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Factors that Impact Adaptability of Companies to Changing Circumstances with Minimal Destructive Effect during Crises

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ABSTRACT[1]

Since global crises humanity faces are becoming a regular phenomenon, the need to research the mechanisms for reaching business resilience has become crucial. Therefore, this paper explores the factors that influence one component of business resilience: companies' ability to adapt to changing circumstances with minimal destructive effect during crises. The literature review revealed three domains of company adaptability factors - individual, organizational, and external. The qualitative content analysis of responses from 218 heads and owners of companies from Europe, Asia, Africa, and America enabled us to determine factors that have the most significant weight in business adaptability The three tables that systemize 49 categories provide insights into the factors that impact business adaptability, based on the experiences of business practitioners during the Global Financial Crisis of 2007-2008, the COVID-19 pandemic, and Russia's war in Ukraine.

Keywords: Business Resilience, Adaptability of a Company, Changing Circumstances, Minimal Destructive Effect, Crisis

1. INTRODUCTION

Considering the constant flow of minor and significant economic changes companies are challenged by, it is essential to understand contemporary views of how to survive as a business and use change and crisis as an opportunity to thrive. The ability to withstand and recover from a crisis in the business world is known as business/organizational resilience [1, 2]. As research endeavors to address societal concerns, resilience has become increasingly urgent for humanity in recent years. This topicality is evidenced by the growing number of publications on Scopus since 2019, which mention "resilience" in the title and "business" in the keywords, abstract, or title. Resilience can be described as an issue of contemporary concern for at least two reasons: firstly, due to the heightened frequency of macroeconomic disruptions, such as the COVID-19 pandemic.

Moreover, the Russian-Ukrainian war [3, 4]; and secondly, because of the changing technologies and customer behaviors resulting from innovation led to a process of change [5].

One of the core features of business resilience is the adaptability of companies to changing circumstances with minimal destructive effects during crises [6]. Adaptability is the capacity to adjust or transform to changing external conditions and overcome pressures or threats [7, 8, 9]. Literature addresses adaptability both from an organizational and individual perspective. Pressures and threats, eliciting the need for adaptation, can be caused by crises or dynamic changes that result in destructive effects. Monroll and Altay [10] identified destructive effects as events that create temporary distress and economic tension within which activity or incidents occur. Examples of destructive effects can be considered general cost intensity [11], resource shortages [12], and operational disruptions [11, 13]. On an organizational level, there can be inefficiencies in communication [14], workers [15], or stakeholder management [16]. Crises are perceived as a

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threatening cause of destructive effects because their source and effects and the means of their resolution are often unknown, and circumstances tend to offer little time to respond [17].

Moreover, they are complex, highly ambiguous, and involve psychological, social-political, and technological-structural factors [18]. On the other hand, continuous and increasing innovation drives dynamic economic change [5]. This can be judged by the growing number of patents [19], startups [20], and investments in R&D departments [21], administering the current focus of the economy on novelty. Innovation, although practical, poses a repeated strain on businesses to adapt, potentially causing destructive effects [5].

However, despite featuring adaptability as a crucial element of business resilience in recent studies, there is a need for far-reaching qualitative research projects on company adaptability-related issues. Therefore, this study attempts to decrease the gap through the qualitative content analysis of interviews of 218 company owners and managers from Europe, Asia, and America to answer the research question (RQ) "What factors influence businesses' ability to adapt to crises and changing circumstances with minimal destructive effects during crises?"

2. THE THEORETICAL FRAMEWORK OF THE STUDY

The literature review aims to study the current state of research on the RQ, thereby clarifying how adaptability is operationalized across studies. The search terms "adapt" OR "adaptability" AND "crisis" AND "business"/ "management"/ "economics" resulted in 27 peer-reviewed articles limited to the earliest year of 2018. Additionally, 11 sources were added from the previously conducted literature review on the crisis, resilience, and destructive effects. The initial analysis of the factors and related categories was conducted by studying the abstracts. The relevant passages were searched for in the main body of the papers and copied into an Excel sheet for conducting qualitative content analysis to highlight definitions and factors concerning adaptability. The concepts, categories, approaches, and dimensions revealed in the literature review served as a feasible base for the empirical part of the research while developing categories out of the codes assigned during the qualitative content analysis of the interview texts.

