Business sustainability in the times of crisis: Propositions and framework

M Hamsal\(^1\) and M Ichsan\(^2\)

\(^1\)Management Department, Binus Business School Doctor of Research in Management, Bina Nusantara University
\(^2\)Management Department, Binus Business School Undergraduate Program, Bina Nusantara University

E-mail: d3919@binus.edu

Abstract. This paper aimed to provide a conceptual framework of how the phenomenon of pandemic COVID-19. It was considered as environmental turbulence influences organizational resilience and firms’ capabilities to cope with them and how it affected firms sustained competitive in their business. The method of this research was the literature review. It finds that the researchers propose antecedents of business sustainability in the condition of the threats from environmental turbulence, including the pandemic crisis (COVID-19). The paper also outlines five research propositions and suggests methods for future empirical research.

Keywords: COVID-19, environmental turbulence, dynamic capability, organizational resilience, business sustainability

1. Introduction
There is a growing interest in the discussion on the issue of business sustainability in response to significant changes in environmental problems [1],[2]. Pandemic disease, natural disasters, terrorist attacks, economic recession, equipment, and human error can pose both a potentially uncertain and severe threat to the sustainability of an organization’s operation and infrastructure [3]. The currently ongoing pandemic disease from a new type of coronavirus (COVID-19) has been affecting large and wide devastation globally. It was started at the end of 2019 in Wuhan, Hubei Province in China before it infected every part of the world [4]. Since the early year 2020, this disease has been spreading all over the world, mostly through community transmissions, sporadic cases, and the cluster of cases [5]. As of May 01, World Health Organization has recorded over 3.1 million cases globally, where around 225 thousand are death cases. The top cases are found significantly in Europe (over 1.4 million cases) and United States (over 1.2 million cases).

This global pandemic has challenged the concept of current global interconnectedness to the organization’s business sustainability. It has been hitting the global economy and changes the structure of the way organizations doing their business rapidly. The Economist Intelligence Unit [6] has downgraded the global GDP growth from 2.3% to 2.2%. The first affected industry is tourism, including transportation services supporting the tourism industry such airlines, especially where there is a dependency of outbound and inbound Chinese Tourists. The second hit industry is retailing, especially for non-food products in shop purchases such as clothing and cosmetics. The third affected industry is automobiles, where major car parts are manufactured in China. The fourth affected industry is finance
as the impact of the other affected industry. Lastly, the fourth affected industry is technology-related to such telecoms and technology sectors, which are most hit due to affect to supply chain activities where the manufacturing sector is within it, especially when it affects the most in current development technology 5G technology-related business in the telecommunication sector. Regardless of the problem in the technology development sectors, telecommunication plays a significant role in responding to the needs of the social and physical distancing measures as consequences of reducing the pandemic. The report from IBM [7] indicates that the extension of 30%-50% capacity is required to support the remote working for business and education. It is increased to accommodate the demand for working while keeping social and physical distances. Nevertheless, the anticipation of pressure on operating and critical capital expenditure is to take into the highest account to avoid further problems [8].

Respectively for the telecom sector, this phenomenon occurs also in Indonesia. Work from home arrangement is advised to be supported by secured and reliable technology facilities that can be provided by information and telecommunication operation support [9]. Some government institutions such Ministry of Communication and Information, Indonesian Federal Police, and especially the Governor of Jakarta have provided formal instruction and letters to provide exception during social and physical distance policy enforcement to telecommunication and information supporting works to ensure that the infrastructures can give major supports to work from home arrangement. The ways organization work has changed into the new normal where technology will work as strong, enabling factors in doing their business.

This paper aims to provide a conceptual framework of how the phenomenon of pandemic COVID-19. It is considered as environmental turbulence influences organizational resilience and firms’ capabilities to cope with them and how it affects firms sustained competitive in their business.

2. Literature review

2.1. Environmental turbulence

Aldrich [10], in his first book, argued that turbulence should not be referred to as chaos in the environment. It is an increased of causal interconnection that provides unclarity to the observer. It is kind of discontinuity that is difficult to predict [11], and fully in line with Dess and Beard [12] recent studies of environmental turbulence (ET) that have been exploring both technological and market turbulence [13],[14],[15], as well as customer and competitor turbulence [16]. However, Stead and Stead [17] took a different perspective of new environmental turbulent to any situation and/or condition that set a new paradigm that cannot be handled with the previous way of working, as they are not and they will not be the same.

