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Sustainable and Resilient Global Practices: Advances in Responsiveness and Adaptation

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INVESTOR IN PEOPLE

Contents

List of Contributors *vii*

Preface *ix*

Chapter 1 Adaptive Strategy-making Processes for Long-term Resilience and Sustainable Solutions
Torben Juul Andersen *1*

Chapter 2 Adaptation Strategies to Climate Change: Bibliometric Analyses and Emerging Themes
Giuseppe Danese *17*

Chapter 3 Assessing Long-term Performance in Manufacturing Companies Hit by a Natural Disaster: The Role of Organizational Resilience and Human Capital
Elisa Martinelli, Elena Sarti and Giulia Tagliazucchi *37*

Chapter 4 Environmental Sustainability Orientation, Dynamic Capability, Entrepreneurial Orientation, and Green Innovation in Small- and Medium-sized Enterprise
Kwadwo Asante, Petr Novak and Michael Adu Kwarteng *55*

Chapter 5 Supporting Green Business Growth: Towards a Transformative Approach
Polina Baranova *81*

Chapter 6 Exploring Organizational Responses to Nonmarket Institutional Pressures: The Case of the EU Taxonomy Regulation
Michelle Palharini, Matthias Fertig and Peter Wehnert *99*

Chapter 7 Corporate Responsiveness and Sustainability Transition: Insights from a Danish–Malaysian Palm Oil Multinational
Frederik Hejselbjerg Vagtborg *149*

Chapter 8 When Supply Chain Sustainability Means Supply Chain Resilience: The Case of Dr. Bronner's
Hannah Stolze, Jon Kirchoff and Alexis Bateman 193

Chapter 9 Justice in a Cooperative Enterprise: The Case of Brazilian Justa Trama
Italo Anderson Taumaturgo dos Santos and Victor Pessoa de Melo Gomes 217

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Preface

Corporate exposures to environmental changes appear to have increased in size and intensity over past decades with many unexpected disruptive incidents with adverse effects on business activities, public services, and societal welfare. Operating in an integrated global economy increases the complexity of multinational enterprise where actions and reactions in different regions around the world intermingle as a mechanism to produce unprecedented events with potentially extreme outcomes. The many interdependent elements can create wicked problems that may seem impossible to resolve through conventional analytics calling for new approaches that engage diverse constituents in collaborative efforts to develop sustainable solutions. The ability to survive, persevere, and prosper under abrupt and uncertain conditions requires dynamic adaptive strategy-making processes that can facilitate organizational realignment of business activities in responsive initiatives to deal with environmental changes as they evolve.

However, the ability to advance organizational adaptability and gain resilient outcomes, that make the organization even stronger after responding to emergent events, is different when the implied exposures have systemic proportions. Here, the individual organizations are exposed to emergent developments, but so are many other private and public sector entities, which therefore calls for collaborative initiatives to generate responses that lead to durable outcomes. Operating in complex global contexts reflects conditions of radical uncertainty where exposures often are hard to identify and outline thus de facto constituting unmeasurable exposures. To a large extent, these exposures derive from, and are locked into, standard practices we have established to govern the global economic activities that create economic value for society and its constituents. When the connected cross-border activities are tightly coupled, say in optimized global value chains, it will have systemic repercussions when political and economic conditions undergo fundamental changes. This creates exposures for all internationally engaged organizations and calls for collaborative solutions that involve all businesses in joint policy efforts with exposed societies across the global economy.

That is, contemporary firms must continue to adapt their business activities to thrive where recent events, such as a pandemic and military conflict close to Europe, have shown how sudden unexpected environmental jolts can cause severe disruptions to the prevailing business conduct. Successful responses to such emergent changes rely on a collective ability to sense ongoing developments and consider coordinated responsive actions that engage businesses in proactive, timely, and meaningful initiatives where economic practices and standards coevolve going forward. It may entail joint reconnaissance involving internal and external stakeholders where organizational agents can take local responsive initiatives to explore for viable solutions that can generate new insights and inform forward-looking analyses for updated strategic direction and guidance as the context evolves.