The concept of adaptability of companies to changing circumstances is defined in various ways in scientific literature. It can be described using different notions, from affective criteria such as attitude and satisfaction towards dealing with challenges and adapting to change, to numerical values such as the number of strategy changes and technologies adopted [23]. Also, a change in focus, beliefs, or action on an individual level is mentioned [24]. Jia [8] argues that the adaptability of an organization is the ability to adapt to external pressures. McCann [25] underlines the ability to recognize and seize opportunities quickly or to change direction in response to external conditions as essential to adaptability. In addition, there is an opinion that an organization needs a stable core of internal operations while displaying maximum adaptability concerning external circumstances [26, 27] varying between stability and adaptability [26].

Having explored the interpretations of the concept of adaptability, it was concluded that adaptability is primarily understood as an ability or capacity, and it is achieved by an organization or a subject in reaction to a changing external environment to survive and maintain a competitive advantage.

The analysis of the factors that influence the adaptability of companies to changing circumstances and crises brought to three domains of factors – individual, organizational, and external.

2.1. Factors that Influence Companies' Adaptability Conditioned by Skills and Qualities of Individuals

To achieve adaptability at the level of the entire organization, there must be adaptability at the level of individuals who work for that organization [28]. This is conditioned by their affection, motivation, attitude, and competence [29, 30, 31, 32]. Several attitudinal and psychological attributes have a significant impact on it. Destructive effects arising from crises concerning the individual can amount to mental health issues caused by existential threat and uncertainty, ultimately limiting the working capacity of employees [15, 14, 13]. Further limitations are given by employees' resistance to change [33].

Overall, themes that emerged from reviewed articles on an individual level were Openness to change and proactivity in dealing with it, the Ability to cognitively process happenings and analyze them to achieve better results, and Mental well-being in dealing with uncertainty, including the belief and motivation to overcome it.

Openness to change and proactivity in addressing it was attributed to several terms, including willingness to learn [29, 34, 27]; resistance to change [33, 34, 27]; readiness to shift focus [35, 33]; ability to see new opportunities [36, 7, 11]; proactiveness [37, 38]; and ability to take risks [22, 39, 24].

Ability to cognitively process happenings and analyze them to achieve better results was derived from several analytical attributes, mentioned as: pre-experience and knowledge [30, 13], speed of reaction [34], intelligence [40], ability to analyze, cognitive skills, metacognitive experience [35, 31, 11], dialectical thinking and problem-solving [35, 41, 31], and preciseness of predictions [31].

Mental well-being in dealing with uncertainty, including the belief and motivation to overcome it, amounted to terms such as: self-efficacy [37, 42]; optimism [43, 41]; self-motivation, confidence and tolerance for ambiguity [37, 39] as well as emotional well-being [9].

Thus, adaptability at the individual level is conditioned by employees' welcoming and open attitude to changing circumstances, even during crises on the one hand, and risk-tolerant and analytical leaders on the other. Mental resilience to ambiguity can be described as a characteristic of adaptability on an individual level.

2.2. Factors that Influence Companies' Adaptability at the Organization Level

Factors that impact companies' adaptability at the organizational level are more than at the individual level as they encompass both individual-related and interaction-related factors that hinder or promote an organization's ability to adapt to changing circumstances with the strive to survive and prosper. The internal workings of organizations encompass leadership, corporate culture, governance, and processes that company representatives manage to enhance competitiveness and ensure the company's economic sustainability. Therefore, adaptability factors at the organizational level are conditioned by companies' size, origin, and ownership [34], corporate culture [33, 32, 27], including modes of collaboration and execution of processes, as well as leadership and strategy for achieving company-goals under conditions of uncertainty [44, 30, 13, 33]. Uhl-Bien and Arena [30] highlight that leadership for organizational adaptability requires a high tolerance for ambiguity. Also, analyzing external conditions and inferring decisions [7] are essential for leadership in the face of change. Adaptability can be negatively impacted by several destructive effects relating to a failure to manage these elements. Sherif et al. [16] have mentioned that inefficient stakeholder management and decision-making are crucial destructive effects of the crisis. Additionally, a general inefficiency of social capital [34, 31, 27], for instance, due to health issues from the COVID-19 pandemic, can cause rising costs from reduced productivity [33]. Also, studies have shown that social distancing may have accounted for inefficiency during the pandemic considering collaboration and innovation [45].