Customer turbulence refers to rapid changes in market segments, customer needs, resources, competencies to satisfy customers, customer preference, which may lead to the cannibalization of resources to tackle the customer turbulence. Meanwhile, the competitor turbulence shall refer to a rapid change in business competition [16]. The technology turbulence shall be understood as a rate change in technology within a specific industry, marketplace, and scientific community and has characteristics such as unpredictable development in technology and its timing. For example, it is a short cycle of technological innovation and obsolescence and a short product development cycle that may threaten a firm’s existing technology. It makes them less competitive in the market [13],[14],[15]. Market turbulence can be referred to as a rapid change of customer preference in industry. Such a phenomenon happens when product preferences and customer demands constantly change due to customer needs and desires, and customers search for new products frequently [13],[14],[15]. While global health turbulence involves the various interest of stakeholders that requires a global effort includes participation, accountability, and transparency of both at the international and national levels [18], this situation may lead to firm’s adjustment of offerings and to be more innovative to produce and sell a new product to tackle it.

Specifically, for pandemic COVID-19, one can consider that such a phenomenon new turbulence (global health turbulence) has set a new structure in organizations and societies [17]. Learning from previous pandemics such as SARS in 2003, avian influenza in 2004, H1N1 in 2009, Ebola in West.
Africa in 2014, and Congo 2019 led to massive and global outbreaks. Organizations have to set up their capabilities in order to become resilient. Some measures are proposed in handling this pandemic such effective response of public health front liners and participations of related stakeholders in national level, providing transparency to enable effective remedial actions [18], accountability and strong leadership to call for effective and timely action as well as thorough risks assessment [19],[20].

2.2. Dynamic capabilities
As Resource-Based Theory is considered static in its nature and insufficient to explain a firm’s competitive advantage in changing the environment, the gap is herewith fulfilled by dynamic capabilities [21]. According to Ethiraj et al. [22], some of the literature of resource-based theory (RBT), as proposed by Barney [23],[24] alludes to aspects of resources and capabilities interchangeably, while some others differentiate them. According to Teece et al., in their seminar publication [25], dynamic capabilities (DC) are understood as a firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. Leonard-Barton [26] argues that dynamic capabilities must be dynamic and adaptive in purpose to serve sustainable benefits in a dynamic environment. For that reason, dynamic capabilities owning a learning orientation with a solid absorptive capacity, are available to make sure that the capabilities will stay as dynamic as a response to the changes in the business environment repeatedly. It argues that the existence of other resources and capabilities is required to deliver a competitive advantage.

Furthermore, dynamic capabilities are essential for resource allocation, including identifying resources required development and direction as well as capabilities to align it with strategy [27],[28]. However, apart from that, the rapid growth of the dynamic capabilities of diverse studies lead to the enrichment of rich findings, these will lead to a complex and disconnected body of research. It points in a different direction, as some studies use firm performance as the relevant outcome; meanwhile, others explore the process or organizational outcomes. These confusions continue as some articles put the concept of dynamic capabilities as distinctive factors. The others accept them as similarities across firms. Some researchers suggest dynamic capabilities relating to changing environments, while others are considered a more stable external context. To strengthen the concept of the dynamic capabilities in a certain industry, this study is further exploring the exposure of a dynamic environment.

Teece has put the business model as a new perspective of resources in his dynamic capabilities that includes sensing, seizing, and transforming that are required whenever they design and implement a business model [29]. Hence strong dynamic capabilities of a firm shall refer to strong in sensing, seizing, and transforming. Sensing shall be referred to as recognizing and assessing opportunities and threats such as (not limited to) identifying target market segment, changing customer needs, tapping into exogenous technology, tapping innovation from suppliers and complementors, and directing internal research and development as well as selecting new strategies. On the other hand, seizing has been defined as addressing opportunities and threats by setting up structures, procedures, designs, and incentives for required changes whenever the new technology or market opportunity is sensed. Lastly, transforming shall be referred to as managing changes by reconfiguring core and complementary resources in a firm’s daily operations to respond to those changes [30],[31].