We need to develop a better understanding of how to generate effective strategic adaptation in times of abrupt environmental changes where uncertainty and the unknown prevails. The interdependencies across specialized economic functions and regional market conditions require that business activities coevolve to gain lasting effects that permeate across all related business activities and public services on a global scale. Public policy and regulation can induce warranted change, but it will take corporate enterprise to effectuate the underlying economic transformation across interacting public–private relationships. Ideally, the public and private organizations should collaborate in the formation of viable and durable ecosystems that can form a sustainable economic path for the future. The ability to develop sustainable solutions thrives on innovation, experimentation, and learning across networks of collaborative institutional and individual relationships. We need to better understand how this can be established and managed.

This collection of chapter articles attempts to fill this void in our current knowledge by delving into the issues of effective responses, sustainable solutions, and long-term resilient outcomes from different perspectives and contexts.

Chapter 1 by Torben Juul Andersen argues for the need to develop *sustainable adaptive business practices* as a basis for long-term resilient outcomes. It argues that businesses operate in a complex dynamic world where human activities interfere with the natural environment in intricate ways that can lead to unforeseen potentially catastrophic outcomes that will affect all economic entities and therefore societies in general and particularly the most vulnerable communities. It argues that we must pay attention to uncertain and unknown factors that create our exposures although we as humans tend to ignore uncertainty and adopt control-based practices, thereby in reality creating a false sense of security, where in truth, we face more uncertainties than we realize. This reduces our ability to find ways to reduce the adverse outcomes caused by abrupt unexpected events and fail to address the underlying causes rooted in the way the global economic activities are structured. The related organizational exposures are only partially determined by enterprise governance but to a large extent derive from the prevailing structure of global business practices. So, effective responses must not only address local firm-specific conditions but should consider the systemic effects associated with the global business structure. Sustainable solutions must give thoughts to multinational enterprise risks as well as societal exposures around the world where they operate in public–private partnerships. The solutions to uncertain exposures and systemic risks will require experimentation that involves public and private organizations to generate new insights and engaged learning to identify viable solutions for a sustainable future.

In Chapter 2, Giuseppe Danese examines what is known about *business adaptation strategies* to deal with climate change conducting a systematic review of the extant literature. This review uncovers a hierarchical structure of significant predictors that map interdependent adaptation decisions and their impact on the environment. The author identifies nine predictors from a final set of records including institutional (regulatory), industry (e.g., tourism, insurance, and wine), interorganizational (horizontal and vertical linkages), and intra-organizational (e.g., capabilities, exposures, and firm-specific characteristics) influences, and effects. The author examines different choices, for example, adaptation versus mitigation, adaptation versus maladaptation, and active versus passive adaptive efforts. There appears to be infrequent recording and monitoring of long-term social and environmental impacts of these adaptive choices. To this effect, the study explores the links between interorganizational predictors and adaptive choices including the role of cognitive and behavioral biases.

In Chapter 3, Elisa Martinelli, Elena Sarti, and Giulia Tagliazucchi investigate how to sustain *economic activity after a natural catastrophe* and the role of human capital as a source of organizational resilience. The specific background is earthquake events that threaten the performance of businesses that operate in regions hit by natural disasters. The exposed organizations must adopt dynamic adaptive strategies to survive after a disaster that allow them to continue to generate revenue and build long-term resilience. This takes human capital, or individual engagement, to realign business activities and identify opportunities for business renewal. The study examines whether businesses that value their human capital respond better, gaining economic sustainability to natural disasters. This is analyzed based on corporate survey data and archival accounting information from 131 sampled firms that were hit by the Emilia earthquake in Italy in 2012. The sampled data were analyzed using partial least squares structural equation modeling (PLS-SEM). The results show the importance of human engagement to develop effective adaptive processes that generate more resilient outcomes to the adverse events. It was specifically identified that involvement of human capital creates valuable and organizational responsiveness. The study investigates how human capital affects long-run (6 years) business performance.

