

Crisis, what crisis? Toward a Dynamic Capabilities Approach for Organisations'

Readiness for Change

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Abstract:

The global COVID-19 pandemic ushered multiple socio-political and economic crises for organisations and society. This situation has led to a scholarly spike in the crisis literature focusing on different types of organisational challenges. Most often, the recommendation suggested is for organisations to adopt a financial approach to resolve their constraints. This approach has led to an even bigger, unresolved problem of how organisations manage crisis situations that threaten their internal and external levels of operation and organisations' capabilities to do so. Drawing from the SMEs-in-Crisis literature, it is argued how Teece's (1997), and Eisenhardt and Martin's (2000) Dynamic Capabilities can provide the theoretical platform of how organisations' capabilities and their readiness to tackle crisis-type disruptions are addressed. Six capability constructs have been developed from the analysis of the capabilities literature to form this conceptual paper's main contribution and is referred to as a 'Dynamic Capabilities Approach' to crisis-change. The aspects make a valuable contribution to how businesses can enhance their internal and external readiness for further disruptive change and thereby boost their sustainability. Implications of the study's findings, contributions and future research trajectories are considered.

Keywords: crisis, SMEs, dynamic capabilities, organisational change, approach

Track: Sustainable and Responsible Business

Paper type: Review article

1. Introduction

Organisations, including SMEs, face multiple problems, and among the most dominant of these are socio-economic and political instabilities. These problems have been amplified by the recent COVID-19 and the preceding 2007/08 financial crash (Liguori and Pittz, 2020; Musa and Aifuwa, 2020). Such problems have additionally magnified risks to SMEs' sustainability (Eggers, 2020; Bundy et al., 2017), thereby increasing the urgency and importance of examining how organisations' readiness for change is addressed (Dopelt and McDonough, 2017). While the organisational crisis literature has mainly focused on adopting a financial approach to tackling the range of socio-economic and political problems faced by firms, such an approach is increasingly being questioned by emerging scholarship on crisis and sustainability (Fitriasari, 2020). This financial approach to crisis has led to an important gap in the field, which is 'how can organisations tackle crisis from a more holistic (internal and external) approach that includes the financial and non-financial aspects to strengthen their capabilities and readiness for crisis-change?'.

While the predominantly financial approach has led to calls for SMEs to stay productive (Nyanga and Zirima, 2020; Aidoo et al., 2021) and tends to have a veneer of financial sustainability (McGeever et al., 2020; Hadi, 2020; Mendy, 2021) by adopting financially-based capabilities (Gourinchas et al., 2020), digitalisation (Ratnasingam et al., 2020), production (Nyanga and Zirima, 2020) and agility mechanisms (Ratnasingam et al., 2020), something is still missing. For SMEs to be sustainable in dealing with crises of socio-economic and political magnitude (Gerald et al., 2020), the financial approach needs to be strengthened/complimented by other measures (Alves et al., 2020).

To address the practical research problem within crisis-change and simultaneously provide an appropriate conceptual approach that fills the financial – non-financial gap, this study asks the fundamental question 'how can SMEs identify and address their key financial and non-financial crises in ever changing environments that disrupt their short to medium term and longer term recovery by harnessing a range of capabilities?' To provide insights into this question, I draw on SMEs-in-crisis and dynamic capabilities literature to critique and problematise the nature, scale, and impact of the crisis on individuals, collectives, and organisations. The results of the conceptual analysis produced six key thematic areas, leading to an examination of Teece's capabilities model. The combined theoretical findings were then used to develop the study's valuable contribution known as a 'Dynamic Capabilities Approach' to reflect on how internal (at the micro-organisational level) and external (at the macro-governmental institutional level) capability sets are needed by firms to tackle socio-economic and political problems caused by crisis change. The six thematic findings and approach's contributions, their implications and impact on organisational and crisis-based change are discussed more widely.

The next section's literature review focuses on crisis-based change and dynamic capabilities is followed by the methodology using Tranfield et al. (2003) and Paul and Criado's (2020) concept based papers. The findings from the literature are critiqued and the six major thematic constructs are deduced to produce the study's key contribution of the Capabilities Adoption Approach (see section 4). Finally, the conclusion and future areas of research in crisis-based organisational change are discussed.

2. Theoretical Foundations of SMEs in Crisis-based Change and Dynamic Capabilities

This conceptual piece is based on two key areas, namely SMEs-in-crisis-based change and Dynamic Capabilities because of the paper's focus, interest and the organisational readiness capabilities and approach to crisis-change gap. Whilst crisis-based organisational change has particularly burgeoned from 2007/08 because of the financial crash, most of its emphasis has predominantly been on recent articles' focus on the nature of a range of crisis and their financial impacts on SME organisations, particularly during and post COVID-19 pandemic. Therefore, whilst the bulk of the focus of the SMEs-in-crisis literature for this paper is based on academic publications from 2020 because of the spike in publications since then, other relevant theoretical aspects from Teece's (1997) and Eisendhardt and Martin's (2000) Dynamic Capabilities construct are also considered for conceptual balance, theoretical development, and contribution. The theoretical examination revealed six main thematic foci highlighting a range of crises namely 1) financial (Ratnasingam et al., 2020; Hoorens et al., 2020; Che Omar et al., 2020); 2) AI and digitalisation (Papadopoulos et al., 2020), 3) supply chain driven performance (Fitriasari, 2020); 4) work and workplace (Supardi et al., 2020); 5) governance (Ba et al., 2020) and 6) sustainability (Ayoko et al., 2022) .

2.1 Financial Crisis

Financial crisis is the biggest crisis-based change threatening SMEs in both developed and developing countries. For example, in developed countries, the finance challenges include difficulties in accessing capital (Juergensen et al. 2020). This has exacerbated SMEs fragility (Nicola et al. 2020; Neu et al., 2020) and worsened their regional and national economies (Beraha and Đuričin, 2020). In developing contexts, Ba et al. (2020) highlighted how SMEs' financial crisis in Vietnam has worsened, thereby adding to Ratnasingam et al.'s (2020) presentation of the Malaysian government's imposition of movement control orders (MCOs) on SMEs' finances. This predicament led to financial institutions such as banks imposing moratoriums on loans between 2021 and 2022. The high inflation rates also meant that SMEs struggled to survive (Ayoko et al., 2022). Such a bleak financial and overall economic climate precipitated price-skyrocketing wars between countries which dampened wage increases (Armantier et al., 2021). Hospitality and retail sectors were badly impacted; so too was consumer/client spending. The impact of these multiple crises produced staff shortages across borders (also see Che et al. 2020) and additional liquidity problems (Hadi, 2020). In Zimbabwe, this crisis resulted in mass sackings (Nyanga and Zirima, 2020) as well as SMEs' inability to meet basic utilities, accommodation, and insurance payments (Neu et al., 2020; Lu et al., 2020).

2.2 AI and Digitalisation Crisis

Artificial Intelligence (AI) and digitalisation posed an additional crisis for SMEs. This is because SMEs had to experiment with the use of digital technologies, portals and transfer platforms and R and D ecosystem (Costa and Matias, 2020) to mitigate the financial pressures on their internal operations (Grzegorz et al., 2020; Musa and Aifuwa, 2020). However, claims that the use of such technologies lead to creativity especially within smaller firms are misguided given their general lack of experience in this area (Fitriasari; 2020; Papadopoulos et al., 2020). This limitation was compounded by SMEs venturing into the use of AI to automate business activities especially at a time of acute staff shortages. The compounded nature of these shortages and lack of expertise have further threatened smaller firms' financial performance (Kumar et al., 2020; Sharma et al., 2020). Whilst AI has been proposed to facilitate some white-collar roles during crisis, these automations of previously executed

human functions, including hiring, absence management protocols, rewards and leave entitlements, it has also raised ethical concerns on how staff are treated during crisis (Müller et al., 2018). Such questions have rendered the sustainable use of human resources and their capabilities, especially in small businesses, unresolved (Cooke et al., 2019).