Three themes emerged as relevant to adaptability at the organizational level: Attachment and identification of employees with the company and its goals, Allocation of social, financial and intellectual capital to solve problems and innovate, and Presence of stability and flexibility in the company structure.

The theme, *Attachment and identification of employees with the company and its goals* emerged from several codes, such as business involvement [46, 22], having a fiduciary work culture [33, 27], effective communication [47, 11, 16], and value-based leadership [41, 13, 32].

Increased engagement and alignment of individuals with their company and its objectives are advantageous to adaptability as they lead to a larger pool of social capital and more stability. For example, according to Tortia and Troisi [46], cooperatives are more adept at managing crises because their members are more tolerant of changing work conditions and can rely on volunteers. Both factors help to absorb external shocks. Similarly, Crespo et al. [22] discovered that family businesses are more resilient because their employees are more willing to work longer. Factors such as fiduciary work culture, effective communication, and value-based leadership all contribute to the business involvement of employees, thus imitating the employee involvement of cooperatives or family businesses. Gavric et al. [34] argue that to increase their ability to adapt, become competitive, or gain an advantage over others, organizations must encourage employees to use their intellectual and creative potential more fully.

The theme, *Allocation of social, financial and intellectual capital to solve problems and innovate* involves the concepts of social network and capital [47, 48], diversity [41, 33], resources for idea generation [33, 47], making changes that are different from those in the past [9], adoption of innovative technologies [48], informal network practices [32, 41, 30], time resources devoted to problem-solving [16, 47], adaptive space [27, 33], providing employees with headspace [41, 47], synchronous exchange of learning and development [24, 11], including also long-term thinking manifested witnessed through investing vs. cost reduction [36, 49, 46], building resilient assets [7], and disaster preparedness [11]. Scholars have shown that the propensity of organizations to encourage employees to use their intellectual ability and knowledge, on the one hand, and provide structures for them to collaborate, on the other, supports organizational adaptability. Fox and Vahala [24] have mentioned that the ideal scenario would be a synchronous exchange between learning and development of an organization. Thus, if financial, spatial, social, and time resources are allocated accordingly, businesses can learn and respond proactively to external developments. Even more so, leaders can encourage the establishment of heterogeneous collaboration to reach maximum intellectual diversity in problem-solving and heighten the innovative capacity of their business [30].

Lastly, the theme, *Presence of stability and flexibility in company structure* has become apparent. This theme has emerged as authors describe adaptability as a tension field between stability and adaptability of operations [24, 26]. Notions applying to stability are performing habitual business [40], governance [29, 47, 27], centralized leadership [31], and controllability [39]. Scholars also mention that an organizational operation needs agility, the flexibility of business model [11, 23, 38], contextual ambidexterity [34], efficiency of economic activity [50, 9, 11], and decentralization of operations [13].

Stability in organizations is essential, as it accounts for the efficiency of operations, while adaptability of organizations is essential, as it endorses flexibility [26, 32]. As both propensities are essential, a compromise must be found for companies to uphold an advantage and survive change [27].

Thus, adaptability at an organizational level encompasses the company culture and processes. As such, they should form a stable core designed for discerning change and embracing novelty by accommodating the right measure of long-term thinking, innovation, and agility.

