

# **Adapting to Environmental Challenges**

# **EMERALD STUDIES IN GLOBAL STRATEGIC RESPONSIVENESS**

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# Adapting to Environmental Challenges: New Research in Strategy and International Business

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INVESTOR IN PEOPLE

In Memoriam  
**Simon Sunn Torp**

† February 22, 1971 – November 3, 2019 †

“Genuine, giving and a good friend – always accessible, helpful,  
reliable and a true contributor.

Thanks for everything – you are (and will be) missed.”

*Torben Juul Andersen*

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# Foreword

The global business environment is as turbulent as ever and organizations must adapt to the changing conditions to survive and persevere. The way we conduct business and manage our societies leads to developments that are beyond our immediate control and create significant exposures with uncertain outcomes possibly in the form of extreme unpredictable events. The mounting complexity of the global business environment creates uncertain and unpredictable conditions with wicked problems to resolve. The conventional control-based management practices fall short in these disruptive contexts that call for more environmentally conscious management approaches to deal effectively with the consequences of current developments.

This collection of chapters outlines these contemporary challenges and suggests that business managers can make a (significant) difference by exercising discretionary choices within their specific industry contexts to circumvent the effects of environmental developments that are beyond their immediate control. It suggests that the adverse circumstances can be overcome through proper managerial actions. One way to induce such strategic responsiveness arguably is to engage middle and lower level managers in the organizational strategy-making processes to reduce adverse effects of environmental turbulence and exploit their upside potential by engaging their practical insights in the generation of responsive solutions. Adopting interactive control systems can be one effective mechanism to achieve this kind of interaction between practical local insights and coordinating efforts at the corporate center that generate an adaptive performance dynamic.

While this is easier said than done due to a variety of inhibiting factors, we note that some environments have institutionalized corruption in “immoral” non-market strategies that circumvent the aims for effective adaptation. We should obviously understand these mechanisms to enable proper countermeasures to their adverse impacts on business adaptation.

A predominant response to the mounting environmental challenges is the pursuit of corporate social responsibility (CSR) as a way to engage businesses in more adaptive behaviors that can circumvent the potential adverse consequences of environmental degradation. The empirical evidence suggests that adherence to more formalized CSR approaches is a function of firm size. Yet, the disclosure of CSR information is found to have a positive effect on the market-valuation of firms indicating that the market ascribes positive value to the CSR practices. Furthermore, it is found that application of green technologies with a strategic

commitment to environmental and social concerns can be associated with more sustainable performance outcomes.

Finally, we realize that organizations operating across a multiplicity of cultural contexts are challenged in their ability to manage responsible corporate behaviors that typically are interpreted differently in the local contexts as opposed to the headquarter context they derived from. This points to a need for a phenomenological perspective that can help multinational managers understand cultural differences and disentangle the managerial challenges in a changing global business environment. It also uncovers a global competitive dynamic where resource-poor (Chinese) firms were able to thrive by introducing advantageous value-to-price offers to the market and gradually build more knowledge-based strategic advantages partially induced by supportive cultural values.

We believe that these chapters provide new interesting perspectives and insights on organizational adaptation, corporate responsible behavior, and the need for cultural sensitivity when operating with agility across global markets aiming to form a resilient organization.

We hope you will enjoy reading them.

*Torben Juul Andersen,*  
Frederiksberg, October 15, 2019  
*Simon Sunn Torp,*  
Herning, October 15, 2019

## Chapter 1

# Managing in Dynamic, Complex and Unpredictable Business Contexts

*Torben Juul Andersen*

### Abstract

The environmental exposures to humankind have increased in number and intensity over past decades introducing the possibility of extreme incidents with irreversible impacts on business and society. The global integration of business and cross-border financial flows supported by digital technology increase the complexity and uncertainty of the business environment. In this context, the behaviors of individual players are interdependent with potentially nonlinear and unpredictable outcomes ascribed to complex wicked problems. As a consequence, organizational decision-makers may pursue false objectives from misinformed causation where stringent score-card controls will exacerbate the problems. The resolution to wicked problems requires cross-functional and collective interactions supported by a collaborative corporate mindset. The conventional control-based management practices fall short in dealing with disruptive developments where value-based stakeholder collaboration can provide resilient responses to unexpected abrupt events.