2.3 Supply Chain driven Performance Crisis

SMEs' logistics have not fully caught up with demands from a more circular economy. Whilst innovations in technology heralded the Internet of Things (IoT) to facilitate supply chains, the integration of such technologies into SMEs' business models and financial-level operations has not fully boosted organisations' self-sustainability. Additionally, claims that SMEs' contributions to regional, national and international economic growth (Bhutta et al., 2011) will resolve the supply chain and performance problems has not addressed the fraught relationships between SME owners, employees and investors (Brown et al., 2020; Ratnasingam et al., 2020). While employees and investors' confidence has been badly hit, the fragility of SMEs' business performance models and supply chain interconnections were also additionally disrupted. Therefore, the predominant global financial interconnectivity model and suggestions for the adoption of a financial approach to solve crisis-change, has exposed SMEs' fragile sustainability interconnectivity as crisis-change takes on new forms and complexities. This is because, whilst previous scholarship supported having fewer key suppliers to show the relational, financial strengths between firms, a break in the chain highlighted global financial havoc and the escalation of the crisis on smaller firms (Macchion et al., 2022; Giotopoulos et al., 2022; Martinsuo and Luomaranta, 2018).

2.4 Work and Workplace Crisis

The daily operational capability of SMEs and the way they organise work have also been changing. Work related changes have constrained operational viability within and beyond workplaces. For example, in the Yogyakarta area of Indonesia, the tourism sector largely operated by SMEs has been badly hit (Hadi, 2020). This has further increased SMEs' exposure to risks (security, corporate operational and people management capabilities) and their ability to be innovative in work settings and devise creative strategies. Whilst emerging scholarship has proffered the Resource-Based View (RBV) of the Firm for SMEs to be competitively advantageous if they are to boost their internal financial capability (Barney, 1997), the framing of the requisite internal and external capability required needs a more balanced approach other than the dependence on financial resources' utilisation and risks mitigation. Although the research in this area posits the need for SMEs to reposition themselves by adopting responsible financial measures, including digitalisation, automation, and risk management (Khalil et al., 2015), the people aspect of change in crisis and any other related capabilities are missing.

2.5 Governance Crisis

SMEs have also endured governance crisis. Corporate governance issues relate to the necessary management infrastructure needed for SMEs' adaptation. Additionally, the need for such firms to exercise control over information gathering and dissemination (Saura et al., 2020) to enhance governance structures and performance have recently been exposed as adding to the crisis (Gil-Gomez et al., 2020). Recently the European Union introduced a framework called Environmental, social, and governance (ESG) to help organisations address crisis type environments (Gjergji et al., 2021). Despite the apparent timeliness of these mechanisms and their generic adoption worldwide as 'best practices', the additional constraints of implementing

the required capabilities and their impacts on people have received scarce exploration. In fact, SMEs, with acute resource crises, have perceived these new governance frameworks as burdensome.

2.6 Sustainability Crisis

These overall threats pose sustainability challenges for in the way SME businesses operate from a multitude of local and global levels (Rodriguez-Soler et al., 2020). Despite the lifting of border restrictions in a post-pandemic world from 2021 to date, business activities especially for SMEs remain constrained at both levels. Such restrictions have impacted on SMEs especially as more staff, at the local level, seek work-life-balance, welfare, and wellbeing issues (Ayoko et al., 2022). The insufficiency of worker training, learning and development during the COVID-19 years has added to SMEs' inability to manage crisis-based change at the more global level of operation (Barbagila et al., 2021). These multi-level barriers have further damaged companies' operational and strategic confidence to grow (Le et al. 2020), their production (Yang et al., 2020) and their survival in different contexts ranging from the Sichuan Province of China and the Middle East to Turkey (Hoorens et al., 2020). The predominant proposition in the research and literature on crisis-change continues to follow Eggers' (2020) financial restructuring approach with the hope that this will resolve the SME crises. However, such a recommendation falls short of a more dynamic set of capabilities currently needed.

To address the gap left by the predominantly financial approach to crisis-change, Dynamic Capabilities was investigated (Barney, 1991) to examine whether other relevant aspects of how an organisation deals with its volatile past (Teece et al., 1997) and develops operational and strategic readiness for disruptive crisis-based change. The assumption is that this will enable it to become more competitive to address volatile situations like the ones explicated in earlier sections (Tallman, 2015). The capabilities concept also factors in how a firm's route dependence over the decades could affect its internal and external capability (Eisenhardt, 1989) by considering the environment of the change (Teece, 2018) and what technological capabilities may be required (Helfat et al., 2007). Whilst the Dynamic capabilities framework (Schilke, 2014) considers the competences that threaten an organisation's competitiveness, (Laaksonen and Peltoniemi, 2018) and highlights a certain level of Schumpeterian creative destruction if it is to facilitate organisations' sustainability (Teece et al., 1997), the extent to which the financial and non-financial capabilities is created, reconfigured and re-integrated as value-adding resources (Teece, 2018) that can tackle both the practical socio-economic and practical challenges faced by firms and contribute theoretically is still missing. Whilst Eisenhardt and Martin (2000) identified strategic decision-making, product development and inter-organisational alliances as necessary processes and procedures to resolve the practical readiness for change and capabilities problem, something is still missing. This relates to how organisations can fully reconfigure the way they develop the requisite financial, technological, and non-financial and non-technological operational capabilities (Mikalef and Gupta, 2021; Mikalef and Krogstie, 2020) to tackle both people's and organisations' readiness for change. Additionally, resolving the theoretical gap left by earlier scholarships' emphasis on the financial approach to organisational change is also necessary to show its benefits to knowledge creation and development within the field of crisis change and dynamic capabilities.

Therefore, the way firms, especially SMEs adapt to volatile, crisis situations require additional internal and external competences (Teece, 2018; Tallman, 2015). The latter consists of a distinctive set of resources (Laaksonen and Peltoniemi, 2018), whose integration is believed to enhance a coordinated organisational response to volatility (Chen et al., 2016). The type of

agility being proposed here differs from the mainly one-directional financial approach of previous cited scholarship, including recent additions on technological aspects. Although this proposition may appear to highlight the establishment of routinised practices to facilitate individual and organisational capacity building (Laaksonen and Peltoniemi, 2018) and may not ensure that the requisite knowledge generation propensity for organisations to deal with volatility (Tallman, 2015), how to resolve both constraints is sorely needed in crisis-change management. This is partly explainable in the sense that an SME's ability to identify, process and evaluate internal and external information for its operational survival (Sakas et al., 2014) and decision-making capability (Teece, 2018) is dependent on staff's readiness and commitment to accept such fundamental changes under crisis situations. Based on the afore critique and problematisation, this study perceives an organisation's (SME's) ability to identify, adopt and use a range of financial and non-financial (human) capabilities as part of a dynamic set of capabilities, whose combination constitutes a vital contribution to an approach that enhances an organisation's and staff's readiness for change. The methodology comes next.