In the ensuing Chapter 4, Kwadwo Asante, Petr Novak, and Michael Adu Kwarteng study *environmental sustainability effects* in the hospitality industry and examine the role of dynamic capabilities and autonomy. They specifically investigate the relationship between the environmental sustainability orientation of the hotel management and the subsequent effects on green creativity within the hotel. They argue that combinations of green dynamic capabilities and green autonomy determine boundary conditions that affect the environmental sustainability orientation and the ability to enact green creativity within the hotel. The study integrates dynamic capability theory with the componential model of creativity and tests the relationships based on data from the hospitality industry in Ghana. The analysis is performed using symmetrical and asymmetrical approaches to uncover plausible configurations that lead to green creativity outcomes. The results provide evidence of firm-specific factors that drive an environmental sustainability orientation and enhance green creativity as guidance for hotel managers.

Chapter 5 by Polina Baranova develops a transformative approach to support the development and *growth of green business activities*. The study is based on analyses of survey data from 372 businesses operating in the British Midlands that show a trend toward increased focus on green business activities that will require development of green skills and environmental business support. The data show significant differences between large and small businesses and the way they engage in green business development. The characteristics of the business sector affect the growth potential where companies in manufacturing develop more sales from green products compared to service offerings. Manufacturing companies are found to be more proactive than service companies and are better at integrating the green ambitions into their business strategies. It appears that information gaps are major impediments to promote green business activities where business support agencies can provide useful pro-environmental enterprise support. Community policies can support development of green skills and capabilities to develop the green growth potential where enterprise support can catalyze business community contributions toward sustainable business development.

In Chapter 6, Michelle Palharini, Matthias Fertig, and Peter Wehnert examine the potential *effects of the EU Taxonomy Regulation* and identifies different organizational responses to these new hybrid practices imposed by forthcoming regulation. The study is focused on understanding firms' responses to the EU taxonomy, and whether they recognize value creation opportunities by aligning market and nonmarket strategies with the taxonomy goals. This regulatory initiative introduces hybrid practices that combine the logics of environmental considerations and financial return logics. Adopting a conceptual framework based on institutional theory, dynamic capabilities view and nonmarket strategy research, the authors examine how organizational structures and practices affect the way companies respond to the regulatory pressures. A study of companies located in several European Union (EU) countries find that most firms respond reactively, while firms with sustainability-driven business models tend to respond in an anticipatory way, and firms with high greenhouse gas (GHG) emissions and low taxonomy eligibility in a defensive way. They also find evidence for mimetic isomorphism related to the influence of consulting and auditing services. Further, high levels of uncertainty, ambiguity and lack of clarity has a great impact on firms' responses and motives. The study identifies different response types when companies are confronted with multiple logics of mandated hybrid practices and explains how organizational structures and practices linked to the different institutional logics determine the corporate responses.

Chapter 7 written by Frederik Hejselbjerg Vagtborg presents a case study of a Danish–Malaysian palm oil multinational and analyzes how the company *responded to new EU regulation* aimed to forge a sustainability transition. The study explores the strategic responses of a company operating in developing economies to the requirements imposed by the new EU sustainability regulation. It adopts a theory-guided approach and develops propositions that subsequently are investigated based on insights from the case study. The research uses data collected from interviews with senior and middle managers as well as external stakeholders cross-checked against archival data from corporate documents and public articles. The study finds that adherence to corporate social responsibility can enhance responsiveness to new regulatory demands particularly when combined with early signal scanning and real options reasoning. It shows how reputation, core values, and ethical concerns support stakeholder engagement and lever the ability to generate collaborative solutions that deal with the new regulation. The EU sustainability regulation has socioeconomic and political relevance and has not yet been studied from the perspective of commodity multinationals in developing countries. The study provides insights into how these companies can enhance responsiveness and adaptability to the uncertainties imposed by the changing regulatory environment.