*Keywords:* Ambidexterity; business continuity planning; insurance; resilience; uncertainty; wicked problems

### Introduction

The events that affect humankind have steadily increased in number and intensity over the past decades including effects of extreme weather incidents, water and food restrictions, financial and debt crises, cybercrime, and so on ([World Economic](#)

Forum, 2008–2013, 2015–2018). Some of the underlying causes are linked to climate change, destructive human behavior, and systemic economic and social mechanisms well beyond the direct control of individuals and are influenced by increasing populations, larger concentration of productive infrastructures, and intensified global interaction. The effects are felt by people, organizations, and societies alike that will have to deal with this evolving reality. Those efforts are for example expressed in ambitious goals set by the [United Nations \(2015\)](#) to end poverty, to protect the planet, and to gain sustainable prosperity targeted by 2030. The implied goals are not legally binding, but governments and institutions are expected to drive economic activities toward achieving those ends.

In this context, we observe that a few organizations are better able to deal with adversity and thrive on opportunities offered by the environmental changes and exerting positive spillover effects on the societies where they operate and thereby the individuals that live in them. This can be a source of inspiration for studies of more effective approaches to deal with the ongoing and often abrupt changes in the surrounding business environment. The conventional way that risk management practices deal with these challenges is to identify, predict, mitigate, and quantify foreseeable events and mitigate or transfer residual exposures via various markets and exchanges. In contrast, an emerging resilience perspective engages available resources across networked relationships in ways that can enable effective adaptation of business activities to form a better fit with the changing environment.

The following will first discuss how this risk landscape seems to be changing over time in ways that require new responses and ways to deal with major exposures. This leads to considerations about conventional approaches to manage major risk events and discussions about unconventional ways to deal with current business and societal exposures.

## **The Evolving Risk Environment**

The global reach of organizations, the social links between individuals in local societies, cross-border financial and information flows, and expanding use of digital technology all contribute to increase the complex interdependencies in the global business environment. It can be conceived as a complex system comprised by many interacting agents and entities where outcomes defeat simple comprehension because the behavior of each component depends on the behavior of the others. The effects are nonlinear and cannot be derived from simple aggregation of individual behaviors. Events follow irreversible paths where decisions are made along the way to partially determine the options that will be available for future actions. It is usually impossible to forecast developments as things are intertwined in intricate networks of interacting elements where things in one place can have unexpected consequences elsewhere. It is difficult to foresee future events, but it is possible to investigate the relationships between system parts and effects on collective outcomes. This study can draw on many fields including self-organization in physics, spontaneous order in social science, chaos in mathematics, and adaptation of biological systems. The interacting components of a complex system often assume properties of power-laws with few extreme outcome effects.

The introduction of the so-called black swan concept denotes the observed occurrence of extreme events as an essential aspect of contemporary life (Taleb, 2007). It also notes that humans tend to ignore the role of randomness and large deviations that contravene the norms of scientific approaches by promoting a certain dependence on large-scale predictions to assess future conditions. Yet, rare and improbable events prevail and exert more influence than we care to realize and may be particularly impactful exactly because they are unexpected. Humans have a propensity to extrapolate prior experiences onto future events although what is truly known may be an illusion as the environmental context changes. The human mind thinks it knows although there is not always a solid basis for that knowledge, which may question the authority of experts whose scientific “truth” can be confined to specific areas of study and constrained by an adopted methodology.

This means that prior dependence on rationality, quantification, and specific risk probability distributions is being challenged. Instead, risk must be conceived as a social multilevel phenomenon that is subjective and hard to quantify, and where perceptions and responses are learned. The risk environment is dynamic, complex, and to a large extent unpredictable where organizations must respond through their actions often guided by ethical considerations. Some argue that we are moving from contexts characterized by actuarially predictive risks toward truly uncertain conditions affected by many unknown factors (e.g., Andersen & Schröder, 2010).

However, the complex systems can also lead to spontaneous innovation and creativity that may arise in entirely unpredictable ways as potential sources of future solutions. Hence, complex adaptive systems are special cases where engaged agents display a capacity to change and learn from experiences in ways that can allow the organization to adapt to the changing conditions.

The extreme risk events are often international in scope with effects crossing borders in self-reinforcing global systemic effects (Smith & Fischbacher, 2009). The underlying exposures often lack prior observable evidence to make them predictable, so the final scale and forms of outcomes are largely unknown. As the events have a potential to trigger major hazards and crises, we require new techniques and analytical frameworks to deal with them. Hence, the risk environment is moving from a modernist toward a post-modernist perspective (Miller, 2009).

