and organizational resilience.

1.3. The moderating role of environmental dynamism and hostility in the relationship between dynamic managerial competencies and organizational resilience

The environment of most companies can be characterized as highly volatile, unstable, and increasingly hostile [Chen et al., 2017]. Consequently, key decision-makers in organizations must consider the dynamism and hostility of the environment in their everyday actions, and organizational strategies should encompass the growing unpredictability of conditions. As a result, every strategic and operational decision is made under uncertainty, and the environment affects the effectiveness of all actions taken by the organization. Out of the three core dimensions of the task environment, dynamism and hostility seem to pose the biggest challenge for managers. While complexity, reflecting the sheer number of competitors, products, and services as well as their mutual relationships, can be nurtured and finally understood by decision-makers, dynamism is much more difficult to predict as it refers to the future competitiveness of a business offer of a company, predictability of customers' behaviors, or technological change, which is highly uncertain. On the other hand, hostility refers to unpredictable actions taken by competitors resulting in bankruptcies or price wars. Also, the risk of operating in a hostile environment is significantly higher. In the paper, we decided to focus on environmental dynamism and hostility, as these factors have a proven effect on organizational resilience [Do et al., 2022; Khan, Farooq, Rasheed, 2019; Yu, Ye, 2021]. In particular, it may be argued that the organizational ability to effectively use its dynamic capabilities is highly dependent upon the state of the environment [Frank, Guttel, Kessler, 2017]. Specifically, a more dynamic and unstable environment will focus the attention of key decision-makers on creating dynamic managerial capabilities among its managers [Xia et al., 2024]. Also, in a highly dynamic environment, dynamic managerial capabilities will have a greater chance to positively affect organizational ability to survive the crisis or counter the

emergency [Li, Liu, 2014]. Luo [2000] argues that capability deployment should be aligned and configured with environmental dynamism in mind. The same applies to hostility, while here, as Penarroya-Farrel and Miralles [2022] argue, environmental hostility triggers reactions in the form of, for example, business model adaptation to new conditions. Hillmann and Guenther [2021] point out environmental hostility as conditions in which organizations should focus on developing resilience abilities to prepare for and withstand the crisis. Based on the abovementioned, we argue that the perceived environmental dynamism and hostility by managers foster companies to adopt effective dynamic capabilities, which may be effectively used to mitigate the risks associated with potential crises. Thus, we formulate two research hypotheses:
H5a: Environmental dynamism moderates the relationship between dynamic managerial capabilities and organizational resilience;
H5b: Environmental hostility moderates the relationship between dynamic managerial capabilities and organizational resilience.

2. Methodology: Sample and measures

To test our research hypotheses, we adopted a quantitative approach. Specifically, we crafted a survey that was dispatched to a randomly selected cohort of 2,000 companies from a database comprising 10,007 entries. In July 2023, we received 405 completed questionnaires from organizational representatives, of which 379 were deemed suitable for analysis. Twenty-six responses were excluded due to incompleteness or lack of credibility, such as instances of identical answers across all Likert-scale items. The resultant effective response rate stood at 18.95%, a commendable outcome for this type of study [Pielsticker, Hiebl, 2020].

Within the final sample, the age distribution of the organizations ranged from 3 to 183 years, with a mean of approximately 20 years and a standard deviation of 17.6 years. Company sizes varied widely, with employee counts ranging from 2 to over 17,000, and a mean of 25 employees, accompanied by a notably high standard deviation of 1,155. This distribution skews due to the presence of a few exceptionally large companies, each employing more than 10,000 individuals.

In terms of market scope, 100 companies operated locally, 71 had a regional presence, while 130 operated at a national level. Additionally, 63 companies had an international reach, and 15 were classified as global entities. Among the sample, 72 were trade organizations, 193 were primarily service-oriented, 35 were engaged in production, and 79 were characterized as mixed-type enterprises. Finally, there were 178 family-owned businesses and 201 non-family-based companies.

