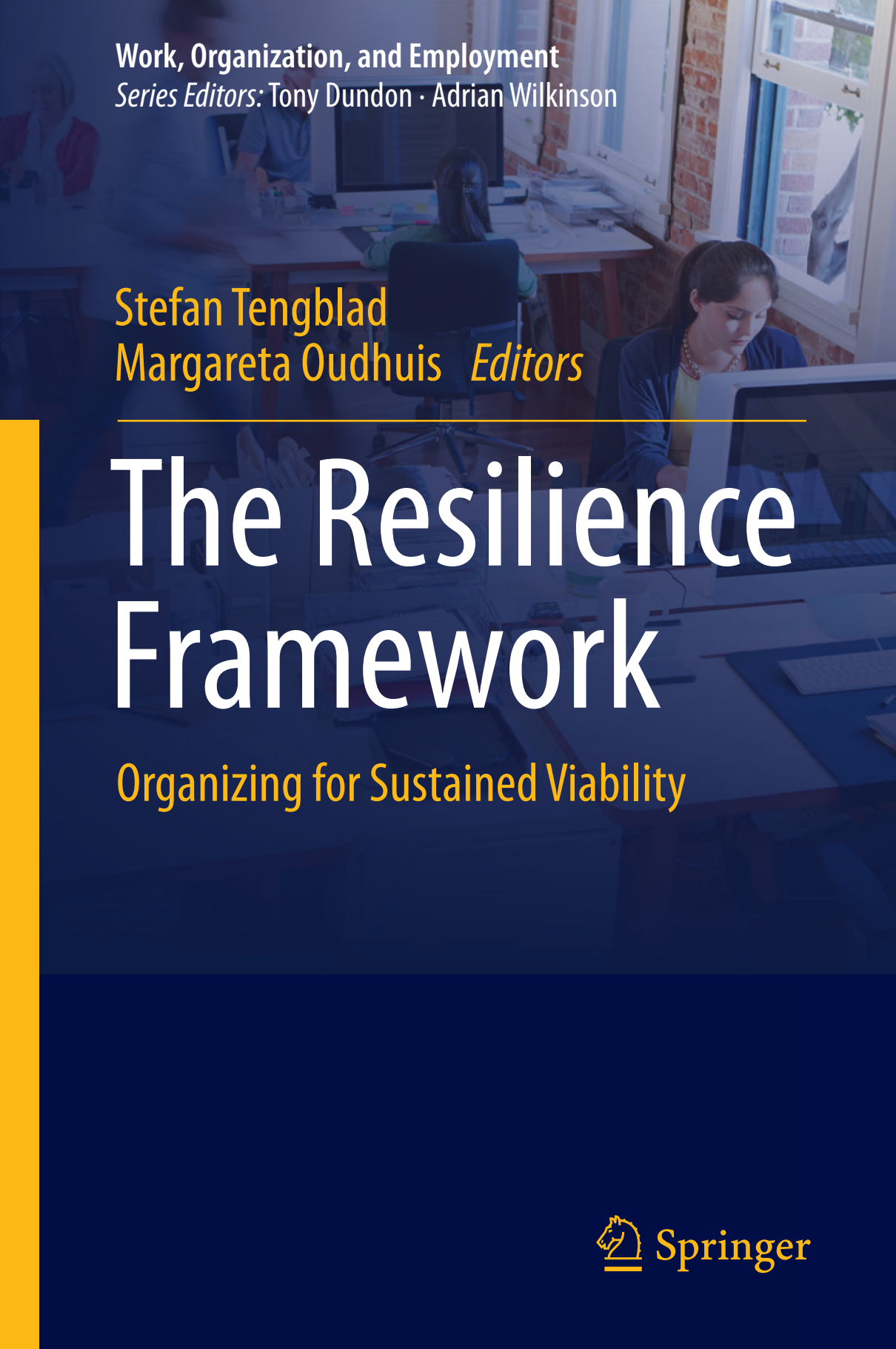

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The Resilience Framework

Organizing for Sustained Viability

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Editors

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Foreword

Using an Evolutionary Perspective to Understand Organizational Resilience

Professor Howard E. Aldrich was invited to introduce the book by reflecting on the relevance of the evolutionary approach in organizational and entrepreneurship research and the importance of organizational adaptability and innovation capacity. This is done against a backdrop of extraordinary opportunities (and also threats) created by new technologies for digitalization, artificial intelligence and automation. Prof. Aldrich also provides some of his key learning points over five decades of research work and some advices for young scholars. He draws upon a longer account of his career, published as Aldrich (forthcoming).