3 Methodology

This study's methodology is a conceptual review of SME organisations in crisis, following Paul and Criado (2020) and Tranfield et al. (2003). Whilst the predominantly financial focus on how businesses deal with crisis change continues (Kahvechi, 2021), additional recent academic endeavours have forayed into SME employees' performance (Alkadash and Alamarin, 2021) and the use of digitalisation (Muditomo and Wahyudi, 2021). While these are suggested as enhancements to organisations' financial readiness for change, they have led to a significant gap in theorisation and practice. To fill this, the author examined alternative theorisation, practice and methodological orientation, key databases, journal, and book searches including SCOPUS, Web of Science and Google Scholar. The justification for doing so is that Social Scientists, who are interested in crisis also focus on such sources. The three stages of the search included namely 1) identifying relevant articles on SMEs faced with crisis change; 2) contents' quality and language suitability, appropriateness, and relevance (10 were omitted after this); 3) checking which of the remaining theoretical aspects were suitable for inclusion (an additional 8 articles which did not focus on SMEs, or the impact of crisis were added); 4) the final selection of papers for inclusion, thematic categorisation, and analysis. In total, over 60 articles comprised this conceptual review. Two major categories regarding organisations' responses to crises were found, namely 1) Internal and 2) External Capability Responses. Each is sub-categorised and broken down into relevant characteristics highlighting the respective SME capabilities – i.e., their readiness for crisis change. The capabilities are discussed, and the outcomes of the analysis used to develop the study's second set of contributions, namely the 'Dynamic Capabilities Approach' and how it provides an alternative to the current, dominant financial readiness approach and shifts attention to more holistic dynamic capabilities' approach, which highlights a more sophisticated range of competences needed by organisations and their members to be ready for future organisational change disruptions.

4 Findings

4.1 Internal and External Readiness for Crisis-based change

The capabilities identified from the literature on how SMEs cope with crisis-based change are categorised as internal and external. The internal capabilities include 1) Developing

Communication; 2) Developing Financial Capability and 3) Developing AI and Digital Capability and the fourth capability comprises an external aspect namely 4) Developing Networks for Government Support. These are discussed below.

4.2 Developing Communication:

The first internal mechanism is developing the communication capability of SMEs. Hadi (2020) noted this as fundamental to survival. It includes developing open and transparent communication processes with all the SME stakeholders. Another important mechanism includes an SME-stakeholder two-way communication process which allows for the receiving of information from internal and external stakeholders as input, its examination and feeding back to all members concerned. This includes a range of communication toolkits, from the written, to the verbal to the social media connectivity with all internal and external SME stakeholders. Klein and Todesco (2021) highlighted the important role that knowledge plays in improving digital communication and transparency. This is geared towards mending any potential damages that may have been caused by the challenges posed to individuals' and the collective's ability to perform during crisis-based change. Khan and Yannis (2020) identified the use and embedding of digital tools into SMEs' business operations as a conduit for the reparation of damaged employer-employee relations and maintaining the potential communication gains for SMEs and their stakeholder base.

4.3 Developing Financial Capability

The second internal mechanism highlights the importance that crisis-based change scholarship continues to attach to financial recovery. In their study of SMEs in Vietnam, Ba et al. (2020), highlighted the useful role that government policy development and implementation could have in facilitating SMEs' growth and their continuous survival and durability (Mendy et al., 2021). These scholars identified financial incentivisation measures, including the payment of SMEs' workers' wages, minimisation or even cancellation of interests on loans and other fixed costs for businesses. These measures are expected to alleviate SMEs' operational viability and members' daily operations. Other scholars such as Lu et al. (2020) had also identified an additional step/measure or if one wills, an added financial aspect. This involved governments' aid through subsidising SMEs' product development and service delivery via tax breaks, financial incentives, and subsidies. However, Cowling, Brown and Rocha (2021) underscored the need for SMEs to save money if they are to mitigate against the risks of bouncing back from the crisis. Beraha and Đuričin (2020) and Bartik et al. (2020) highlighted the reduction of staff numbers as part of such a financial push to cope with business operations' incapacity to meet loans' repayments and other inadequate resources during crisis-based change in US-based SMEs. Part of their proposals included employment contracts' variation and the adoption of innovative recruitment methods. They thought these measures will facilitate additional business opportunities and diversity resources despite additional challenges. The financial measures including Brown's (2020) Jobs Guarantee Scheme have been insufficient.

4.4 Developing AI and Digital Capability:

Digitalising techniques have been added in efforts to enhance SMEs' performativity capability and innovative potential. Mazzarol (2015) highlighted how digitalisation enhances SMEs' members' innovation skills and even boosts the performativity of bigger firms (see Alves et al., 2020). On the other hand, Priyono, Moin and Putri (2021) highlighted the significance 'Digital Transformation Paths' that are crucial in enabling SMEs to bounce back from the

pandemic. In fact, Alves et al. (2020) went on to highlight that SMEs' performativity strategy should be viewed as part of their wider challenge-mitigation propensity. Despite propositions from Aidoo et al. (2021) for further digitalisation of SMEs, the latter's sustainability crisis continues. Che et al. (2020) went further to propose SMEs' use of social media-marketing, but Hoorens et al. (2020) have cautioned about SMEs' resource inability to do so. This is partly because additional attainment of better service and performativity capability are also required (Fitriasari, 2020). Musa and Aifuwa (2020) and Papadopoulos et al. (2020) introduced the need for SMEs to become more flexible to enhance their creativity and Menezes, Mocheva and Shankar, (2020) proposed 'Online Dispute Resolution Platforms' as a means of facilitating smoother employer-employment relations. The wide range of financially driven measures remain at the micro, organisational level. The next section highlights what is needed at a more macro-level.

4.5 Developing Networks for Government Support

Fitriasari (2020) has highlighted how COVID-19's creation of a worldwide economic crisis needs a more macro-institutional level examination/intervention. Brulhart et al. (2020) proposed the first set of mechanisms such as governments' loans and wage support for struggling SMEs and Brown et al. (2020) have called for governments to guarantee small firms' loans and the repaying of their debts. Jose et al. (2020) have proposed measures including the urgency for governments to increase investments for SMEs to use latest technology and telecommunication toolkits. They thought this will update sales-monitoring software capability, especially for SMEs whose business is mainly online (Hoorens et al. 2020; Morgan et al., 2020; Brown, 2020) to diffuse Gourinchas et al.'s (2021). Diffusing the much-referenced SME 'time bomb' of change needs to go beyond their financial readiness to ward off business closures, mass layoffs and unemployment. Despite this recognition, cash grants/support and employee retention schemes (Juergensen et al., 2020) are still considered to be critical. Tsilika et al. (2020) pointed out that amalgamating these into an entrepreneurial bricolage could salvage SMEs from the stranglehold of government, financial bailouts (Thorgren and Williams, 2020; Sarkar and Clegg, 2021). However, we do not know what that bricolage looks like and what new theoretical and practice-based directions may be involved to tackle future crisis change.

5 New Directions informing Crisis-based Organisational Change

Based on the previous theoretical examination, explications and analyses, the author now addresses how the theoretical and practical gap created by current research's focus on the financial approach to crisis change is resolved. Four capabilities have been identified, namely 1) strategic-ness; 2) communication; 3) competence; 4) sustainability. Whilst the first three capabilities are internal, the last/final one vitally combines internal and external ability – i.e., an operational responsiveness as well as a strategic readiness for disruptive change. These capabilities build upon/add to the financial responsiveness approach and extend Teece et al.'s (2012) dynamic capabilities construct by introducing the notion and practice of individual and collective dynamic capabilities. Each of the capability extensions/contributions is explicated below.