2.3. Organizational resilience
Organizations must deal with uncertainties, crises, and risks such as natural catastrophes like floods, earthquakes, or pandemic as recently the happening COVID-19 or wide-range power outage that is affecting the organization’s capability to run their businesses. However, only a few organizations have been anticipating such conditions effectively. One of the reasons is the different interpretation of the resilience across the organizations [32]. The thought of resilience is originated from the field of ecology. It refers to the level of a disturbance where the system can take in before redefining its structure by changing its variables and processes that control its behavior [33].
The concept has been now wide-spread included in the area of engineering [34], area of psychology [35], area of sociology [36], area of disaster management [37], and area of business administration [38]. Organizational resilience (OR) is defined by The International Organization for Standardization [39] as the ability of an organization to absorb and adapt in changing environments to enable it to deliver its objectives and to survive and prosper. Based on this definition, Bell argued that it should be considered business outcomes and therefore required a holistic and adaptive approach [32].

Manfield and Newey [40] proposed a resilience model that divides two conditions or domains based on slack availability. Slack is defined as reserves of resources that can be diverted or redeployed anytime to achieve organizations’ goals [41]. This concept can be understood that the organization has to prepare its reserve for something that they identify as risks or planned resilience and for something that they have not identified. Hence they have just to adapt to the situation or adaptive resilience.

2.4. Business sustainability
The word sustainability has been originally defined by World Commission on Environment and Development (WCED) as development that meets the needs of the present without compromising the ability of future generations to meet their own needs that contain two concepts, namely needs and the idea of limitation[42]. Furthermore, Bansal and DesJardine [43] defined business sustainability (BS) as the ability of firms to respond to their short-term financial needs, deprived of compromising their ability to fulfill firms’ future requirements. There has been the development of the view of sustainability from a different organization. Future concepts of the organization’s business sustainability should be renewed, especially in dealing with ET in terms of a global pandemic. For example, the study of Yu et al. [44] about global supply chain dynamism and resilience needs to be further explored and adjusted. In their study, environmental dynamism only focuses on volatility and unpredictability of changes in products and services, technologies, and demand for new products and services in the market, not specifically relates to global health crises.

The classic view of business sustainability starts from the theoretical perspective of sustainability that suggests a closed integration among corporate financial performance (FP), cooperate commitment to social (known as Corporate Social Commitment or CSC), and environmental issues (known as Corporate Environmental Commitment or CEC), which are commonly known as three pillars of BS [45]. Apart from that, some studies have found that the integration among these pillars is not easy to fulfill [45].

It starts from the concept of the sustainability of WCED comes from a perspective as a system. Hence, to have these pillars be in balance at a macro level, resources have to be distributed at a micro-level across the time. Meanwhile, the firms are systems attached within larger macro systems, so there must be trade-offs across times if the firms want to be sustainable [43]. Furthermore, firms might have different paradigms and outcomes when it comes to being sustainable.

3. Research Propositions
3.1. Relationship between environmental turbulence and dynamic capabilities
In order to cope with environmental turbulence, organizations must be able to manage their capabilities by sensing, seizing, and transforming their resources and processes. The rapid changes in organizations’ environments can be managed better because the organization is more capable of managing their resources [46]. Based on the above thought, the following proposition is suggested:

Proposition 1: The organizations’ environmental turbulence can be better managed by organizations that have more capabilities.

3.2. Relationship between environmental turbulence and organizational resilience
Basis of organizational resilience is the ability of the organization to react to the rapid changes of the environment [17],[32],[40]. Richter and Löffsten[47] argued that resilience evolves over time, whilst a
process interaction is caused by environmental turbulence. Therefore, it can be understood that resilience will occur whenever certain threats or opportunities hit the organization. Based on the above thought, the following proposition is suggested:

**Proposition 2:** The organizations’ environmental turbulence will make better organization resilience

3.3. Relationship between organizational resilience and business sustainability

Branicki et al. [48] argued that organizational resilience directly influences SME’s resilience that refers to continuity, survival, and renewal or reorientation. Organizational resilience is business outcomes [32] and the later view of business sustainability that refers to a sustainable value that comprises of economic value, social value and environmental value as well [49] as refers to business outcomes as argued by Dyllick and Muff [50], Bansal and DesJardine [43]. Based on the above thought, the following proposition is suggested:

**Proposition 3:** Better organizations’ resilience will lead to better business sustainability of the organizations.

3.4. Relationship between dynamic capabilities and business sustainability

The trade-offs of short and long-term strategic goals are becoming threats to the firms’ sustainability and strategy. Therefore, being competitive as part of the strategy shall be considered to be sustained over a long time. Therefore a DC perspective can be taken into account as the firms can sustain competition by sensing, seizing, and reconfiguring processes [43]. Based on the above thought, the following proposition is suggested:

**Proposition 4:** Dynamic capabilities in reacting to environmental turbulence will influence better business sustainability.