Developing an appreciation of evolutionary thinking

During my graduate work, I was fascinated by the work of scholars such as Donald Campbell and Walter Buckley, and also social psychologists such as Daniel Katz and Robert Kahn. In Katz's graduate course on organizations, he gave me some advice about the theory building which I have never forgotten: "Design your theoretical framework so that other people's perspectives are a subset of yours." Readers familiar with the evolutionary perspective and its encompassing reach will appreciate how much I benefited from Katz's recommendation. The evolutionary perspective is a metatheory, an overarching framework that permits comparison and integration of other social scientific theories. It does not provide a set of law-like statements governing evolutionary processes, but rather takes what it needs from other approaches. It is purposefully eclectic.

My first statement of the approach appeared in my paper "Organizational Boundaries and Interorganizational Conflict," (Aldrich 1971) where I argued that we can't investigate organizations without paying attention to the environments

they inhabit. In fact, no explanations are complete until the explanation includes the environments in which organizations acquire their resources. That paper became the foundation on which I built my subsequent papers and my 1979 book, *Organizations and Environments*, as well as my 1999 book, *Organizations Evolving*.

Initially, I built on several approaches to organizational analysis that were flowering in the mid-1970s, as theorists on both US coasts developed distinctive ideas about organizational analysis. Curiously enough, I found that the Stanford/Berkeley approaches were better for understanding an evolutionary paradigm than what I was exposed to on the East Coast, in Ivy League sociology. At Stanford and UC-Berkeley, three new powerful and overarching views of organizational analysis had emerged: resource dependence (Pfeffer and Salancik 1978), population ecology (Hannan and Freeman 1989), and "new" institutional theory (Scott 2008).

During the 1970s, evolutionary models made great advances, mainly as a result of the open-system revolution in organization theory and management studies. Scholars from different disciplines presented evolutionary theories, inspired by the seminal work of Donald T. Campbell (1969), to explain phenomena ranging from the micro to the macro levels of organization. I discovered as I began working on projects in the 1970s that the variation-selection-retention framework was a very powerful generic framework. It was not a detailed mechanism perspective, but once scholars grasped the ideas of selective retention and variation, they could apply it to phenomena on multiple levels of analysis. For example, at the individual level, Karl Weick (1979) developed his landmark statement, *The Social Psychology of Organizing*, a social psychological theory of how individuals coordinate their actions, which drew on Campbell. Weick advocated an evolutionary approach, but at a micro level. He and I met regularly while we were both at Cornell, mainly through our students, as I would be on committees he chaired and vice versa. We did not see eye to eye on everything, but we shared a common "home base," which was an appreciation for evolutionary thinking.

While at Stanford the summer of 1973, I began collaborating with Jeff Pfeffer on what was to become the first synthetic statement combining the evolutionary and resource dependence perspectives. We laid out the premises of a resource dependence model, building on Karen Cook's (1977) work and on work by Peter Blau (1964). Published in the *Annual Review of Sociology* (Aldrich and Pfeffer 1976), it is one of my most cited papers. After that paper, I was able to see that really it made no sense to talk about resource dependence or evolutionary theory as two separate ways of looking at the world. The explanations of how things actually happen between people and organizations or between organizations, mostly concern power and exchange dynamics (Wry et al 2013).