5.1 Strategic-ness

Strategic-ness focuses on organisations' ability to develop strategic awareness and acumen to improve their chances of surviving a crisis (Mendy, 2021). This involves developing staff's awareness of the nature, scale, and extent of the multiplicity of the crises and identifying the development opportunities needed. Such strategic capability also involves the review of performance regimes and their relevance and applicability under the evolving crises. Where appropriate, specialist crisis adaptation training and the types of outcomes needed would be identified at the individual and collective levels. Whilst Huang et al. (2019) earlier identified the respective leadership roles that managers in organisations could play in staff's capability goal orientation and achievement, facilitating individual and team members' adaptability orientation and performance within a crisis change situation, was not established. Earlier too, despite Kumar and Ayedee's (2021) identification of the significance of technological usage for online business performance, the extent of technological applications and their intended and unintended consequences on people's capabilities within a crisis environment have not been examined. Therefore, the author hereby introduces strategic-ness to crisis-based organisational change to serve as the first contribution to the dominant financial approach thus far. Whilst Jordan et al. (2006) earlier established a direct correlation between human capital learning and development and one's ability to perform and manage conflict, such explications have not been established within the strategic ability of organisations to be ready for a multiplicity of practice-based socio-economic and political crises.

5.2 Communication attuning

The second capability is for organisations to develop communication. Whilst Hadi et al. (2020) and Khan et al. (2020) identified two-way communication as part of this capability, they also signalled openness and trust as essential characteristics. However, they did not extend their conceptualisation to include how firms attune their communication and other strategies as they try to tackle disruptive crises environments. Quite often a top-down form of communication is exercised within crisis situations despite suggestions to be more inclusive (Lin & Dang, 2017) so as to gain employees' commitment (Hadi et al. 2020). Recent suggestions from Vazquez-Bustelo and Avella (2019) and Goel and Gupta, (2020) to use social media platforms when disseminating information and knowledge in crisis situations have fallen short of attuning communication practices with all relevant stakeholders' needs.

5.3 Competence

The third capability centres on organisations' ability to be competent in the selection of which practices best suit different crisis situations. This can be facilitated through the strengthening of employees and management's propensity to anticipate the disruptive nature of change and to cope. Whilst Jeong and Choi (2016) signalled the need for Human Resource Management to be focal in facilitating employees and management's adaptation capability, doing so as an overall organisational competence capability within crisis stations has not been examined yet. Recently, Jerez-Gomez et al. (2019) highlighted the need for competence development while omitting the complementarity of micro employee and management competence, organisational-level competence and external level competence requirements. Such an omission has been redressed in this paper's Dynamic Capabilities Approach as yet an additional contribution.

5.4 Sustainability

The fourth capability constitutes internal and external characteristics. Whilst Klein and Knight (2005), among many others, have highlighted how essential it is for organisations to adopt the

financial approach to ensure viability, and whilst Jerez-Gomez et al. (2019), Reinhardt et al., (2018) went a step further to highlight how internal HR training programmes can help enhance financial sustainability. However, we still do not know the extent to which the development of this much-needed capability can be harnessed to manage business level operations internally as well as externally during crisis. To do so, a combination of disparate elements in the literature and research, namely internal financial, performance and operational capability (Brown et al., 2020; Juergenssen et al., 2020; Hadi, 2020; Neu et al., 2020), competence attuning as well as strategic sustainability have been considered (Hoorens et al., 2020). This involves a constant cycle of adaptation (Klein and Todesco 2021; Nachmias and Hubschmid-Vierheilig, 2021) to strengthen the dominant crisis-change's focus on the financial approach (Bartik et al., 2020; Gerald et al., 2020; Ratnasingam et al., 2020) but also their human capability in a more dynamic way (i.e., by introducing new and evolving capabilities). This additional aspect enhances collective organisational capability and resilience than previously explicated and conceptualised (see below for the Dynamic Abilities Approach).

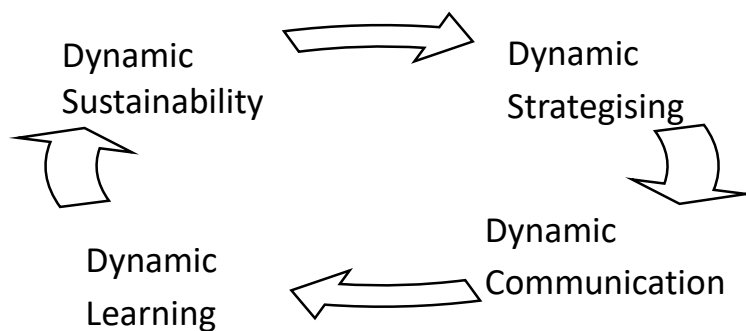


Figure 1. Dynamic Capabilities Approach

5.5 Characteristics and Contributions of the Dynamic Capabilities Approach

Approach 1: Dynamic Strategising

Dynamic strategising involves employees and management jointly identifying and implementing new individual level and organisational level strategic objectives, whilst collaboratively recognising the challenges posed to their achievement and the learning and development opportunities offered within a crisis environment.

Approach 2: Dynamic Communication

Dynamic communication entails organisational stakeholders' identification and disruption of traditional, hierarchical forms of communication and disrupting these by a joint employee-management-wider public verbal, non-verbal, technology and non-technology forms of communication.

Approach 3: Dynamic Learning

Dynamic learning focuses on learning to unlearn and relearn new adaptation mechanisms by utilising organisations' internal and external sources of knowing and informing product, service, and operational capability to enhance financial and non-financial survivability.

Approach 4: Dynamic Sustainability

Dynamic sustainability is the fourth/final characteristic of the study's approach. It involves all organisational members learning to be more resourceful and resilient to disruptions as individuals and groups. All the four sets of capabilities signal how organisations can better disrupt disruptive/crisis change by doing so in a more coordinated way – i.e., organisationally and collectively. The next section discusses considerations of this paper's new approach and what this means for crisis-based organisational change.

6 Discussions and Implications for Crisis-based Organisational Change

The Dynamic Capabilities Approach's characteristics highlight the extent and scale of the multiplicity of crises and, more importantly, the holistic range of capabilities needed to enhance organisations' internal and external readiness for change. While four of the capabilities, namely 1) developing communication; 2) developing financial capability and 3) developing AI and digital capability and 4) developing networks for government support were drawn from the literature on crisis, it was crucial to go a step further to highlight the additional complexity of the changes and the capabilities required to enhance organisational, collective, and individual readiness for crisis change. However, adapting in ways that solely depend on the financial approach as suggested in the literature and research are no longer sufficient if organisations are to sustainably disrupt the complexity of crisis change and address the challenges. To be able to do so, a certain level of dynamism needs to be enhanced to facilitate both organisational responsiveness as well as readiness for change. Doing so will enhance not only individual but also collective and wider organisational-level sustainability. Each of the six responsiveness and readiness areas are explicated as follows.