3.5. Relationship between dynamic capabilities and organizational resilience

To be resilient to the changing environment in uncertain conditions, an organization must be able to manage its capabilities. This will lead to the understanding that organizations be able to sense, seize, and transform their resources and process to be more resilient [40],[51]. Based on the above thought, the following proposition is suggested:

**Proposition 5:** Organizations with better capabilities can establish higher organizational resilience.

All propositions are put into the proposed framework as has been shown in Figure 1.

![Figure 1. Proposed Conceptual Framework of Organizational Resilience and Business Sustainability](image-url)
4. Conclusion and future research directions

This paper aims to provide a new perspective on how organizations can achieve long-term resilience during and after the pandemic crisis by examining the role of DC to OR. In other words, how organizations revamp themselves internally through DC and externally through OR to maintain their BS by fitting with current global environmental crises. BS does not only appear as a theoretical term, but it is also relevant in daily business practices, especially whenever firms face challenging ET in the global health pandemic. It consists of a set of constituents within the economic, social, and environmental categories of the triple bottom line approach. Among others, economic indicators are profitability, competitiveness, cost reduction, trade-offs, and spin-offs. The social aspect can be measured by organizational support, business networks, commitment and dedication, corporate culture, and reputation. Environmental indicators are determined by efficiency programs, product/process dematerialization, and decarbonizing [52].

There is still so much research to be conducted on the antecedents to improve an organization’s sustainability in the situation of global pandemic COVID-19. Our theoretical framework provides opportunities for empirical study that can further extend and improve the knowledge of OR. First, ET is defined as the rate of the unpredictability and highly varied events which occur in the environment in which a particular industry operates [53]. It consists of three dimensions market turbulence, institutional turbulence, and pandemic turbulence as described in the following:

- Market turbulence is the rate of change in customers’ composition or their preferences for products and services [53],[54].
- Institutional turbulence is the degree of complexity and uncertainty of government policies in their industrial sectors [55].
- Pandemic turbulence is the conditions of a public health crisis characteristic of decisional urgency, high uncertainty, health information scarcity, and threat [56],[57].

Second, our study conceptually proposes a step toward showing a firm’s OR triggered by ET through sensing, seizing, and transforming resources and processes as part of the firms’ DT. It shows that organizations’ capabilities can contribute to long-term resilience in the time of crisis. In this case, DC can be explored through sensing capability, learning capability, integrating capability, and coordinating capability [58]. Third, due to OR is crucial in maintaining long-term organization survival [59], it is operationalized as a two-dimensional construct proposed by Lee et al. [60].

We strongly believe that empirical research linked to BS needs to be conducted to make a difference in building a new perspective of a resilient atmosphere in the organizations that, in turn, may lead to better and longer BS of the firm to deal with this novel coronavirus threat. It can be conducted by collecting primary data through a formal survey to the member of top management teams as respondents and followed by in-depth interviews with different types of impacted industries/organizations (previously mentioned in Introduction) to provide practical suggestions on how to achieve OR. The new form of the concept of DC, OR, and BS concerning the global ET affected by the pandemic should be further explored and studied.

References
[1] Buxel H, Esenduran G and Griffin S 2015 Strategic Creating business value with life cycle analysis Bus Horiz 58 109–22
[2] Doppelt B 2003 Overcoming the Seven Sustainability Blunders Syst Think 14 5.
[3] Bhamra R, Dani S and Burnard K 2011 Resilience: The concept, a literature review, and future directions. Int J Prod Res. 49 5375–93
[4] Phelan A L, Katz R and Gostin LO 2020 The Novel Coronavirus Originating in Wuhan, China: Challenges for Global Health Governance JAMA - J Am Med Assoc. 323 709–10
[5] World Health Organization 2020 Coronavirus Disease (COVID-19) [Internet] 1–7 Retrieved from https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200501-covid-19-sitrep.pdf?sfvrsn=742f4a18_2
[6] The Economist Intelligence Unit 2020 The impact on social on industry [Internet] 31 Retrieved from https://www.incae.edu/sites/default/files/coronavirus-report-v4-1.pdf

[7] Wilson C 2020 The Telecom Industry Is Proving Essential in the COVID-19 Response [Internet] 1–4 Retrieved from https://www.forbes.com/sites/ibm/#44f5f28063d5

[8] Casey M and Wigginton C 2020 Understanding the sector impact of COVID19 - Telecommunications [Internet] Deloite 2 Retrieved from https://www2.deloitte.com/global/en/pages/about-deloitte/articles/covid-19/understanding-covid-19-impact-on-the-telcom-sector.html