In Chapter 8, Hannah Stolze, Jon Kirchoff, and Alexis Bateman present a case analysis of Dr. Bronner's as an example of an organization where *value-driven response capabilities* lead to more sustainable responses and resilient outcomes. The study investigates whether the use of sustainable strategies and responsive initiatives can help firms become more resilient in the face of disruptive incidents. Dr. Bronner's is a rapidly growing personal care products company with strong values that hone the engagement of their employees. The study explores the potential pathways to generate sustainable solutions and create resilient outcomes that resist disruptions and recover, even improve, operational capabilities after disruptions. It shows how sustainable responses can buttress and overcome the impact of emergent disruptions and build more robust long-term operations going forward.

Finally, Chapter 9 presents a case study by Italo Anderson Taumaturgo dos Santos and Victor Pessoa de Melo Gomes of the Brazilian company Justa Trama presenting the *effects of justice on sustainability* in a cooperative enterprise. The Sustainable Development Goal Number 16 established by the United Nations (UN) is about providing justice for all to build effective, accountable, and inclusive institutions. According to stakeholder theory, the perception of fair treatment implies that the organization incorporates fairness, impartiality, and morality as operating principles and core values. Hence, their study analyzes how justice influences organizational processes around an economic network of solidary cooperatives. They collect data from semi-structured interviews and archival information from formal documents made available by the involved members of the cooperative network. The study identifies how justice drives a series of corporate values and organizational processes applied across the production value chain. This develops relationships conceived as being fair, among organizations that pursue the same ideals, and thereby enhances more responsive actions with sustainable outcomes.

The chapters provide different perspectives to the issue of sustainable and resilient operating practices and the need for effective responses to deal with unpredictable, abrupt, and rapid changes in the global business environment. This search for sustainable solutions presents a diversity of methodological approaches including conceptual argumentation, theoretical modeling, systematic literature reviews, empirical examinations and data analyses, and several insightful case studies. These research chapter articles present current challenges of dealing with uncertain and unknown conditions, accumulating environmental degradation, extreme natural events, new evolving regulatory initiatives, green business opportunities, cooperative approaches, etc. We hope these diverse contributions can provide some inspiring reading to advance our thinking about how to generate sustainable and resilient practices for the benefit of future societies.

Torben Juul Andersen
Frederiksberg, September 30, 2023

Chapter 1

Adaptive Strategy-making Processes for Long-term Resilience and Sustainable Solutions

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Abstract

We operate in a complex dynamic world where human activities interfere with the environment in ways that may cause unpredictable extreme outcomes that reflect exposure to *uncertainty* and *unknown* factors as opposed to identifiable risk events. As humans, we tend to downplay the effects of uncertainty and create a false sense of security by adopting formal control-based management practices where we in truth face more uncertainties than we realize. Hence, we attempt to assess extreme disaster events to mitigate adverse effects but fail to address the underlying causes for the exposures rooted in the way we have organized global economic activities. Exposures partially derive from the way enterprises govern their economic assets while systemic exposures derive from the way we conduct our global business practices. Identified exposures are typically local whereas the systemic causes are global with collective societal effects. Therefore, mitigating enterprise exposures will not address the global systemic causes for the extreme societal effects. To reach more sustainable solutions we must involve businesses that operate the global economy as well as the societies they operate in around the world. Given the extreme uncertainty of systemic risks, grand solutions cannot be derived from computational analytics but require experimentation among engaged public and private organizations and open collaborative learning to identify viable solutions from diverse insights. We must embrace uncertainty to explore innovative opportunities for proposed solutions

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and implement them in gradual co-evolving progression to develop viable sustainable economic outcomes.

Keywords: Collaborative solutions; disaster events; experimentation; global economic infrastructure; systemic effects; resilience

Introduction

Major risk incidents seem to increase in number and intensity including extreme weather events, drought, flooding, food restrictions, economic crises, cybercrime, political conflicts, pandemics, etc. (e.g., World Economic Forum, 2020, 2021, 2022). These events affect general economic activities but hit vulnerable developing economies disproportionately hard even though the underlying causes largely derive from systemic issues linked to global business practices endorsed by the "rich" countries retained through political and social mechanisms beyond the control of individual organizations. The economic exposures increase as populations grow and productive assets agglomerate around major urban centers often in exposed areas. The adverse effects of potential disasters affect people, businesses, and societies alike as a major challenge to achieve the goals of gaining sustainable prosperity reducing poverty by 2030 through active engagement of corporations and public entities (United Nations, 2015). Multilateral aid to support local crises is getting scarce as more societies are affected by disaster-like phenomena. In this situation, there is a need to consider alternative approaches and arrangements that can generate future solutions more effectively in collaborative efforts between public, private, and plural sector entities as integral parts of these global systemic phenomena. They should engage in open collaborative exploratory search for innovative solutions where conventional venture capitalists pursue projects that, each of them on their own, claim to have "the" solution to deal with a systemic exposure.