6.1 On financial dynamism

One of organisations' sustainability dilemmas that researchers and practitioners have been trying to resolve within crisis change environments is via a financial approach (Lu et al., 2020; Ba et al., 2020). Whilst this may be welcomed by struggling companies, it does not guarantee organisations' financial dynamism given the repetitiveness and scale of the multiple crises. To this end, this paper proposes financial dynamism to be added onto literature and research on crisis change and dynamic capabilities studies such as those of Teece et al. (2014, 2021). Financial dynamism entails the constant development of both management and employee financial acumen in recognising and applying new competences within constantly changing environments. Therefore, the dynamic financial capability of the approach goes beyond the current focus on management/leadership financial capability as a response tool to employees and teams' financial performance during crisis change (Tsilika et al., 2020; Alves et al., 2020). Such a combination is designed to strengthen organisations' internal capabilities to be financial robust at the micro-level whilst boosting members' readiness for macro/external-level financial crisis. Therefore, bringing together management, employee and organisational level financial capability has implications for crisis change in that it fills the government, organisational, collective and the individual-level financial capabilities gap in the crisis change and dynamic capabilities literature and research.

6.2 On AI and Digitalisation dynamism

Artificial Intelligence and digitalisation have recently emerged as key responses to crisis change. The increasing use of industry 4.0 and the automation of business operations have increased calls for their inclusion in staff selection and recruitment and in management's financial decision making (Sharma et al., 2020; Kumar et al., 2020). However, AI and digitalisation techniques are still being developed (Müller et al., 2018), the requisite trust from all stakeholders (Hadi, 2020) and the ways via which two-way communication systems are developed between management and staff have not yet been finalised. This incompleteness disrupts the sustainability of efforts involving AI and digitalisation processes within change. This paper adds the need for AI and digitalisation dynamism (i.e., the continuous fine tuning of such technologies with peoples' readiness for change) as a welcome development onto crisis change and dynamic capabilities literature instead of Che et al.'s (2015) top-down proposition.

6.3 On Supply Chain and Performance dynamism

Previous studies by Fitriasari (2020) have highlighted how COVID-19 created a worldwide economic crisis and Brulhart et al. (2020) suggested that the scale of organisations' financial risks, needed a more macro-level intervention/support (Brown et al., 2020; Jose et al., 2020). Whilst recent additions have included dynamic capabilities, the Resource-Based View (RBV) of the Firm, competitive advantage, and firm-level performance as particularly useful concepts to include in the mix of the financial approach to crisis, the author notes that risk is becoming such an increasingly ubiquitous issue in business's supply chain operations and therefore should be re-conceptualised differently. This new way of conceptualisation is referred to here as dynamic – i.e., the continuous evolution of a twin-tracked combination of supply chain networks and the dynamic performance required from organisations' members in constantly changing environments.

6.4 On Work and Workplace dynamism

Barney (1997) and his followers previously emphasised the centrality of organisations' utilisation of tangible and intangible resources to address firms' exposure to socio-economic and political challenges and their ability to be innovative. Therefore, enhancing the internal and external capability of firms has been recognised as part of the way organisations now need to respond to crisis change. This paper proposes a more balanced approach that includes the financial and people management of work and the workplace, that includes the introduction of a risk-informed and transformative mindset to enhancing a more work and workplace dynamic environment. This new dynamism includes the need for organisations to reposition their financial, digitalisation and automation practices in ways that could be seen to develop their management of crisis change capability (Khalil et al., 2015). This reconstitution and repositioning include working internally with people to attune their preferences for work and workplace adaptations with those that facilitate a more dynamic internal and external work and workplace reconfiguration and environmental realignment.

6.5 On Governance dynamism

The range of government loan repayments and other investment schemes, (Hoorens et al. 2020; Morgan et al., 2020; Brown, 2020) coupled with financial incentivisation measures (Fitriasari, 2020; Brulhart et al., 2020) have highlighted the financial 'time bomb' that SMEs have faced

in crisis-change situations (Gourinchas et al., 2021). These schemes additionally raise a more severe challenge, which relates to governance capability. Such a challenge also raises a wider institutional set of entrepreneurial, financial and governance talent that Tsilika et al. (2020), Sarkar and Clegg (2021) and Thorgren and Williams (2020) consider as crucial in developing a bricolage of talent for crisis change. This paper proposes governance dynamism – i.e., an amalgam of existing financial, people management and institutional structures with new adaptation readiness processes that coordinate all these aspects.

6.6 On sustainability

The emerging crisis change literature has identified resource utilisation as crucial for sustaining organisations (Tsilika et al. 2020). However, addressing the widespread nature of crisis change requires something more than resources in their tangible financial nature. The new Dynamic Capabilities Approach combines tangible and non-tangible capabilities from financial resources to non-financial aspects and refers to such capture and presentation as sustaining disruptively. The notion and practice of dynamic sustainability (i.e., being continuously dynamic to stay sustainable) entails the identification and use of financial and non-financial organisational and individual capabilities. Additionally, it deploys these to enhance ongoing sustainability at the micro individual and macro-organisational and institutional levels. The implications of the Dynamic Capabilities Approach within the field of organisational change are considered next.

6.7 Practical contributions and implications

This paper's Dynamic Capabilities Approach makes a vital contribution to the dominant financial approach to crisis, and has implications for practice, theory and managerial decision making in the field of organisational change. Firstly, the approach has practical implications in terms of how organisations and their stakeholders (employees, management, shareholders, clients) address both their responsiveness to and readiness for change in the following areas.

Through the proposed 'Dynamic strategising' policy makers especially change management experts can learn new competences such as prioritising which activities they need to include in their organisations' strategic orientation and which individuals and groups they need to consult. Additionally, the approach surfaces which organisational, individual, and collective objectives are crucial, and which financial and non-financial goals organisations should strategise upon.

Through 'Dynamic communication' management, policy implementers and change management professionals unlearn traditional, hierarchical communication practices which excluded and silenced the voices of other change stakeholders. By so doing, they learn new inclusivity and continuous engagement with other stakeholders in a crisis-change environment.

Via 'Dynamic supply chain and performance' organisations learn to disrupt/radically shift their capabilities from relying on traditional supply chain practices to learning new skills that will enhance individual, collective and organisational performance. The new learning involves greater engagement between staff and management through engagement fora, joint performance and production goals' identification and implementation and with wider product and service providers beyond their geographic dispensations.

By adopting ‘Dynamic work and workplace practices’, change management and capabilities experts and professionals use existing individual, collective and organisational knowledge and information and optimise daily work activities. These foster greater organisational citizenship for employees, an amenable organisational change climate and employee and management wellbeing.

Through ‘Dynamic governance’ organisations are tasked with developing expertise in combining internal know-how with external sources of knowledge acquisition regarding how government and other agential support work effectively. They also tailor new people-centric governance applications to boost people’s capabilities readiness for change.

Via the adoption of ‘Dynamic sustainability’ organisations learn how to approach crisis change by disrupting/radically changing their over-reliance on financial sustainability to include non-financial and resilient emotional intelligence. They also continuously seek to disrupt staff’s respond-to-change mentality towards a readiness for/an expectation and preparedness for continuous disruptions.

6.8 Theoretical contributions and implications

Secondly, the author considers the theoretical implications from this study’s approach to see what new concepts/constructs have been introduced to crisis management and dynamic capabilities literature as follows.

‘Dynamic strategic-ness’ ushers a radical rethink of how crisis situations are managed from the traditional reliance on financial capability perspective to the introduction of ‘strategic-ness’ or foresight that disrupts the disruptiveness of future change. This extends Teece et al.’s (2021; 2014) capabilities’ literature by introducing the idea of foresightedness in the capabilities required to address disruptive change.

‘Dynamic communication’ introduces the idea that crisis change, and dynamic capabilities theorisation should involve the notion of continuously disrupting/radically rethinking and attuning old ways of communicating with new technology with non-technology enhancing modes.