In the late 1970s, I published *Organizations and Environments* (1979) in which I wrote about organizations and how they changed over time. It was arguably the first book-length statement of this perspective—not just thinking in evolutionary terms, but also on multiple levels, thinking about issues of selection. I argued that organizations flourish or fail because they are more or less suited to the particular

environment in which they operate. My writings tended to privilege context as a driving force in organizational change. Later, as I drew more from resource dependence theory, I took more account of human agency and collective action.

Throughout the 1980s, I struggled to differentiate my evolutionary approach from the ecological approach. I did not write about "population ecology" until after Hannan and Freeman's article was published in 1977. Before that I called it the natural selection process or the population perspective. In *Organizations and Environments*, I used the label "population ecology" interchangeably with "natural selection." Looking back, I think the label "population ecology" confused people. Most of my work was rather different from population ecology reasoning, and my views would have been better described as a sociological approach, strongly informed by evolutionary principles. My approach made much greater room for human agency and emergent phenomena, emphasizing both "upward" and "downward" causation: that is, emergence and constraint. Therefore, in the book *Organizations Evolving* (1999) I adopted the label "evolutionary perspective" or "evolutionary approach."

In brief, the evolutionary approach is a generic framework for understanding social change and an overarching framework permitting comparison and integration of other social scientific theories. At the heart of evolutionary thinking is the assumption that evolutionary processes are driven by entrepreneurs and organizations' struggles to obtain scarce resources, both social and physical (Aldrich and Ruef 2006a). The approach is applicable at multiple levels of analysis and directs our attention to the processes of variation, selection, retention, and struggle that jointly produce patterned change in evolving systems. In organizational communities, populations with different characteristics enter into relationships of competition and cooperation; those populations better able to deal with the environment are more likely to survive, and characteristics of the successful population may then be diffused to other populations in the same community.

Technological Development Provides Unprecedented Opportunities

As an evolutionary theorist, it is a violation of my fundamental assumptions about the world if I claim clairvoyance and assert an ability to peer into the future. By definition, tomorrow is different than today, and we do not know what it will give us. But there is no doubt that technological changes, such as 3D printing, numerically controlled machinery downsized to desktop size, and laser cutters have changed the way that people develop and experiment with prototypes that might become the basis for new firms, markets, and industries. Traditional craft-based technologies are also involved: sewing, weaving, and other tools of the creative classes. The potential now exists for thousands of people working in makerspaces to engage in what Sonali Shah, Mary Tripsas, and Eric von Hippel have called

user-driven innovation: they noted that people often discover innovations when they are working with an off-the-shelf design and spot ways to improve it (Shah and Tripsas 2007; Von Hippel 2005).

Starting in 2012, I began paying much greater attention to the maker movement, visiting many of these spaces. For example, at the ShoptBot factory in Durham, I spent several days learning how to use a CNC machine. I learned about a movement of people who say that the way that things are made and distributed in modern societies does not tap into the inherent creativity of humans, and that creativity could be unleashed if people were just given the tools to use that potential.

Humans in the twenty-first century are accustomed to having goods just delivered to their door. They are told that this is just the way things are: "Don't open that computer, phone, or home appliance—you'll break it." In the maker movement, people reject that claim. They argue that humans can take something off-the-shelf made by manufacturers, open it up, look at its innards, figure out how it actually works, make it better through hacking it by adding something to it or redesigning it. They can even put another program into its controller. The maker movement—which is a very powerful global movement to give people, in a sense, control over their own destiny—will make available the tools people can use to make things for themselves. These can be as simple as things that you play with, or things that are functionally useful in the kitchen, the car, and the garage. It's an amazingly adaptable set of technologies, reflecting the resilience of human learning based on experimentation and innovation.

In makerspaces, "makers" are not just stuck with a hammer and a screwdriver. Rather, they have CNC machines, 3D printers, and computer software design programs that let makers do craft work that was unthinkable fifteen or twenty years ago. I suspect the next industrial revolution will emerge from these aggregated individual and collective efforts. We might think about this through an anti-Schumpeter distorted lens: if the R&D labs of big firms were the only force in invention and innovation, we would be stuck with what the imaginations of that limited number of scientists and engineers can generate. In the hierarchies of big firms, people are assigned to work on projects, with varying degrees of autonomy in how they accomplish their goals. What if we take those same resources, downsize them, and make them available to people working in makerspaces?