Resilient organizations arguably prepare for the worst and prepare to take quick actions as risk events occur, but this requires more than standard procedures. Resilience thrives on perceptual support and commitment, involvement and interaction, availability of resources, capabilities, creativity and innovation to drive continuity, adaptation, renewal and recovery when faced with extreme and abrupt changes (Kantur & Isery-Say, 2012). In an organizational setting, things are also influenced by the decision-making structure, information processing systems, individual motivation, and incentives. Operating in dynamic complex systems can generate unexpected effects that defeat common risk practices specifically in the case of low-probability high-impact events where the frequency of extreme outcomes is very low. In these situations, most data samples will not

reveal the black swans until after they have occurred and, therefore, it is virtually impossible to identify, quantify, and assess them in advance (Taleb, 2013). In contrast, a resilience approach can follow a number of recursive activities capturing fast stress signals, anticipating potential crisis situations, while redesigning and transforming operations if and when the events arise engaging in learning along the way (Park, Seager, Rao, Convertino, & Linkov, 2013). Resilience can be conceived as the outcome of a recursive process including elements of sensing, anticipating, learning, and adapting.

Alternative conceptualizations of resilience refer to an ability to adjust under challenging conditions, so the organization emerges stronger and more resourceful than before the inflicting errors, scandals, crises, shocks, and extreme risk events (Vogus & Sutcliffe, 2007). The mechanisms of resilience are linked to beliefs and cognitive processes where past success is treated lightly with high awareness about unexpected events with regular testing of the assumptions ascribed to good performance and potential risks. Resilience relies on structures, processes, and practices with effective response capabilities when the organization is under strain. At the individual level, this may entail values, emotional stability, autonomy, self-efficacy, reflective thinking, prosocial behaviors, participation, encouragement, resources, and high expectations (Abdullah, Noor, & Ibrahim, 2013).

In the face of absolute uncertainty where all possible courses of action as well as the potential outcomes are indeterminate, it is suggested that organizations are better off when they pursue interdependent processes of causation and effectuation (Packard, Clark, & Klein, 2017). A causal approach implies engagement in conceptual thinking to outline possible future states and consider alternative options to obtain the expected optimal outcomes. An effectual approach implies that new options are developed from available resources and applied on an ongoing basis as and when emerging outcomes are considered tenable and desired.

Realizing that resilience has multiple conceptualizations, a recent review suggests that it should be defined as an ability to face disruptions and unexpected events (Annarelli & Nonino, 2016). It can be supported by preparedness efforts and taking preventive measures to minimize potential impacts (a static view), and it can be driven by a managerial capacity to reduce unfavorable effects and optimize recovery to an original or a new more desirable state (a dynamic view).

When organizations are confronted with adverse economic situations whether caused by conventional risks or by competitive developments, they tend to follow a specific recovery process. This typically entails a first attempt to increase cost efficiencies, then asset retrenchment, selling off peripheral activities focusing on core activities before starting to build for the future. This is often accompanied by initial efforts to reinvigorate leadership by changing the CEO and other top executives with attempts to change the organizational culture and challenge old routines while thinking of new ways to accomplish things (Shoenberg, Collier, & Bowman, 2013). While this is an observed pattern toward corporate recovery, it might not represent the most effective approach. It is noted how organizations achieve faster recovery when they are part of a dynamic functional network. This challenges the common view that recovery is achieved by following a series of remedial steps (Scoot, Laws, & Prideaux, 2008). For example, it is observed that

effective recovery strategies benefit from direct interaction with customers and are more successful than strategies relying on economic compensation (insurance cover) for suffered losses (Silber, Israeli, Bustin, & Zvi, 2009).

Conventional decision-making models assume reasonable stability around tasks and organizational design parameters even though these assumptions are challenged in the complex global business environment. Strategic decision-makers face unprecedented interdependencies of unpredictable forces embedded in wicked problems. As a consequence, they may pursue goals and objectives with a false sense of causation with control loops exacerbating positive feedback. Wicked problems in organizations are multilayered and need cross-functional and collective processes to be resolved, which requires a different corporate mindset.