We observe increasing exposures to extreme phenomena caused by factors that are beyond the control of individual organizations and societies. The individual efforts to analyze potentially extreme events and their effects to mitigate adverse impacts are challenging and do not address the underlying factors rooted in the way we organize global economic activities that will have (severe) long-term climatic effects. The underlying systemic effects derive from global business practices that local actors cannot influence on their own – it will require collaborative efforts across sectors, institutions, and national borders (e.g., Andersen & Gatti, 2022). As the root cause is associated with the way we conduct global economic activities, the ability to generate sustainable solutions must rely on the engagement of the very business entities that conduct the economic activities around the world – it cannot be accomplished through public policy interventions alone. Public and plural sector organizations can provide needed regulation and expertise to address the systemic risk issues, but private enterprises must develop the viable business approaches and are therefore essential players.

The adoption of conventional control-based management approaches in response to complex systemic exposures attempting to quantify, analyze, and mitigate effects of local events will not deliver long-term resilient solutions that address the root causes for potentially extreme events. There is a tendency to commit resources that remedy (deficient) operations and improve the status quo as opposed to addressing the underlying sources by investing in experimentation and search for new sustainable approaches. The systemic exposures in a dynamic complex system are elusive and hard to quantify in meaningful ways. The future events are impossible to predict and describe in detail for practical planning purposes although we can make projections of potentially fatal outcomes. This means that it is harder to conceive of possible solutions that can be implemented in concrete efforts. The ability to foresee and respond effectively to emergent extreme events seem wanting partly because the economic ecosystem is optimized by forging dominant global standards with common practices and procedures that are exceedingly hard to change across the board (EURAM, 2023). It also relates to system-driven behaviors where business leaders must satisfy short-term demands for economic performance that makes it hard to endure current investments that reduce disaster effects in a distant future. Likewise, politicians often make short-term considerations to secure the next re-election where it is hard to promote long-term goals unless they have immediate positive effects. Hence, we arguably need plural sector engagement from "civil society" to change the way we organize economic activities.

The move toward more uncertain and unpredictable conditions can lead to poly-synchronous incidents with many simultaneous disruptions in related subsystems that require unconventional ways to be dealt with in these complex dynamic settings. We must distinguish between risk (*measurable uncertainty*), true uncertainty, and the unknown where we subconsciously rely on the risk concept paying less attention to the issues that are hard to measure. The highly complex systemic exposures defy simple description, are hard to quantify, and are therefore often dismissed or disregarded. We attempt to manage the systemic exposures through a risk lens, where the real exposures are linked to extreme uncertainty and unknown emergent conditions (Andersen, 2023; Andersen & Young, 2020). In this situation, we must embrace the uncertainty and use opportunities the changing circumstances may offer to form viable solutions and change the way we conduct business in the global economy. There is a need to explore through many small probing initiatives searching for approaches that can feed into more sustainable solutions for the future. These efforts should engage diverse institutions operating within the public, private, and plural sectors in collaborative exploration (Fig. 1.1) rather than society forging grand solutions that are unrealistic. Ongoing experimentation and learning as we walk the way outline a more sensible approach toward reaching viable, resilient, and sustainable solutions in small incremental steps rather than committing resources into large irreversible bets.

Systemic risk events relate to exposures that affect many, if not all, constituents in society including individuals, organizations, and communities, for example, caused by degrading business practices that increase the likelihood of major incidents as exposures build up over time in the absence of proper responses.