‘Dynamic supply chain and performance’ entails a radical shift from traditional reliance on old supply chain networks to include local and more globally interconnected entities, whilst nurturing some independence that allows one relative flexibility and ability to manoeuvre difficulties when required.

‘Dynamic work and workplace’ introduce the idea that as work and workplace change become the new normal, a constant evolution of organising work practices is also needed in workplaces of the future.

‘Dynamic governance’ highlights a new construct in crisis change and dynamic capabilities literature and research by focusing scholarly attention on a reassessment of stable institutional and governance frameworks and re-evaluating ‘agents’ and ‘recipients’ of change as interchanging and complimentary roles.

‘Dynamic sustainability’ introduces the notion of radicality/a shift in how we conceptualise, implement, and evaluate organisations and members’ responsiveness and readiness for a cycle of continuous crisis change.

6.9 Managerial contributions and implications

Thirdly, a critical management implication raised by the Dynamic Capabilities Approach is the importance of recognising the multiplicity of crises faced by contemporary organisations and the need for continuous operational and strategic readiness for change to enhance longer-term sustainability. The study's approach highlights the criticality of a range of management capabilities, from financial to people-centric emotional intelligence development if managers are to be better equipped to manage how organisations traditionally respond to production, performance, financial viability, and employer-employee relations. Understanding these challenges also calls for managerial capabilities' development in a more holistic manner to enhance overall organisations' strategic readiness to constant crises than has previously been attempted in crisis change and dynamic capabilities literature and research.

Therefore, it is being proposed here, that managing disruptive organisational change in a sustainable and effective manner calls for a radical shift from management's traditional reliance on their role as financial change agents to considering everyone as financial and non-financial change actors. Such a shift in thinking necessitates considering the recruitment of dynamically capable and crises sensitive management and staff that can be trained/equipped to disrupt organisations' traditional mode of financial responsiveness to change to a more collective actors' readiness to tackle organisational sustainability on a collective level (see Table 1 below for a summative comparative analysis of the theoretical aspects and the Dynamic Capabilities Approach).

Crisis change Areas	Literature & Research on Crisis Change	Capabilities required	Dynamic Capabilities Approach, Contributions & Implications
Financial	Lack of financial capital; imposition of governments and banks' control orders; high staff turnover.	Financial incentivisation from governments and banks; wage subsidisation, loan reprieves, business cost reductions.	Practical contribution: Dynamic strategising includes joint identification of individual, collective and organisational objectives, including financial and non-financial goals. Theoretical contribution: the need to include 'dynamic strategic capability' as a construct in crisis change and dynamic capabilities theorisation.
AI & Digital	AI and digital technological constraints; lack of resources to implement	AI and digital technological adoption; develop AI and digital technology skills; adopt flexible working	Practical contribution: Dynamic communication through non-hierarchical, formal, non-formal and semi-formal communication measures.

	technological creativity and innovation.		Theoretical contribution: the need to include ‘dynamic communicative capability’ as a concept in crisis change and dynamic capabilities theorisation.
Supply Chain & Performance	Problems with maintaining supply chains, dwindling contracts; poor performance and productivity	Use digitalisation to enhance organisations’ supply chains and their performance and productivity	Practical contribution: Enhancing individual, collective and organisational performance through disruption of traditional supply chains via greater staff-management and organisational engagements to achieve individual, collective and organisations’ performance and production goals. Theoretical contribution: the inclusion of ‘dynamic supply chain and performance capability’ as an idea in crisis change and dynamic capabilities theorisation.
Work & Workplace	Lack of value-adding work and workplace practices and procedures; low-value clients and stakeholders.	Adopt non-hierarchical and open forms of communication to facilitate how daily activities within work are conducted.	Practical contribution: Disrupting traditional work and workplace practices, including how individual, collective, and organisational information and knowledge are shared and utilised in conducting daily work activities. Theoretical contribution: the addition of ‘dynamic work and workplace capability’ as theory in crisis change and dynamic capabilities theorisation.
Governance	Macro government support and organisational, entrepreneurial ecosystem	Buy into governments’ macro financial incentivisation; improve internal,	Practical contribution: Disrupting traditional governance by combining external government and other agential support with

		organisational entrepreneurship	new, people-centric governance enhancing measures for greater capabilities development. Theoretical contribution: the inclusion of ‘dynamic governance capability’ as a construct in crisis change and dynamic capabilities theorisation.
Sustainability	Low business turnover, low-talented staff, low staff morale, low organisational commitment; low business sustainability.		Practical contribution: Adopt a dynamic sustainability approach to crisis change by integrating financial and non-financial capabilities in the ways individuals, collectives and organisations nurture resilience and sustainability culture during crisis change. Theoretical contribution: the addition of ‘dynamic sustainability capability’ as a concept in crisis change and dynamic capabilities theorisation.

Table 1. Organisations in crisis change literature and dynamic capabilities

7 Conclusion and future research

This conceptual paper has examined a range of areas showing how SME businesses use the dominant financial approach in crisis. Non-financial and capabilities aspects were additionally used to critique the predominantly financial approach to organisational change and sustainability. Using Teece et al.’s (2014; 2021) and Eisenhardt and Martin’s (2000) dynamic capabilities approach, it was also highlighted how a focus on capabilities alone is not enough when examining the range of ongoing financial and non-financial set of crises faced by contemporary organisations. To fill the gap between an over-reliance of the literature and research on either dynamic capabilities or the dominant financial approach to crisis, the author proposed the Dynamic Capabilities Approach to help bridge the two areas and contribute theoretically, practically, and managerially. Each of the respective contributions highlights the scale and level of the disruption in six areas, namely strategic-ness, communication, supply chain and performance, work and workplace, governance, and sustainability.

Future scholars could investigate additional challenges and opportunities that could be obtained if organisations were to use the Dynamic Capabilities Approach in different crises change situations to ascertain the extent to which the proposed sets of disruptions could be practically developed for organisational change stakeholders. Additionally, the Dynamic Capabilities Approach and the respective characteristics in each of its aspects could be compared to other approaches and models in organisational change and dynamic capabilities research ranging from Lewin's force-field model/theory/framework to Teece's dynamic capabilities of firms' conceptualisation. Such follow-up studies could unearth additional methodological, theoretical, management and practical gaps that could highlight the extent to which organisations' past and present capability frameworks may continue to enhance their dynamism and readiness to address continuous crises in different situations. The work on organisational crisis change continues....

7.1 Paper's Limitations

This paper is mainly conceptual and therefore is lacking in empirical grounding to test the applicability of the Dynamic Capabilities Approach in different business and change contexts. This was partly necessitated by the need to bridge the gap presented by the dominant financial approach to crisis-change and dynamic capabilities to show how organisations' readiness for strategic change can be enhanced. Additionally, such a practical gap provided a theoretical chasm on how to theorise the new development. However, having developed the Dynamic Capabilities Approach to resolve both the practical and theoretical gaps in crisis change, yet another gap or limitation has presented itself, which is what are the challenges and opportunities of the new Dynamic Capabilities Approach for workplaces of the future and what new expansions, problematisation and/or re-conceptualisation does it offer in organisational, crisis change management. The work continues....