2.3. Factors that Influence Companies' Adaptability Conditioned by the External Environment

The factors that fall beyond an organization's direct control, such as economic dynamics [51], availability of financial and human resources [29, 48], culture [32, 27] including politics and religious aspects [32], integration of technology [8], market forces, and other external variables, collectively make up the external environment. These variables often necessitate a change in business weathering and are thus the origin of the need for the present research. Considering recent crises such as the COVID-19 pandemic, or the Russian-Ukrainian war, destructive effects have amounted to external circumstances such as economic instability [13], high market volatility [11], supply chain disruption [16, 48], and insufficient financial resources [27, 11, 16]. Two notions that impact adaptability have become apparent: the Presence of resources in the business environment on the one hand and the Presence of intellectual capacities in the business environment - on the other.

Thereby the theme, *Presence of resources in the business environment*, involves the categories of social network and capital [49, 16, 47, 46, 52] and dependence on technologies [48]. As Ramella [52] puts it, innovation is bound to social and institutional structures in businesses' geographic or relational neighborhoods, besides the available technological infrastructure that enhances them. It becomes apparent, as innovation often happens in the surroundings of universities where a diversity of knowledge and thinking is given, and technology is up to date, making connected firms more apt to live through change successfully. In addition to social capital, access to financial capital [47, 50] must be given. This shows how easy it is for companies to obtain financial support while facing change and crises. It can account for having access to economic aid [23] and other means of financing, such as family savings [22]. Additionally, it can be moderated by the presence or absence of demand [11], which is regulated through economic dynamics in the business surroundings.

Secondly, sources mention categories that can be synthesized as *Presence of intellectual capabilities in the business environment.* For instance, Jandrić and Ranđelović [53] have investigated that companies in regions with higher scores in PISA studies are more likely to overcome crises. Furthermore, the ability of customers to change to digital modes of doing business has influenced business adaptability in corresponding regions during the COVID-19 pandemic [54]. Additionally, according to Jia [8], areas with a variety of technical skills that work well together rather than diverse knowledge sets are better suited to weather adversity.

Thus, companies' adaptability at the superficial level is affected by the availability of human and material resources and relationships with customers and partners.

3. THE EMPIRICAL PART OF THE RESEARCH AND FINDINGS

This research was conducted by international and Latvian Master students of the Faculty of Engineering Economics and Management of Riga Technical University (RTU), Latvia, in the autumn semester of 2022 within the study course "Modern Research Methods: Theory and Practice" delivered by Karine Oganisjana. The RQ "What factors influence businesses' ability to adapt to crises and changing circumstances with minimal destructive effects during crises?" is one of the nine questions asked to 218 company owners and heads from Europe (Latvia, Germany, Spain, UK, Ukraine, Switzerland, Greece, Macedonia, Poland), Asia (India, Sri Lanka, Azerbaijan, Qatar, Iran), Africa (Cameroon, Tunisia, Egypt) and America (USA, Canada, Bolivia). Each question focused on factors that impact one of the nine components of business resilience revealed in the previously conducted research by an RTU team of researchers –Pokromovica, Lace, and Oganisjana [6].

It was agreed that each Master's student was to organize at least one Zoom interview or electronic survey using a Google form to create a joint database to be used by all the students in carrying out individual research projects. The stable tradition within the study course is to use the "Crowdfunding principle" for primary data collection on topical economic or management problems [55, 56]. The demographic information was related to respondents' gender, position in the company, company age, location, industry, and number of employees. Those Master students who managed their individual projects most successfully were offered to work together in small groups to elaborate a research paper concept and write it in collaboration with the teacher. Three authors of this paper - Magenta Shipsey (an Erasmus Master's student from Austria), Chamika Thathsarani Gawendri De Silva (a full-time RTU Master student from Sri Lanka), and Malpe Pradeep Pai (a full-time RTU Master student from India) studied this RQ in their individual research projects. Therefore, these groups continued to work on it as a group combining efforts for the literature review and conducting the qualitative content analysis of the respondents' answers with Karine Oganisjana to ensure research validity and reliability. The qualitative content analysis was conducted according to Philip Mayring's "Step model of inductive category development" [57, p 80], which means the codes were systematically verified and optimized inductively in different analysis phases to develop categories for answering the RQ.