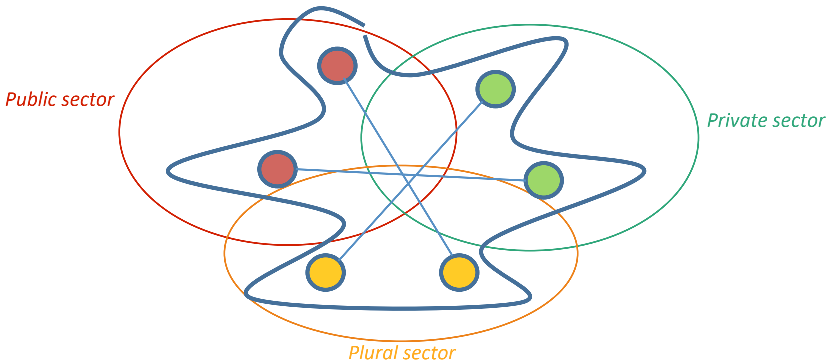

Fig. 1.1. Engaging Public, Private, and Plural Sector Institutions in Collaborative Search:

The modeling of systemic risk effects in complex dynamic systems is intrinsically difficult as exposures are highly uncertain and defy meaningful quantification. Contemporary networked anthropogenic business activities operate in a complex system that is potentially unstable and uncontrollable where it is impossible to fully understand everything. The exposures in this environment are often expressed as probable downside losses to be mitigated whereas resilient adaptation (in principle) entails ongoing analysis of updated information to guide responsive actions that also take the upside potential of opportunities into account. To do this requires more organic structures where stakeholders can collaborate across public–private organizations to address the complex systemic challenges while honing the collective intelligence of individuals within these institutions.

The Changing Risk Landscape

Most organizations are somehow connected globally with social links between individuals across borders with broad commercial, financial, and information flows facilitated by digital technologies that all contribute to adding complexity and uncertainty to the global business environment. It constitutes a complex dynamic system with many interacting elements where possible outcomes defeat simple prediction because each of the elements depends on the others in intricate nonlinear ways where developments in one location can have unexpected consequences elsewhere in the system. This makes it difficult to foresee developments and limits the ability to generate grand plans as viable responses but rather suggests that emergent exploration is appropriate to identify solutions.

The "black swan" phenomenon reflects that extreme events are essential aspects of contemporary life that we tend to ignore because randomness and extremes contravene scientific norms that rely on large-scale analyses to identify prevailing probabilistic relationships (e.g., Taleb, 2007, 2013). But improbable events exert more influence on our lives than we care to realize and may be so impactful due to our ignorance that they often appear as "unexpected" events. So, our reliance on quantitative statistical analyses where data typically are assumed to display Gaussian properties is challenged where observed events constitute complex multilevel phenomena subjected to unruly influences of social and behavioral reactions. This renders a risk environment that increasingly implicates (potentially) large unpredictable effects where the context is moving from actuarial or probabilistic risks to uncertain conditions with many unknown factors (e.g., Andersen & Young, 2020). Hence, we see extreme events that often are international in scope where cross-border relations can induce self-reinforcing global systemic effects (Smith & Fischbacher, 2009) as, for example, observed in the 2007–2009 financial crises, the COVID-19 pandemic, and the evolving climatic effects. The risk landscape is changing from a modernist to a post-modernist frame (Miller, 2009), where conventional analytical techniques and control-based approaches fall short. Instead, there is a need to develop organizational systems where employees and managers are actively engaged to identify opportunities through collaborative efforts with a capacity to engage in experimental responses learning from the generated insights.