### **Conventional Approaches to Manage Risk**

The conventional techniques applied to deal with potential loss scenarios are manifested in developed insurance markets for major risks that trade the exposures and provide economic cover for institutions and individuals. The insurance-buying function in major organizations has been extended to consider all types of exposures within more integrated risk management frameworks providing a more holistic perspective to the handling of corporate or institutional exposures.

Insurance contracts typically provide financial cover that compensates the policy-holders for all or part of the direct economic losses incurred from predefined risk events under the assumption that the damaged asset will be replaced. However, the direct economic costs often constitute only a part of the loss where there might be significant indirect and secondary effects associated with unfinished work, loss of operating capacity, and missed business opportunities. In many instances, the direct economic losses may be less important than the indirect costs derived from subsequent dynamic effects. Insurance can handle the direct economic costs of property loss and damage to physical assets whereas it is more challenging to deal with the adverse effects on the economic activity level in the aftermath, which depends on an ability to excel human activity. This may require consideration about more extensive insurance covers for both direct and indirect effects as well as assessing possible support through social networks to recover from major incidents.

The formal planning frameworks heed the principles of preparation based on thorough advance analyses. They build on the assumption that events can be predicted, foreseen, and assessed in advance, therefore necessary responses are prepared in time. They adopt a control perspective on organizational processes, where ongoing monitoring provides the basis for adjusting actions as a diagnostic control system. It reflects a balanced scorecard thinking where one can identify, monitor, adjust, and update activities in a timely manner. But, these approaches are less effective in dealing with wicked problems and contexts where planning is challenged due to incomplete contradictory information and continuously changing conditions. The planning and control perspectives are extended in the development and application of more holistic enterprise risk management (ERM) frameworks.

### ***Enterprise Risk Management***

ERM builds on the principle of identifying, assessing, managing, and monitoring risks as the means to reduce exposures and increase the ability to respond to possible events. There are various ERM frameworks<sup>1</sup> of which the most prominent are [Committee of Sponsoring Organizations of the Treadway Commission \(COSO\) \(2004\)](#) and [International Organization for Standardization \(ISO\) \(2009\)](#). The COSO was formed in 1985 to sponsor the National Commission on Fraudulent Financial Reporting and consists of five professional accounting and auditing entities.<sup>2</sup> The ISO is an independent international organization with national standards bodies as members promoting and certifying various process standards.<sup>3</sup>

Corporate finance scholars provide a rationale for ERM as an approach that enable senior management to decide on important risk-return tradeoffs at the firm level while ensuring that operating managers throughout the organization own the risks. This is expected to provide discipline to the use of cash for investment by considering proper risk-adjusted returns that guard against unexpected cash shortfalls from business operations. The basic idea is to hedge noncore exposures in markets for derivative instruments and take on strategic risks associated with the core business. This should determine an optimal amount of total risk to bear that will provide the targeted earnings within acceptable default probabilities and statistical confidence levels. The ERM approach first determines the risk appetite at a proper tradeoff between earnings and default risk to optimize firm value based on acceptable default probabilities. Then, the aggregated firm-level exposures should be managed through various hedging, risk-transfer, and risk mitigation efforts with the risk-capital tradeoff decisions delegated to the operational managers ([Nocco & Stulz, 2006](#)).

The ERM frameworks outline the basic process components to guide management on the handling of enterprise risks. ERM is:

a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives. ([COSO, 2004](#))

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<sup>1</sup>An early Risk Management Standard was published by the Institute of Risk Management, The Association of Insurance and Risk Manager, and The Public Risk Management Association (Alarm) in 2002 and was subsequently adopted by the Federation of European Risk Management Association.

<sup>2</sup>American Accounting Association, American Institute of Certified Public Accountants, Financial Executives International, The Institute of Internal Auditors, and the National Association of Accountants [now the Institute of Management Accountants].

<sup>3</sup>The ISO 31000 standard extended and replaced the previous Australian and New Zealand risk management standard AS/NZS 4360 from 2004.

The ERM framework is:

a set of components that provide the foundations and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management processes throughout the organization. (ISO, 2009)

These practices are also reflected in the guidelines developed by the Bank for International Settlement that emphasize internal controls, risk limits, a risk appetite framework, adherence to the ERM approach, appointment of a Chief Risk Officer (CRO), and establishing a risk aware culture throughout the organization (Basel Committee on Banking Supervision, 2015).