The categories developed were systemized according to the three domains of factors highlighted in the literature review, as seen in Tables 1, 2, and 3. These tables demonstrate which companies' adaptability factors were mentioned by the business practitioners more frequently, which speaks of their higher weight in achieving stability in changing circumstances with minimal destructive effect during crises.

Table 1

Factors conditioned by the qualities and skills of individuals that influence companies' adaptability

Factor group	Adaptability Factors	Fr.
1. Ability to cognitively process happenings and analyze them to achieve better results	Awareness of the changing situation	35
	Ability to solve problems effectively	31
	Reflective thinking	20
	Creativity in decision-making	9
2. Openness to change and proactivity in dealing with it	Openness to changes in business environment and processes	86
	Ability to give a prompt response to changing business circumstances	29
	Ability to recognize and use opportunities	17
	Proactiveness	5
3. Mental well-being in dealing with uncertainty, including the belief and motivation to overcome it	Tolerance for ambiguity	10
	Effective management of emotions	5

It must be emphasized that Table 1 can be considered in twofold ways. On the one hand, it shows an autonomous set of factors that influence adaptability conditioned by the qualities and skills of everyone in the company. On the other hand, Table 1 could be considered part of Table 2 as any organization's characteristic features, potential, and competencies are formed based on the synergizing of individuals' qualities and skills. That is the reason why, for instance, Openness to changes in the business environment and processes (n=86), Awareness of changing situations (n=35), Ability to solve problems effectively (n=31), Ability to give a prompt response to changing business circumstances (n=29) and others are adaptability factors related to both individuals and organizations.

Table 2

Factors that influence companies' adaptability at the organizational level

Factor group	Adaptability Factors	Fr.
4. Attachment and identification of employees with the company and its goals	Trustful and supportive work climate	19
	Effective leadership	18
	The financial and psychological safety of employees	12
	Encouraging employees' willingness to adopt new solutions	11
	Effectiveness of communication within the company	10
	Involvement and ownership of employees for the company's performance	8
	Provision of flexible working conditions	6
5. Allocation of social, financial, and intellectual capital to solve problems and innovate	Strengthening of human capital	33
	Collaboration among structural units of the company	16
	Expertise and experience in the industry field	11
6. Presence of stability and flexibility in the company structure	Company structure that enables prompt response to changing business circumstances	41
	Company culture	20
	The preservation of core values and fixed base processes in the company	8
	Organizational stability over the years	8
	Company size	8
	Guidelines, rules, policies, regulations, and other company governance-related elements	5
7. Management efficiency	Resource management efficiency	36
	Human resources management efficiency	19
	The ability of a company to perform efficiently using its goods and services	8
	Time management efficiency	6
8. Long term thinking	Having strategies and planning to achieve goals and overcome crises	32
	Preparedness for crisis and availability of financial cushion in the company	27
	Diversification of products and services	9
	Providing quality goods and services	2

Factor group	Adaptability Factors	Fr.
9. Novelty	Access to information and the taking of research-based decisions	26
	Digitalization and use of modern technologies by the company	25
	Effectiveness of external communication with customers	9
10. Informedness	Effective marketing strategies	10
	Knowledge management and development in the company	8
	Awareness about competitors and their products and services	7

During the qualitative content analysis, three more factor groups –*Management efficiency, Long-term thinking, and Novelty* emerged as complementary to the ones formed in the literature review: *Attachment and identification of employees with the company and its goals*, *Allocation of social, financial and intellectual capital to solve problems and innovate*, and *Presence of stability and flexibility in company structure* (see Table 2). These new factor groups were not dissolved in the others, but, on the contrary, were highlighted separately owing to factors which were spoken about by the respondents so frequently: Resource management efficiency (n=36), Having strategies and planning to achieve goals and overcome crises (n=32), Preparedness for crisis and availability of financial cushion in the company (n=27), Access to information and the taking of research-based decisions (n=26), Digitalization and use of modern technologies by the company (n=25), etc.