Resilience, Agility, and Adaptation

Resilient organizations can deal effectively with events as they emerge making quick (local) responses to fend off immediate effects eventually finding actions that seem to work as a basis for broader applications across the entire organization. It requires more than standard procedures to gain resilience in organizations. A resilient organization as a social system relies on updated sensemaking, perceptual support, continuity, individual commitment, capabilities, active involvement, autonomy, creativity, innovation, resources, and structural flexibility to enable reconfiguration in the face of extreme events (e.g., Kantur & Isery-Say, 2012). A supportive organizational structure must have decision-making practices, information processing systems, and incentive schemes that are conducive to individual engagement and collaboration for a common outcome. This includes identification of emergent opportunities from exploratory efforts that may constitute viable solutions with upside potential that can generate resilient organizational outcomes (e.g., Taleb & Goldstein, 2012). Resilience reflects an ability to face disruption and unexpected developments adjusting to the changing conditions and making the organization stronger and more resourceful after extreme events than was the case before (Annarelli & Nonino, 2016; Vogus & Sutcliffe, 2007). Resilience relies on structures, processes, and practices underpinned by effective response capabilities. This entails that individual employees and managers display common values, emotional stability, self-efficacy, perseverance, big-picture thinking, support, participation, and collaboration (e.g., Abdullah et al., 2013).

When organizations face uncertain contexts with indeterminate or unknown outcomes, they perform better when they act through interdependent *causation* and *effectuation* processes (Packard et al., 2017), that is, responding, experimenting, and learning by doing as things evolve. Causation implies advanced conceptual thinking to analytically determine possible ways going forward in view of alternative opportunities. Effectuation implies that opportunities are identified and enacted by honing available resources and capabilities in responses to emerging developments. This means that initial attempts at updated consequential analyses of future scenarios are preceding a sensemaking process that guides the ongoing exploration for opportunities. Hence, causation and effectuation are not either-or propositions but should be pursued simultaneously in the form of central planning and decentralized emergence as a dynamic adaptive system (Andersen, 2013).

Dealing with Wicked Problems

Rational decision-making implies a process of information collection to assess conditions and developing alternatives decision-makers can choose from. However, in the real world, incomplete information, complex interdependencies, and unknown factors create wicked problems without any obvious optimal solution. Wicked problems are difficult, even impossible, to resolve or optimize computationally because information is insufficient, possibly contradictory, and relationships are complex with frequent changes depicting truly turbulent conditions. This means that a problem cannot be analyzed based on a fixed dataset but considers a moving target with all parts in constant flux without a single (simple) solution. Hence, the term "wicked" depicts the conditions of flimsy data in changing states and does not reflect an "evil" force. In organizations, it refers to complex issues with many intricate relationships where all fixpoints are dynamic and change in an unstable system where attempting to modify some moving elements may cause effects elsewhere in the system that create new problems. The solutions to wicked organizational problems require collective cross-functional processes where individuals in the social system interact and exchange information possibly supported by digital technologies. Collaboration between many diverse individuals can improve the analytical accuracy and enhance the ability to generate viable solutions to wicked problems under the uncertain conditions of continuously changing environmental parameters.

Disruptive changes in the environment affect current business operations, and general market conditions, and may lead to changes in corporate value chains that condition the global economic ecosystem across different geographies around the world. Responding to these conditions requires a certain operational flexibility that allows adjustments to international production, sourcing, and distribution channels and building on speedy redesigns, market reallocations, workforce adjustments, etc. This points to a role for a central analytical function to evaluate, organize, and integrate built-in flexibilities in invested productive assets and coordinate ongoing adaptations to the operating structure that calls for dispersed response capabilities among individuals in the operating entities. Hence, studies in operations management find that central analytical coordination in combination with decentralized responses and sharing of information is the better way to deal with uncertain unpredictable contexts (Datta & Christopher, 2011). This resonates with the rationales arguing for interactive causation and effectuation processes as the more effective approach to handle value chain disruptions caused by complex dynamic conditions and extreme events in the global business environment.