References

- Aidoo, S.O., Agyapong, A., Acquah, M., & Akomea, S.Y. (2021). The performance implications of strategic responses of SMEs to the covid-19 pandemic: Evidence from an African economy. *Africa Journal of Management*, 7(1): 74-103.
- Alkadash, T.M., & Alamarin, F. (2021). An Integrative Conceptual Framework on Employee Performance during COVID-19 Pandemic for Bahrain SMEs. *Psychology and Education*.
- Amir, M.A. (2020). How are small and medium enterprises in Malaysia's furniture industry coping with COVID-19 pandemic? Early evidences from a survey and recommendations for policymakers. *BioResources*, 15(3): 5951-5964.
- Alves, J.C., Lok, T.C., Luo, Y. & Hao, W. (2020). Crisis Management for Small Business during the COVID-19 Outbreak: Survival, Resilience and Renewal Strategies of Firms in Macau. 1–29.
- Armantier, O., Koşar, G., Pomerantz, R., Skandalis, D., Smith, K., Topa, G. & Van der Klaauw, W. (2021). How economic crises affect inflation beliefs: Evidence from the Covid-19 pandemic. *Journal of Economic Behavior and Organization*, 189: 443-469.
- Ayoko, O.B., Caputo, A., & Mendy, J. (2022). Management research contributions to the COVID-19: A bibliometric review and analysis of the contributions from the Journal of Management & Organization. *Journal of Management and Organization*.
- Ba, H., Le, H., Loan, T., Thanh, C., Bich, T., Pham, T. & Binh, T. (2020). Policy related factors affecting the survival and development of SMEs in the context of Covid 19 pandemic. *Management Science Letters*, 10: 3683–3692.
- Barbagila, M., Buttice, V., Giudici, G., Mendy, J., Sarker, T., Sharma, G.D., Thomas, A. &

- Zutshi, A. (2021). "Supporting SMEs in sustainable strategy development post-Covid-19: challenges and policy agenda for the G20".
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1): 99–120.
- Bartik, A.W., Cullen, Z.B., Glaeser, E.L., Luca, M., Stanton, C.T., & Sunderam, A. (2020). *The targeting and impact of Paycheck Protection Program loans to small businesses* (No. w27623). National Bureau of Economic Research.
- Bartik, A.W., Bertrand, M., Cullen, Z.B., Glaeser, E.L., Luca, M., & Stanton, C.T. (2020b). How are small businesses adjusting to COVID-19? Early evidence from a survey (No. 26989), *NBER Working Paper Series*, Cambridge.
- Beraha, I., & Đuričin, S. (2020). The impact of COVID-19 crisis on medium-sized enterprises in Serbia. *Economic Analysis*, 53(1): 14-27.
- Bhutta, M.K.S., Omar, A., & Yang, X. (2011). Electronic Waste: A Growing Concern in Today's Environment. *Economics Research International*, 2011, 1–8.
- Brown, R. (2020). The impact of Covid-19 on Scottish small and medium-sized enterprises (SMEs): prognosis and policy prescription. *Fraser of Allander Economic Commentary*, 44(2).
- Brown, R., Rocha, A., & Cowling, M. (2020). Financing entrepreneurship in times of crisis: Exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. *International Small Business Journal*, 38(5): 380-390.
- Brühlhart, M., Lalive, R., Lehmann, T., & Siegenthaler, M. (2020). COVID-19 financial support to small businesses in Switzerland: evaluation and outlook. *Swiss Journal of Economics and Statistics*, 156(1): 1-13.
- Bundy, J., Pfarrer, M.D., Short, C.E., & Coombs, W.T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of Management*, 43(6): 1661-1692.
- By, R.T. (2005). Organisational change management: A critical review. *Journal of Change Management*, 5(4): 369-380.
- Caballero-Morales, S.O. (2021). Innovation as recovery strategy for SMEs in emerging economies during the COVID-19 pandemic. *Research in international business and finance*, 57: 101396.
- Chen, D., Heyer, S., Ibbotson, S., Salonitis, K., Steingrímsson, J.G., et al. (2015). Direct digital manufacturing: Definition, evolution, and sustainability implications. *Journal of Cleaner Production*, 107: 615–625.
- Costa, J., & Matias, J.C. (2020). Open innovation 4.0 as an enhancer of sustainable innovation ecosystems. *Sustainability*, 12(19): 8112.
- Cowling, M., Brown, R., & Rocha, A. (2020). Did you save some cash for a rainy COVID-19 day? The crisis and SMEs. *International Small Business Journal*, 38(7): 593-604.
- Dele-Ijagbulu, O., Moos, M., & Eresia-Eke, C.E. (2021). Modelling the relationships between the business environment, entrepreneurial orientation and employment growth amongst small, medium and micro-enterprises in South Africa.
- Doppelt, B., & McDonough, W. (2017). *Leading change toward sustainability: A change-management guide for business, government and civil society*. Routledge.
- Dubouloz, S., Bocquet, R., Equey Balzli, C., Gardet, E., & Gandia, R. (2021). SMEs' open innovation: Applying a barrier approach. *California Management Review*, 64(1): 113-137.
- Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, 116: 199-208.
- Eisenhardt, K.M., & Martin, J.A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10–11): 1105–1121.

- Farkas, T.N., Mendy, J. & Kargas, N. (2020). 'Enhancing Resilience in Autistic Adults Using Community-based Participatory Research: A Novel HRD Intervention in Employment Service Provision', *Advances in Developing Human Resources*, 22(4): 370-386.
- Fitriasari, F. (2020). How do Small and Medium Enterprise (SME) survive the COVID-19 outbreak? *Jurnal Inovasi Ekonomi*, 5(02): 53-62.
- Gerald, E., Obianuju, A., & Chukwunonso, N. (2020). Strategic agility and performance of small and medium enterprises in the phase of Covid-19 pandemic. *International Journal of Financial, Accounting, and Management*, 2(1): 41-50.
- Gil-Gomez, H., Guerola-Navarro, V., Oltra-Badenes, R., & Lozano-Quilis, J.A. (2020). Customer relationship management: digital transformation and sustainable business model innovation. *Economic Research-Ekonomska Istrazivanja*, 33(1): 2733–2750.
- Giotopoulos, I., Kontolaimou, A. and Tsakanikas, A. (2022). Digital responses of SMEs to the COVID-19 crisis. *International Journal of Entrepreneurial Behavior & Research*, 28(7): 1751-1772.
- Goel, A., & Gupta, L. (2020). Social Media in the Times of COVID-19. *Journal of Clinical Rheumatology*.
- Gourinchas, P.O., Kalemli-Özcan, Ş., Penciakova, V., & Sander, N. (2020). *Covid-19 and SME failures* (No. w27877). National Bureau of Economic Research.
- Hadi, S., & Supardi, S. (2020). Revitalization strategy for small and medium enterprises after Corona virus disease pandemic (covid-19) in Yogyakarta. *J. Xian Univ. Archit. Technol*, 12: 4068-4076.
- Heider, A., Gerken, M., van Dinther, N., & Hülsbeck, M. (2021). Business model innovation through dynamic capabilities in small and medium enterprises—Evidence from the German Mittelstand. *Journal of Business Research*, 130: 635-645.
- Hoorens, S., Hocking, L., & Fays, C. (2020). How Small Businesses are Coping with the Impact of COVID-19: Results from a Survey in Turkey and the Middle East. RAND.
- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47(3): 499-510.
- Kahveci, E. (2021). Surviving COVID-19 and beyond: a conceptual framework for SMEs in crisis. *Business: Theory and Practice*, 22(1): 167-179.
- Khan, M. & Yannis, M. (2020). An Artificial Intelligence and NLP based Islamic FinTech Model Combining Zakat and Qardh-Al-Hasan for Countering the Adverse Impact of COVID 19 on SMEs and Individuals. *International Journal of Economics & Business Administration*, VIII, 351–364.
- Klein, V.B., & Todesco, J.L. (2021). COVID-19 crisis and SMEs responses: The role of digital transformation. *Knowledge and Process Management*.
- Kumar, P., Agrawal, A., & Budhwar, P. (2020). Human and Technological Resource Management (HTRM): New Insights into Revolution 4.0. (P. Kumar, A. Agrawal, & P. Budhwar, Eds.) *Human & Technological Resource Management: New Insights into Revolution 4.0*. Emerald Group Publishing.
- Kumar, A., & Ayedee, D. (2021). Technology Adoption: A Solution for SMEs to Overcome Problems during COVID-19. *Forthcoming, Academy of Marketing Studies Journal*, 25(1).
- Laaksonen, O., & Peltoniemi, M. (2018). The Essence of Dynamic Capabilities and their Measurement. *International Journal of Management Reviews*, 20(2): 184–205.
- Lu, Y., Wu, J., Peng, J. & Lu, L. (2020). The perceived impact of the Covid-19 epidemic: evidence from a sample of 4807 SMEs in Sichuan Province, China. *Environmental Hazards*, 19(4), 323-340.
- Lutfi, A., Al-Khasawneh, A. L., Almaiah, M.A., Alsyouf, A., & Alrawad, M. (2022).