The primary dependent variable, organizational resilience, was conceptualized in line with the framework proposed by Orth and Schuldis [2021]. The questionnaire,

comprising 8 items rated on a 7-point Likert scale, demonstrated strong internal consistency with a Cronbach's alpha coefficient of 0.873. Exploratory factor analysis (EFA) with varimax rotation indicated that it constitutes a unidimensional construct (KMO = 0.880; approx.chi-squared = 1351.351 with 28 degrees of freedom, $p < 0.001$), explaining 54.05% of the variance across all items.

Managerial dynamic capabilities were assessed using the scale developed by Botts (2004), which consisted of 6 items rated on a 7-point Likert scale. The Cronbach's alpha coefficient for this scale was 0.837. EFA with varimax rotation confirmed its unidimensional nature (KMO = 0.845; approx.chi-square = 993.723 with 15 degrees of freedom, $p < 0.001$), accounting for over 63% of the variance. One item, related to employee diversification within the organization, was removed due to its negative impact on Cronbach's alpha and low factor loading (0.385). Consequently, Cronbach's alpha increased to 0.876, and EFA indicated that a single construct explains more than 67% of the variability of all items (KMO = 0.849; approx. chi-square = 937.865 with 10 degrees of freedom, $p < 0.001$).

Benevolent leadership was operationalized following the framework proposed by Cheng et al. [2004]. The scale, comprising 11 items, demonstrated high internal consistency (Cronbach's alpha = 0.946) and constituted a unidimensional construct (KMO = 0.940; approx. chi-square = 3453.235 with 55 degrees of freedom, $p<0.001$), explaining over 66% of the cumulative variance of the items.

Finally, the moderator variable, task environment, particularly environmental dynamism and hostility, were operationalized based on the proposition by Kwiotkowska [2018]. We focused on studying the interactive effect of two aspects of the original scale, as hostility and the rate of change are closely related to organizational resilience, directly reflecting the unpredictability of the environment – a similar approach was adopted by Frank, Guttel, and Kessler [2017]. The 8-item scale demonstrated reasonable internal consistency, with a Cronbach's alpha coefficient of 0.809. EFA revealed a two-factor structure (KMO=0.795; approx. chi-square = 985.550 with 18 degrees of freedom, $p<0.001$), explaining over 60% of the cumulative variance. The composition of factors is presented in Table 1.

Hence, in subsequent analyses, two factors reflecting the dynamism and hostility of the environment were incorporated. All variables were treated as latent, following the methodology recommended in the literature from which the scales were derived.

Control Variables: Two control variables were integrated into our study – namely, the size of the organization, measured by the number of full-time equivalents (FTE), and the age of the organization, quantified by the number of years since establishment. Consistent with prior research [Esteve-Perez, Pieri, Rodriguez, 2023], we anticipate that size may significantly influence an organization's resilience to crises. Larger organizations, on average, are posited to exhibit greater resistance to environmental changes due to their inherent internal potential, reflected in their resources. Similarly,

older companies might be perceived as more resilient during crises, having accumulated the financial resources necessary for survival over numerous operational years [Tognazzo, Gubitta, Favaron, 2016]. Given that both age and size data are heavily skewed, we followed De Meulenaere et al.'s [2021] recommendation and applied natural logarithms to normalize the data.

Table 1. Rotated factor loadings

Items	Dynamism	Hostility
ENV2. The ageing rate of products/services is very fast	**.799**	.147
ENV3. Competitors' behaviors is unpredictable	**.721**	.252
ENV1. Changes in marketing practices are frequent	**.698**	-.154
ENV4. The supply of products/services and customers' behaviors are unpredictable	**.638**	.429
ENV5. The pace of changes in the production/service provision technology is very fast	**.615**	.364
ENV7. The market activities of key competitors became more hostile	.249	**.818**
ENV6. The environment of the enterprise is very risky, one false step can lead to a big failure	.167	**.796**
ENV8. The market activities of the main competitors more and more influence the scope of the activities of the company (prices, supplies, services, quality, etc.)		**.771**

a. Solution converged in 3 iterations

Source: own study.