Effective Strategic Responses

Decentralization or delegation of decision power is the proposed cure to deal with uncertain conditions according to organization theory because it allows operating managers and employees that have insights, knowledge, and capabilities to make fast informed decisions in their local task environments (e.g., Child & McGrath, 2001). Yet, a robust integrated organization with an updated sense of direction informed by central analytical competencies is equally important for the responsive behaviors of individuals in a flexible agile operating structure. This depicts a combination of central integration and decentralized responsiveness in an ambidextrous structure that exploits the capacity of an existing business model while it simultaneously explores for opportunities to adapt the existing business model and develop capabilities required to deal with new circumstances (e.g., Junni et al., 2013). The literature introduces two ambidextrous organizational strands. *Structural* ambidexterity argues that new exploration must be conducted in separate locations from prevailing business operations to eliminate the adverse influence of preexisting norms (e.g., O'Reilly & Tushman, 2013). *Contextual* ambidexterity argues that innovative exploration must be linked to the current insights and capabilities that reside among individuals within the operating entities often in tacit non-generalizable forms to enable effective relevant responses (e.g., Gibson & Birkinshaw, 2004; Raisch et al., 2009). This coincides with views in the strategy field that describe how organizational outcomes derive from top management's intended pre-planned activities and (not least) the emerging responsive actions taken along the way by individuals in the operating entities as opportunities arise in the changing environment (e.g., Burgelman & Grove, 1996, 2007; Mintzberg & Waters, 1985). Organizations that outperform their peers can combine the central intended processes with decentralized autonomous initiatives as they generate superior risk-return profiles over time, that is, they generate higher average returns with lower variation in returns (e.g., Andersen, 2010, 2021; Andersen & Bettis, 2015; Andersen et al., 2007). Central analytics-driven guidance of activities provides an updated understanding of the changing business environment where the decentralized responsive initiatives constitute small exploratory probes that can uncover possible solutions for application across the organization in line with agile innovation adopted to deal with wicked problems (e.g., Rigby et al., 2016). Hence, there are no grand solutions to complex wicked problems, but central analytics based on current insights can provide updated guidance for decentralized or dispersed exploratory responses in the operating units that search for viable solutions to the challenges.

Solutions from Dispersed Responses

The organization's internal stakeholders, for example, employees and managers, as well as close external stakeholders they interact with as they pursue their daily business activities, for example, customers and suppliers, can be engaged to generate effective solutions in response to unexpected developments honing their deep location-specific insights (e.g., Aaltonen et al., 2010). By managing strong relationships with essential stakeholders, the organization is better positioned to deal with uncertain and unforeseeable conditions through collaborative search processes across diverse relevant experiences (e.g., De Meyer et al., 2002). Access to and consideration for broader knowledge and insights from multiple sources can be facilitated by digital technologies incorporating artificial intelligence and empowered local actors searching for viable solutions.

The ability to adapt toward more sustainable business activities will contribute to organizational resilience as close individual stakeholders are aware of emergent changes in the environment and respond to emergent threats and seize opportunities to generate long-term solutions (e.g., Ortiz-de-Mandojana & Bansal, 2016). This way organizations can observe otherwise ignored threats and opportunities that pass under the central radar of top management and thereby increase the ability to identify and address pending environmental challenges in time with more effective results. It takes a certain set of leadership-driven values to foster these responsive and responsible behaviors that build reputational assets as a trusted and reliable counterpart that in turn can be levered by attracting essential stakeholders into resolutions to complex social issues (e.g., Andersen, 2017). Hence, organizations that confront wicked problems as is the case in contemporary business environments, the ability to generate collaborative collective solutions through open interactive discussions with many internal and external stakeholders are important elements of a successful approach to resolve challenging issues.

Engaging Public and Private Catalysts

The proper structures for effective organizational adaptation in complex interdependent contexts must involve public institutions as proponents for societal concerns as well as private enterprises that de facto operate and manage the global economic infrastructure. That is, any real change to the current structure of international business conduct must involve the underpinning businesses to develop sustainable operating solutions for the global economic systems that support our societies. This approach builds on a guiding analytics-based sensemaking process involving (many) individual stakeholders with sufficient autonomy to take responsive exploratory initiatives that generate new insights where collaborative learning can sketch new solutions. Investing in these collaborative innovation efforts together with important stakeholder institutions can foster more effective adaptation to the global business ecosystem as modifications to the various elements co-evolve in a coherent manner toward sustainable solutions (e.g., Andersen, 2009; Gatti, 2016). Given the complexity of the global economic system that supports our societies, the collaborative structures should engage both public and private stakeholders, possibly including plural sector actors and multilateral institutions, to consider joint development investments in co-evolving economic practices.