[9] PricewaterhouseCoopers 2020 COVID-19: Considering the potential business impacts for Indonesia [Internet] PricewaterhouseCoopers 11 Retrieved from https://www.pwc.com/id/en/covid-19-potential-business-impact-for-indonesia.html

[10] Aldrich H E 2008 Organizations and environments (Standford: Stanford University Press)

[11] Haleblian J and Finkelstein S 1993 Top Management Team Size, CEO Dominance, and Firm Performance: The Moderating Roles of Environmental Turbulence and Discretion Acad Manag J. 36 844–63

[12] Dess G G and Beard D W 1984 Dimensions of Organizational Task Environments Adm Sci Q. 29 52–73

[13] Hanvanič S, Sivakumar K and Hult G T M 2006 The relationship of learning and memory with organizational performance: The moderating role of turbulence J Acad Mark Sci. 34 600–12

[14] Calantone R, Garcia R and Dröge C 2003 The effects of environmental turbulence on new product development strategy planning J Prod Innov Manag. 20 90–103

[15] Tsai K H and Yang S Y 2014 The contingent value of firm innovativeness for business performance under environmental turbulence Int Entrep Manag J. 10 343–66

[16] Danneels E and Sethi R 2011 New product exploration under environmental turbulence Organ Sci. 22 1026–39

[17] Stead J G and Stead W E 2017 Sustainable strategic management Sustain Strateg Manag. 1 1–287

[18] Lee T 2020 Global Health in a Turbulence Time: A Commentary Asian J WTO Int Heal Law Policy 15 27–60

[19] Sharma P, Leung T Y, Kingshott R P J, Davcik N S and Cardinalli S 2020 Managing uncertainty during a global pandemic: An international business perspective J Bus Res. 116 188–92

[20] Liu Y, Min J and Celia L 2020 The challenges and opportunities of a global health crisis: The management and business implications of COVID - 19: Asian perspective Asian Bus Manag. 19 277-97

[21] Barreto I 2009 Dynamic Capabilities: A Review of Past Research and an Agenda for the Future Journal of Management 36 256–80

[22] Ethiraj S K, Kale P, Krishnan M S and Singh J V 2005 Where do capabilities come from and how do they matter? A study in the software services industry Strateg Manag J. 26 25–45

[23] Barney J 1991 Firm Resources and Sustained Competitive Advantage J Manage 17 99–120

[24] Barney J B, Ketchen D J and Wright M 2011 The Future of Resource-Based Theory: Revitalization or Decline? J Manage. 37 1299–315

[25] Teece DJ, Pisano G and Shuen A 1997 Dynamic Capabilities and Strategic Management Strateg Manag J. 18 509–33

[26] Leonard-Barton D 1992 Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. Strateg Management Journal 13 111–25

[27] Wang C L and Ahmed P K 2007 Dynamic capabilities: A review and research agenda Int J Manag Rev. 9 31–51

[28] Killen C P, Hunt R A and Kleinschmidt E J 2008 Project portfolio management for product innovation Int J Qual Reliab Manag. 25 24–38

[29] Teece DJ 2018 Business models and dynamic capabilities Long Range Plann 51 40–9

[30] Teece DJ 2009 Dynamic Capabilities & Strategic Management: Organizing for Innovation and Growth (New York: Oxford University Press)

[31] Matsysik L, Rugman A M and Bausch A 2018 Dynamic Capabilities of Multinational Enterprises: The Dominant Logics Behind Sensing, Seizing, and Transforming Matter Manag Int Rev. 58 225–50

[32] Bell S 2019 Organisational resilience: A matter of organisational life and death Contiu Resil Rev. 1 5–16

[33] Gunderson L 2006 Ecologocial Resilience - In Theory and Application Anna Rev Ecol Syst. 31 425–39

[34] Hollnagel E, Woods D D and Leveson N 2006 Resilience Engineering: Concepts and Precepts (Burlington, VT: Ashgate)

[35] Bonanno G A 2004 Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive after Extremely Aversive Events Am Psychol 59 20–8
Introducing a Typology of Organizational Resilience to Crises and Disasters

[60] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900

[61] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900

[62] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900

[63] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900

[64] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900

[65] Lee A V., Vargo J and Seville E 2013 Developing a tool to measure and compare organizations’ resilience to crises and disasters: A dynamic capabilities view Int J Tour Res. 21 882–900