3. Research results

We commence our analysis by examining the fundamental properties of the studied constructs, presenting their descriptive statistics. To gain initial insights into the relationships between variables, we conducted a correlation analysis (see Table 2). For the purpose of estimating correlations, we computed metavariables, as previously suggested by Ingram, Kraśnicka, and Głód [2020] and Wójcik-Karpacz, Kraus, and Karpacz [2022].

As evident from Table 1, all scales, except for organizational resilience, exhibit acceptable or very good levels of Average Variance Extracted (AVE) and Composite Reliability (CR). Following Lam's (2012) suggestion, we proceeded with the analysis despite the AVE falling below the accepted threshold of 0.5. Given that the CR and Cronbach's alpha values are at respectable levels, a scale may still be deemed acceptable for further calculations.

The research findings indicate that organizational resilience is significantly associated with both benevolent leadership ($\rho = 0.612$) and dynamic managerial capabilities ($\rho = 0.609$). It is also influenced by environmental dynamism ($\rho = 0.411$), while

its relationship with environmental hostility is deemed insignificant ($\rho = 0.084$). Additionally, both organizational size and age exhibit negative correlations with the resilience of the studied companies (–0.190 and –0.122, respectively); however, these relationships are weak.

Table 2. Descriptives, correlations, Cronbach's alpha, EVA and CR

	1	2	3	4	5	6	7
Organizational resilience	1						
Benevolent Leadership	.612**	1					
Dynamic managerial capabilities	.609**	.400**	1				
Environmental dynamism	.411**	.290**	.158**	1			
Environmental hostility	.084	.078	.003	.441**	1		
6. Size	-.190**	-.279**	-.032	-.169**	-.072	1	
7. Age	-.122*	-.195**	-.124*	-.107*	.022	.520**	1
Mean	5.182	4.704	5.018	4.875	4.378	241.385	19.640
Standard deviation	0.903	1.211	0.977	0.969	1.191	1155.940	17.585
AVE	0.378	0.599	0.576	0.444	0.555	-	-
CR	0.828	0.942	0.871	0.797	0.789	-	-
Cronbach's alpha	0.873	0.946	0.876	0.780	0.770	-	-

N = 379, ** – $p < 0.001$; * – $p < 0.05$

Source: own study.

Benevolent leadership demonstrates a strong association with dynamic managerial capabilities (0.400) and environmental dynamism (0.290). Furthermore, it exhibits negative correlations with organizational size (–0.279) and age (–0.195).

Dynamic managerial capabilities are significantly related to environmental dynamism (0.158) but show no correlation with environmental hostility (0.078). Moreover, they exhibit a negative correlation with organizational age (–0.124).

Finally, both dimensions of the organizational environment are interrelated (0.441), with environmental dynamism being associated with organizational size (–0.169) and age (–0.107). Given the significant correlations between the independent variable, mediator, and moderator, it is prudent to check for potential multicollinearity. In order to ensure the reliability of the research, variance inflation factors were calculated to assess whether multicollinearity exists. Consequently, a regression model was computed using SPSS, with organizational resilience as the dependent variable and all other variables set as independent, with multicollinearity statistics enabled. The results are provided in Table 3.

As depicted in Table 1, all Variance Inflation Factor (VIF) statistics are well below the threshold of 3, indicating a low probability of multicollinearity among the studied variables. Therefore, we can confidently proceed with further analyses.