These stylized or formal perspectives and approaches to risk management were challenged by events during the financial crisis in 2008 where the risk limits set by banks using the common calculative principles were exceeded by wide margins due to the extremity of events. In many ways, this has further enforced requirements to implement formal risk management practices despite the equivocal evidence on the effects of the ERM frameworks.

A recent study states that it in particular finds “no evidence that application of the COSO framework improves risk management effectiveness.” It also does not find support for the mechanistic view implied by ex ante risk appetite and tolerance measures (Paape & Spekle, 2012). It is generally found that ERM implementation is influenced by regulation, ownership structure, and industry context. The hiring of a CRO, as something synonymous with the implementation of ERM, is found to be associated with large organizations, volatile earnings, institutional ownership, and executive incentives (Pagach & Warr, 2011). The results are sobering with respect to the effectiveness of formal risk management approaches and the motivation and argumentation for their extensive use.

The implementation of ERM frameworks is insufficient and more is needed to deal with the changing risk landscape. Hence, it is noted that ERM is construed to handle identifiable risk events whereas it has relatively little to say about how organizations should deal with uncertain and unknowable developments (Andersen & Schröder, 2010).

It has been argued that ERM is fundamentally flawed. The enterprise-wide view that imposes a singular risk appetite ignores the organizational processing of evolving risk situations. It promotes the significance of logical linear relations that can be monitored in audible processes. However, it is “incapable of articulating and comprehending critical risks” that derive from nonlinear relationship effects (Power, 2009). Hence, the ERM approach applies to certain observable states where in reality the assumed security is limited, and in the worst case illusory.

A recent review observes that the ERM field generally takes on a rather naïve view of organizational processes assuming that appropriate incentives and objectives by themselves will result in the adoption of proper risk practices. The formation of perceptions in the mental models of key managerial decision-makers is particularly relevant to understand behaviors around the hard-to-measure types of risk that characterize the evolving risk landscape (Bromiley, McShane, Nair, &

Rustambekov, 2015). These issues are rarely considered and the risk management models may be part of the problem as they assume that uncertainty can be managed as quantifiable risk.

### ***Business Continuity Planning***

Business Continuity Planning (BCP) is a comparable framework of processes created to prevent adverse effects and recover company operations from potential disruptions. It is particularly focused on impacts on infrastructure, productive assets, machinery, computer systems, and operations in general. As such, it may be seen as a subset of ERM that typically adopts a governance perspective considering the entire enterprise. Yet, it can arguably play a strategic role by preserving existing competitive advantage while aligning the BCP process toward the mission-critical aspects of the organization (Herbane, Elliott, & Swartz, 2004). Like ERM, the BCP is put in place ahead of time with the aim of taking necessary precautions to reduce adverse effects, and also adopts cyclical processing steps of analysis, solution design, implementation, testing, and maintenance. Private consulting firms, self-governing institutions, and government agencies conduct formal training in these processes and offer certification services.<sup>4</sup>

Organizations often rely too much on checklists provided by the standard frameworks to deal with predefined situations rather than using BCP as a general support tool. The checklists should be part of the planning process where managers think systematically about possible risk scenarios (Lindström, Samuelsson, & Hägerfors, 2010). This learning can be enhanced through education, training, and practice simulations including both internal and external stakeholders. It is important that all organizational members are involved in the processes from top management to the operational personnel and there is evidence that firms without BCP have a lower probability of survival after major incidents (Cerulo & Cerulo, 2004). Nonetheless, early implementation often considers internal events rather than incidents caused by external factors and the plans often focus on accidental failures caused by one class of risk whereas other serious threats are ignored. Furthermore, many firms do not establish the BCP systems until a natural disaster actually has occurred and uncovered the exposures. Hence, the most significant driver of BCP remains prior disaster loss experiences and the size of the organization (Han & Nigg, 2011). Engaging in advance preparedness and emergency response planning seems to have an effect supporting the management of crisis situations and enhancing the subsequent recovery process (Fowler, Kling, & Larson, 2007). Similarly, preparedness planning is found to reduce subsequent implementation problems in complex projects (Sammon & Adam, 2010).

However, wicked problems are highly complex and cannot be resolved using these traditional approaches. Various decision-support systems have been

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<sup>4</sup>For example, the ISO 22301 business continuity management standard specifies management systems to protect against disruptive incidents and recover business operations.