Table 3

Factors that influence companies' adaptability conditioned by the external environment

Factor group	Adaptability Factors	Fr.
11. Stability of resource flow in the environment	Inflation and changes in the global economy	44
	Legislation and governmental support	28
	Demand for the products, services, and skills offered by the company	18
	Availability of the needed resources	18
	Uncertainty and volatility in the macroeconomic environment	16
	Stability of the supply chain	6
12. Social capital	Large customer base and a strong relationship with them	21
	Availability of high human capital	18
	Strong relationships among stakeholders	4

The most frequently mentioned adaptability factors conditioned by the external environment, as can be seen in Table 3, were Inflation and changes in the global economy (n=44), Legislation and government support (n=28), Large customer base and strong relationship with them (n=21) which could be quite expected due to the crucial role they play in a company's stability, especially during economic and political disruptions or breakdowns.

4. CONCLUSIONS

This research aimed to enhance awareness of the factors that impact companies' ability to adapt to changing circumstances with minimal destructive effects during crises, which ultimately condition business resilience. Based on the qualitative content analysis of the experiences and expertise shared by business leaders with diverse backgrounds, 49 adaptability factors (see Tables 1, 2, & 3) were developed inductively with the step-by-step strategy of analysis of text fragments and regular revisions of their meanings, specification of definitions and names of these categories. Later, these adaptability factors were clustered into 12 groups of factors; the names of the factor groups emerged while conducting the literature review. This approach was conditioned by the need to ensure the relatedness between the previous studies conducted by other researchers and this research. The final procedure to strengthen this continuity was the distribution of the factor groups among the three domains of factors that influence companies' adaptability conditioned by: 1) skills and qualities of individuals, 2) companies' characteristic aspects at the organization level, 3) the external environment.

The value of this study for researchers and practitioners along with the literature review can be conditioned specifically by the findings of the empirical part of the research shown schematically in the model given in Figure 1.

While the literature review gives insight into the domains and factor groups, the empirical research reveals a broad set of adaptability factors that comprise the components of these factor groups. Moreover, the qualitative content analysis led to new factor groups such as Management efficiency (FG 7), Long-term thinking (FG 8), and Novelty (FG 9) which did not emerge directly from the literature review.

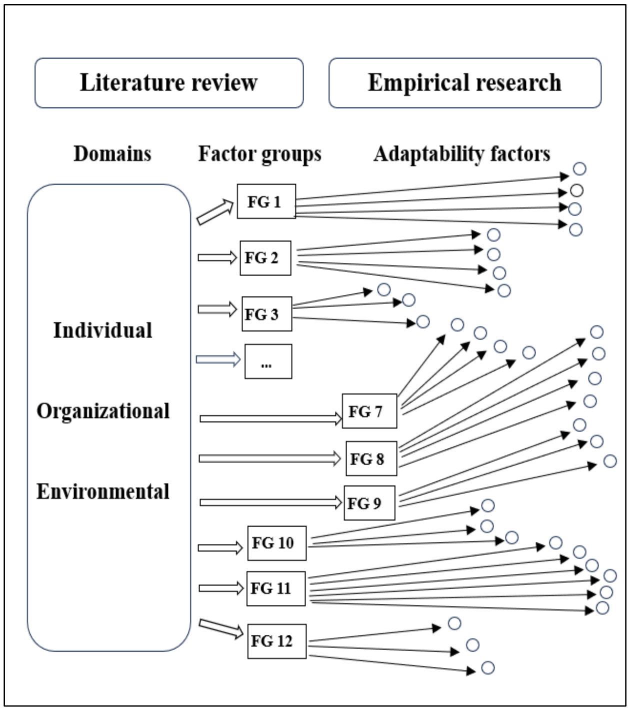

Figure 1. The model of research findings

The frequencies of the adaptability factors (see Tables 1, 2, & 3) show how often each factor was mentioned by the respondents; this might correlate with the role that the factor plays in the adaptability of companies to changing circumstances with minimal destructive effects during crises. This knowledge acquired from the respondents' hands-on experiences is essential as they, living and working in different continents, have struggled, or are still struggling with the three latest crises worldwide - the Global Financial Crisis of 2007-2008, the COVID-19 pandemic worldwide, and/or Russia's war in Ukraine.

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