Table 3. Multicollinearity test

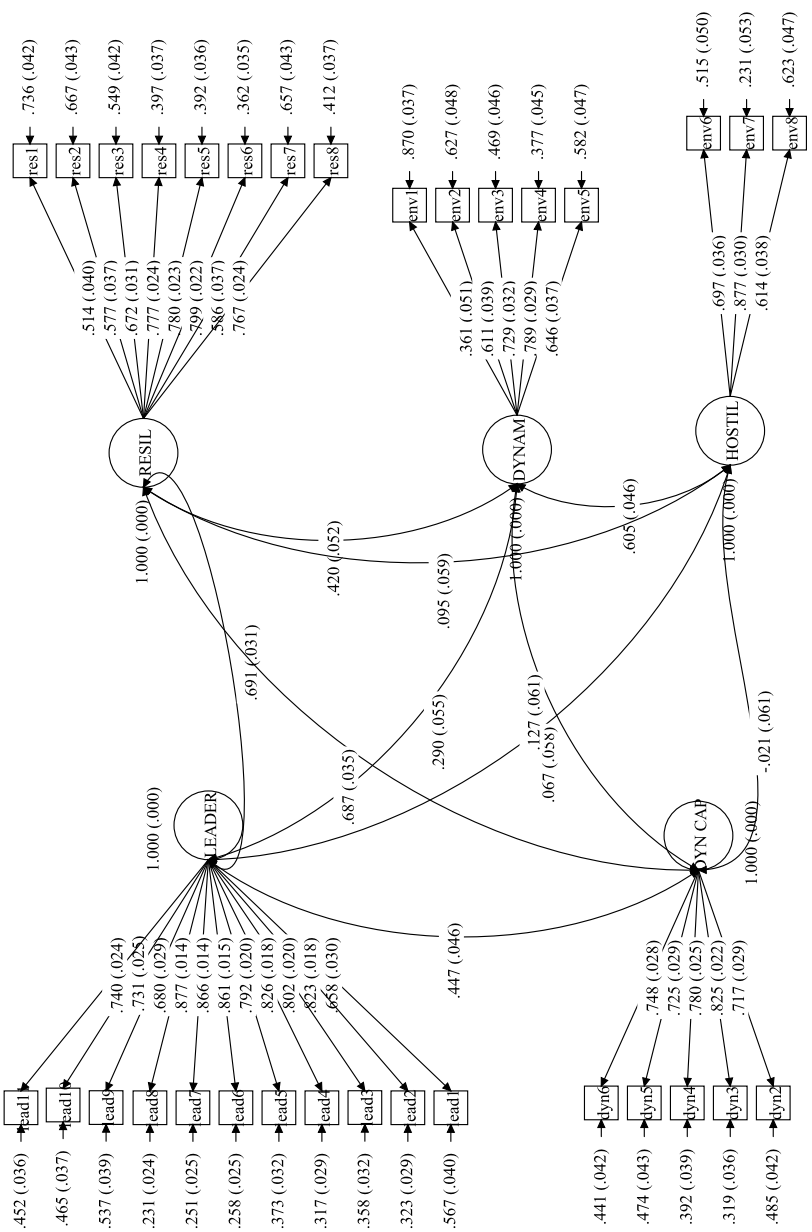
Model	Unstandardized coefficients		Standardized coefficients	t	P value	Multicollinearity statistics	
	B	Standard error	Beta			Tollerance	VIF
Constant	.820	.222		3.687	<.001		
Benevolent leadership	.285	.028	,382	10.177	<.001	.796	1.257
Environmental dynamism	.243	.036	,260	6.662	<.001	.735	1.361
Hostility	-.043	.028	-,057	–1.528	.127	.798	1.253
Dynamic capabilities	.411	.037	,409	11.207	<.001	.843	1.186

Source: own study.

To detect and test our research hypotheses, we employed structural equation modeling (SEM), which allows for the estimation of relationships between variables in their entirety. Hence, we adopted a two-step approach for data analysis. In the initial step, the structural model was estimated to assess the adequacy of the internal structure and the appropriateness of the data fit (refer to Figure 1). Mplus for Mac was selected for these computations, as it offers capabilities for analyzing mediation and moderation effects on latent variables, a feature not available in alternative software options.