- Business Sustainability of Small and Medium Enterprises during the COVID-19 Pandemic: The Role of AIS Implementation. *Sustainability*, 14(9): 5362.
- Lyver, M.J., & Lu, T.J. (2018). Sustaining innovation performance in SMEs: Exploring the roles of strategic entrepreneurship and IT capabilities. *Sustainability*, 10(2): 442.
- Macchion, L., Toscani, A.C. & Vinelli, A. (2022). Sustainable business models of small and medium-sized enterprises and the relationships to be established within the supply chain to support these models. *Corporate Social Responsibility and Environmental Management*.
- Martinsuo, M. & Luomaranta, T. (2018). Adopting additive manufacturing in SMEs: exploring the challenges and solutions. *Journal of Manufacturing Technology Management*, 29(6): 937-957.
- Mendy, J. (2020). Bouncing back from Workplace Stress: From HRD's Individual Employee's Developmental Focus to Multi-faceted Collective Workforce Resilience Intervention. *Advances in Developing Human Resources*, 22(4): 353-369.
- Mendy, J. (2020). Staff preferences in four SMEs experiencing organizational change. *Journal of Organizational Change Management*, 33(2): 331-348.
- Mendy, J. (2021). Performance Management problem of 4 SMEs: towards a performance resolution', *Journal of Small Business and Enterprise Development*.
- Mendy, J., Odunukan, K. & Rahman, M. (2021). Place and Policy Barriers of Rural Nigeria's SMEs' Internationalization, *Thunderbird International Business Review*.
- Menezes, A., Mocheva, N., & Shankar, S. S. (2020). 'Under Pressure': Integrating Online Dispute Resolution Platforms into Pre-insolvency Processes and Early Warning Tools to Save Distressed Small Businesses. *Vikalpa*, 45(2): 79-92.
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information and Management*, 58(3), 103434.
- Mikalef, P., & Krogstie, J. (2020). Examining the interplay between big data analytics and contextual factors in driving process innovation capabilities. *European Journal of Information Systems*, 29(3): 260–287.
- Muditomo, A., & Wahyudi, I. (2021). Conceptual Model for SME Digital Transformation during the COVID-19 Pandemic Time in Indonesia: R-Digital Transformation Model. *BASKARA: Journal of Business and Entrepreneurship*, 3(1): 13-23.
- Müller, J.M., Kiel, D., & Voigt, K.I. (2018). What Drives the Implementation of Industry 4.0? The Role of Opportunities and Challenges in the Context of Sustainability. *Sustainability*, 10(1).
- Musa, S. & Aifuwa, H.O. (2020). Coronavirus pandemic in Nigeria: How can Small and Medium Enterprises (SMEs) cope and flatten the curve? *European Journal of Accounting, Finance and Investment*, 6(5): 55-61.
- Nachmias, S., & Hubschmid-Vierheilig, E. (2021). We need to learn how to love digital learning 'again': European SMEs response to COVID-19 digital learning needs.
- Neu, C., Carew, D. & Shatz, H. (2020). Preserving Small Businesses: Small-Business Owners Speak About Surviving the COVID-19 Pandemic.
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M. & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78: 185–193.
- Nyanga, T., & Zirima, H. (2020). Reactions of Small To Medium Enterprises in Masvingo, Zimbabwe To Covid 19: Implications on Productivity. *Business Excellence and Management*, 10(1): 22-32.
- Omar, A.R.C., Ishak, S., & Jusoh, M.A. (2020). The impact of Covid-19 Movement Control Order on SMEs' businesses and survival strategies. *Geografia*, 16(2).

- Papadopoulos, T., Baltas, K.N., & Balta, M.E. (2020). The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice. *International Journal of Information Management*, 55: 102192.
- Paul, J., & Criado, A.R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717.
- Priem, R.L., & Butler, J.E. (2001). Is the Resource-Based “View” a Useful Perspective for Strategic Management Research? *Academy of Management Review*, 26(1): 22–40.
- Priyono, A., Moin, A., & Putri, V.N.A.O. (2020). Identifying Digital Transformation Paths in the Business Model of SMEs during the COVID-19 Pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4): 104.
- Sakas, D., Vlachos, D., & Nasiopoulos, D. (2014). Modelling strategic management for the development of competitive advantage, based on technology. *Journal of Systems and Information Technology*.
- Ratnasingam, J., Khoo, A., Jegathesan, N., Wei, L.C., Abd Latib, H., Thanasegaran, G., ... & Sarkar, S., (2021). Resilience in a time of contagion: Lessons from small businesses during the COVID-19 pandemic. *Journal of Change Management*, 1-26.
- Saura, J.R., Palos-Sanchez, P., & Herráez, B.R. (2020). Digital marketing for sustainable growth: Business models and online campaigns using sustainable strategies. *Sustainability*, 12(3).
- Sharma, G.D., Yadav, A., & Chopra, R. (2020). Artificial intelligence and effective governance: A review, critique and research agenda. *Sustainable Futures*, 2, 100004.
- Schilke, O. (2013). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35(2): 179–203.
- Tallman, S. (2015). Dynamic capabilities. *Wiley Encyclopedia of Management*, 1-3.
- Teece, D.J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1): 40-49.
- Teece, D.J., Pisano, G.P., & Shuen, A. (1997a). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7): 509–533.
- Thorgren, S., & Williams, T.A. (2020). Staying alive during an unfolding crisis: How SMEs ward off impending disaster. *Journal of Business Venturing Insights*, 14, e00187.
- Tranfield, D., Denyer, D. & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 14: 207–222.
- Tsilika, T., Kakouris, A., Apostolopoulos, N. & Dermatis, Z. (2020). Entrepreneurial bricolage in the aftermath of a shock. Insights from Greek SMEs. *Journal of Small Business and Entrepreneurship*, 32(6): 635-652.
- Veronica, S., Alexeis, G.P., Valentina, C., & Elisa, G. (2020). Do stakeholder capabilities promote sustainable business innovation in small and medium-sized enterprises? Evidence from Italy. *Journal of Business Research*, 119: 131-141.
- Weaven, S., Quach, S., Thaichon, P., Frazer, L., Billot, K., & Grace, D. (2021). Surviving an economic downturn: Dynamic capabilities of SMEs. *Journal of Business Research*, 128: 109-123.