The model was well fitted with RMSEA equal to 0.060, CFI = 0.917, TLI = 0.908, SRMR (Standardize Root Mean Square Residual) = 0.061. Akaike Information Criterion (AIC) equaled to 35991.949. Reading the model, indices and model parameters confirm theoretical structure, which opens up a pathway to further analysis, focused on discovering statistical significant relationships between latent variables (structural model). The model of relationships between studied variables is presented in Figure 1. To facilitate interpretation of relationships all the structural components (relationships between latent variable and indicators) were hidden. The model was created using draw.io, free application for preparation of graphs.

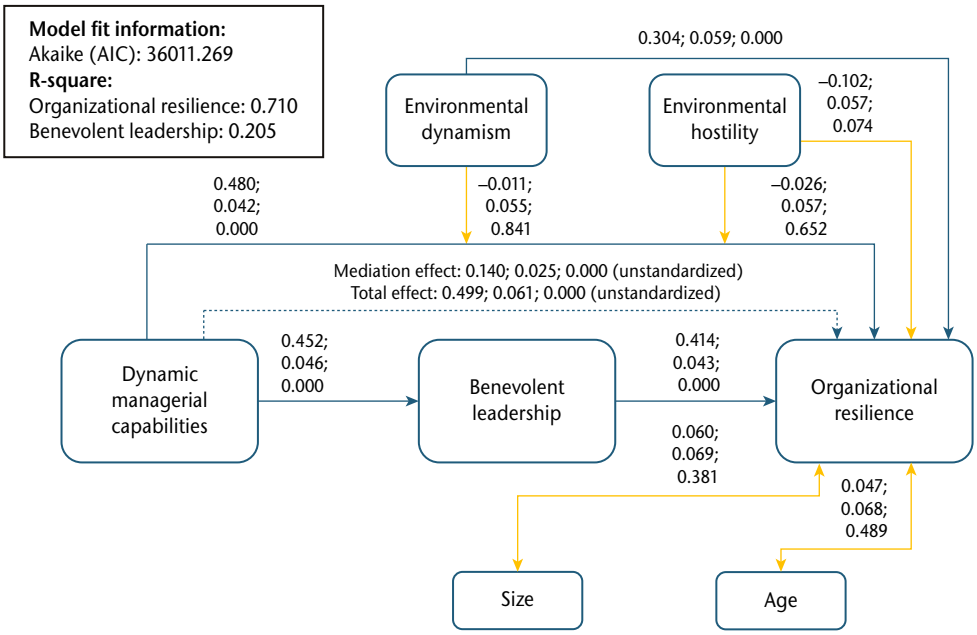
Figure 1. Measurement model with the individual latent constructs



LEGEND: LEADER – benevolent leadership; DYN CAP – dynamic managerial capabilities, RESIL – organizational resilience, DYNAM – environmental dynamism, HOSTIL – environmental hostility; lead1-lead11 – benevolent leadership items; dyn2-dyn6 – dynamic managerial capabilities items; res1-res8 – organizational resilience items; env1-env5 – environmental dynamism items; env6-env8 – environmental hostility items.
Above the lines standardized parameters and standard errors are given.

Source: own study.

Figure 2. Structural model of relationships between dynamic managerial competencies, benevolent leadership, organizational resilience and environmental dynamism and hostility



Legend: Above lines standardized model parameters, standard errors, and p-values are provided. Black arrows – relationship statistically significant; yellow arrows – relationships statistically insignificant; dotted line – mediation effect from dynamic managerial capabilities through benevolent leadership to organizational resilience (based on unstandardized results).

Source: own study.

The model presented in Figure 2 was derived using a Random analysis approach employing an integration algorithm and a maximum likelihood estimator. However, employing this method, which is recommended for estimating models with moderation effects, results in the absence of standard structural equation model fit indices. The software is unable to compute RMSEA, chi-square of model fit, CFI, TLI, or SRMR. Nevertheless, the model depicted in Figure 2 can be considered well-fitted, considering the AIC level, which equals 36,011. For comparison, the AIC of an identical model, but fitted without the interaction effects (Figure 1), was only slightly better. This indicates that adding relationships with environmental dynamism and hostility has effectively worsened the model by 20 points, which, in the context of AIC itself, is relatively small. Research shows that the variability of organizational resilience is significantly explained by dynamic managerial capabilities, benevolent leadership and companies' environmental dynamism and hostility (r-square equal to 0.710).

The results of the study strongly support hypothesis H1, indicating that dynamic managerial capabilities positively influence organizational resilience (0.480; $p < 0.001$).

Additionally, hypothesis H2 is supported, as benevolent leadership is shown to depend on dynamic managerial capabilities (0.452; $p < 0.001$). Furthermore, hypothesis H4, which describes the mediation effect, is empirically supported: benevolent leadership is significantly related to organizational resilience (0.414; $p < 0.001$) and plays a crucial role in explaining the influence of dynamic capabilities on organizational resilience (0.140, $p < 0.001$). However, introducing the mediating variable did not render the direct influence of dynamic managerial capabilities statistically insignificant, suggesting partial mediation.

Lastly, our hypotheses regarding the moderating effect of environmental dynamism (H4a) (–0.011, $p = 0.841$) and hostility (H5b) (–0.026, $p = 0.652$) did not find statistical support. Of the two aspects of the task environment, only environmental dynamism significantly affects organizational resilience (0.304, $p < 0.001$), while the effect of environmental hostility remains statistically insignificant (–0.102; $p = 0.074$).

4. Discussion

Our research findings substantiate the significant impact of dynamic managerial capabilities on an organization's resilience and adaptability amidst environmental challenges. This assertion aligns with Manfield's [2016] claim in a Ph.D. dissertation, suggesting that dynamic capabilities serve as the foundation for achieving organizational resilience. It also resonates with the conclusions drawn by Akpan, Johnny, and Sylva [2022], who demonstrated a direct and positive relationship between dynamic capabilities – particularly sensing and reconfiguration capabilities – and organizational resilience. Similarly, Ozanne et al. [2022] found that social capital and dynamic capabilities positively influence organizational resilience, particularly evident during the Covid-19 pandemic. These findings validate the thesis that robust organizational resilience stems from well-developed dynamic capabilities, emphasizing not only the collective capacity of the organization but also the managerial acumen of its leaders, as highlighted by Duchek [2018]. Thus, the underpinning of organizational resilience extends beyond the organizational level to the individual level.

Moreover, our study lends empirical support to the second research hypothesis, revealing that benevolent leadership significantly enhances an organization's capacity to thrive amidst uncertainty. Defined as a supportive leadership style characterized by understanding and assistance [Grego-Planer, 2022], benevolent leadership facilitates more effective responses to external threats within the organization. This finding echoes the research by Chhabra and Pandey [2023], indicating that benevolent leadership acts as a catalyst for organizational resilience, whether as a mediator or a moderator in the relationship. Our results further demonstrate that benevolent leadership enables the transformation of dynamic managerial capabilities into organizational

resilience, corroborating the recommendation for this leadership style during times of crisis, as suggested by Steinbach, Kautz, and Korsgaard [2021]. Notably, our study underscores the effectiveness of benevolent leadership in fostering welfare orientation, ethical climate, and organizational citizenship behavior, not limited to not-for-profit organizations but applicable across all organizational contexts [Ghosh, 2015].

Finally, our analysis indicates that the relationships examined persist irrespective of the environmental dynamics and hostility, as there is no moderation effect of environmental dynamism and hostility on the relationship between dynamic managerial capabilities and organizational resilience. This suggests that the influence of dynamic managerial capabilities remains unchanged despite environmental unpredictability. This finding contrasts with the results of Do et al. [2022], who observed variability in the effect of organizational learning (akin to dynamic capabilities) on organizational resilience based on environmental conditions. However, our research underscores the positive impact of environmental dynamism on organizational resilience, indicating that organizations operating in dynamic environments develop stronger resilience mechanisms to navigate external threats, in line with the findings of Yu et al. [2019].

Interestingly, the nullification of hypothesis H5b is particularly noteworthy. Our prediction that dynamic capabilities would be more effective in fostering organizational resilience in highly hostile environments compared to friendlier conditions was not supported by the research findings. Instead, we observed similar levels of organizational resilience in both types of environments, challenging the notion that organizational hostility promotes the development of resilience mechanisms. This aligns with the findings presented by Yu and Ye [2021] at the annual meeting of the Academy of Management, suggesting that companies can effectively mitigate environmental hostility over time, whereas addressing environmental dynamism presents a more formidable challenge. Hence, it is the ability to navigate environmental dynamism that necessitates stronger organizational resilience mechanisms to counter external threats.

From a practical standpoint, nurturing dynamic managerial capabilities and fostering benevolent leadership greatly enhance an organization's ability to weather external challenges effectively. Consequently, organizations should prioritize the recruitment and selection of managers who possess the adeptness to efficiently delegate tasks, cultivate proficient and cohesive teams, and whose objectives are harmoniously aligned with those of the team and the organization. Moreover, organizations ought to invest in the professional development of their managers through comprehensive training programs, especially for those inclined to cultivate organizational resilience [Botts, 2017].

Furthermore, in addition to emphasizing the professionalization of managerial roles, organizations should also focus on attracting leaders who can cultivate a nurturing

work environment – one that is supportive, engaging, and compassionate [Cheng et al., 2004]. These shared values among organizational leaders serve as a sturdy foundation for organizational resilience, irrespective of external conditions such as the dynamism and hostility of the organizational environment.

There are several limitations to our study. Firstly, all the data come from a single respondent per organization, which might affect the results due to single source bias [Sohnchen, 2009]. Unfortunately, due to practical constraints, we were unable to obtain responses from additional employees in the studied organizations. However, the reliability and validity of the scales used in our research show that the understanding of key issues is consistent among managers. We also employed tested and validated research scales to mitigate the influence of this type of bias on the research results. Secondly, we measured dependent and independent variables at the same point in time, which may call the causal nature of the hypotheses into question. To mitigate this flaw, we purposefully chose a structural equation modelling technique, as it is widely used to test causal relationships [Pearl, 2012]. Thirdly, larger sample would help reduce errors in the model. To ensure that our research results are less affected by the limitations of a moderately large sample size, we used standardized research results in the study [Kwan, Chan, 2011].

Conclusion

Our research findings suggest that dynamic capabilities alone do no play a critical role in preparing organizations for the unknown, as reflected by levels of organizational resilience. However, benevolent leadership emerges as a significant mediator in this relationship, enabling dynamic capabilities to enhance resilience. While neither environmental dynamism nor hostility directly impacts the link between dynamic capabilities and resilience, organizations in highly dynamic environments generally report higher resilience and preparedness for disruptions.

As a result of our analyses, we rejected the first hypothesis, which proposed a direct impact of dynamic managerial capabilities on organizational resilience. In contrast, the second hypothesis, asserting a positive effect of dynamic managerial capabilities on benevolent leadership – was supported. Similarly, the third hypothesis, indicating a strong association between benevolent leadership and organizational resilience, was also confirmed. Our findings further support the fourth hypothesis, which highlights the indirect and total effect of benevolent leadership as a mediator in the relationship between dynamic managerial capabilities and resilience.

Contrary to our expectations, neither environmental dynamism nor hostility significantly influences the connection between dynamic managerial capabilities and resilience, leading us to reject both sub-hypotheses, 5a and 5b.

Our study also brings to the table questions worth answering in future research. While our research design involved variables from different organizational levels (cross-level study), it would be worthwhile for future studies to focus on additional organizational levels. In particular, focusing on individual, team and organization levels in a multilevel study would be interesting. This approach would help to better understand factors determining an organizational ability to survive, as pointed out by Tasic et al. [2020]. From a methodological standpoint, qualitative research should also provide a better understanding of the dynamics of relationships between benevolent leadership and organizational resilience [Borekci, 2021]. Finally, in our opinion, longitudinal studies should help to better grasp the effect of dynamic capabilities on an organizational ability to thrive in hostile environments [Borekci, 2014].

Our research model could also help to better explain organizational resilience if it encompasses organizational learning and knowledge management [Duchek, 2020], while create the preconditions for the development of resilience capabilities. Additionally, as previous studies emphasize, corporate social responsibility appears to be an important factor in framing effective responses to adversities [Rodriguez-Sanchez, 2021]. Another notable variable missing in our model are effective human resource management policies and practices which enable the creation of more aware leadership within organization [Branicki, Steyer, Sullivan-Taylor, 2019] as well as more resilient employees [Kim, Cho, Yang, 2022]. Finally, HRM also creates conditions for organizational resilience, as pointed out by Lengnick-Hall, Beck, and Lengnick-Hall [2011]. Referring to Weick and Sutcliffe [2006], organizational resilience also stems from mindfulness and sensemaking, which would enable to a better understanding of how, from a resilient organizations' point of view, critical decisions are made.

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NURTURING ORGANIZATIONAL RESILIENCE: EXPLORING THE INTERPLAY OF LEADERSHIP AND DYNAMIC MANAGERIAL CAPABILITIES

Abstract

In recent years, organizational resilience has garnered significant managerial and research attention. To better understand the organizational and environmental factors influencing an organization's ability to respond to external threats, we investigate the impact of dynamic managerial capabilities on organizational resilience, considering the mediating roles of benevolent leadership, environmental dynamism, and hostility. Using data from 379 Polish companies, we empirically validate the positive relationship between dynamic managerial capabilities and organizational resilience. Furthermore, benevolent leadership significantly moderates this relationship. Interestingly, neither environmental dynamism nor hostility directly affected the relationship between dynamic managerial capabilities and organizational resilience; however, environmental dynamism had a positive direct influence on organizational resilience.

Keywords: dynamic managerial capabilities, benevolent leadership, organizational resilience, structural equation modeling, empirical study

JEL Classification Codes: L20, L26, M12

OŻYWIENIE ODPORNOŚCI ORGANIZACYJNEJ: WZAJEMNE ODDZIAŁYWANIE PRZYWÓDZTWA I DYNAMICZNYCH ZDOLNOŚCI MENEDŻERSKICH

Streszczenie

W ciągu ostatnich lat odporność organizacyjna przyciągnęła znaczną uwagę menedżerską i badawczą. Aby lepiej zrozumieć czynniki organizacyjne i środowiskowe wpływające na zdolność organizacji do reagowania na zewnętrzne zagrożenia, w artykule skupiamy się na badaniu wpływu dynamicznych zdolności menedżerskich na odporność organizacyjną, pośredniczoną przez przyjazne przywództwo i moderowaną przez dynamikę i wrogość otoczenia. Na podstawie danych z 379 polskich firm znaleziono empiryczne wsparcie dla istnienia związku między dynamicznymi zdolnościami menedżerskimi a odpornością organizacyjną. Ponadto przyjazne przywództwo odgrywa rolę moderującą w relacji między dynamicznymi

zdolnościami menedżerskimi a odpornością organizacyjną. Ani dynamika środowiska, ani wrogość nie wpływają na relację pomiędzy dynamicznymi zdolnościami menedżerskimi a odpornością organizacyjną, ale sama dynamika środowiska pozytywnie wpływa na odporność organizacyjną.

Słowa kluczowe: Dynamiczne zdolności menedżerskie, przywództwo życzliwe, odporność organizacyjna, modelowanie równań strukturalnych, badania empiryczne

Kody klasyfikacji JEL: L20, L26, M12