Instead of having corporate agendas driving the innovation, we would have users driving the innovation, based on recognizing local needs. Gothenburg, Sweden may have people who need goods and services that people in Stockholm do not need. Alternatively, people in Lund may collectively have needs that would not create a viable market in Gothenburg. Only time will tell. The maker movement and the possibility that these people will come together and help one another means that the variations generated might well succeed in changing the world for those people locally. That's an unprecedented opening to the future.

A Call for Field Ethnography

I try to avoid cross-sectional research. A general research strategy of mine has been to pick a project where I spend some time getting to know the lay of the land, explore ideas that might be testable, conduct a pilot project, and then build a comprehensive research design. I tell my students that if you want to study something, you have to watch it change (Aldrich 1992). Such projects take a long time to design and bring to fruition. One of my arguments—going back to the first papers I wrote in the mid-1980s about entrepreneurship research methods—is that we do not have enough people doing much-needed field work: ethnographic and observational field work (Aldrich 2000). I would like to see more researchers venturing into entrepreneurial startups and new ventures—or into incubators and accelerators—and actually hanging out, spending days observing, taking notes, recording, doing mini-experiments, and collecting data in innovative ways.

I would like to see entrepreneurship researchers doing ethnographies that document, in a typical day, week, or month, what entrepreneurs actually do. How do they spend their time? How much time are they spending in meetings? Are these people like Mintzberg's (1973) managers in *The Nature of Managerial Work* whose days are consumed with meetings, and who spend very little time thinking about strategy? The managers in Mintzberg's study spent much of their time answering memos or the phone and giving people orders. Articles in magazines like *Wired* and *Fast Company* that describe a very different world than the world described in cases of big companies. Some scholars are probably naturally gifted ethnographers who are good at watching people do things and interpreting what they see, and then communicating to others the theoretical significance of what they observed. I am hopeful that young scholars who are interested in entrepreneurship or organizations will think twice before beginning to use an archival dataset—a dataset handed to them by somebody, downloaded from the web. I suggest that instead, they go out and spend a little time with the phenomenon.

Many people actually know very little about what they are studying. I meet with people in doctoral consortiums, talk with them about their proposals, and I will ask them questions about their phenomenon. Something like, "You're studying people making gaming software. What's it like to be in one of their shops?" and they say, "I don't know, I've never actually watched them do this." Or I say, "What's it like to be in a biotech firm? What's it like in the lab? What's the interaction like between the scientist and the entrepreneurs?""I don't know, I've never seen it." I am astonished by investigators' inabilities to questions about basic descriptive characteristics of the phenomenon. They tell me what they have read in books or how the variables are described in a code book. But that is not enough. If you are going to convince me that you understand the phenomenon, I want a report from the field.

Final Thoughts

This volume, *The Resilience Framework*, is a laudable effort to apply an evolutionary approach to the fields of organizational analysis and strategy. It sees the world as it is; complex and extensively unpredictable. The authors describe the processes organizations need to undertake to prepare for disruptions and other kinds of challenges posed by economic, social, and political change in the twenty-first century. The book combines a solid theoretical underpinning with several empirical cases. In doing so, it advances the organizational resilience literature in an exemplary way by showing that organizational survivability is much more than shock absorption and good crises management, in that it also includes learning, innovation and adaption.

As I have indicated in describing my scholarly career, learning and adaptation are central to an evolutionary perspective on organizations, industries, and economies in uncertain environments. Without certain knowledge of the future, people build on what they know, experiment, make mistakes, and frequently learn from the feedback they receive from their efforts. Evolutionary processes tend to select for resilience, but such selection processes can only work with what humans create, as they exercise their imagination and creativity. We need more research, such as that reported in this volume, on how that process unfolds in organizations of the twenty-first century.

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Biography

Howard E. Aldrich is Kenan Professor of Sociology; Adjunct Professor of Business at the University of North Carolina, Chapel Hill; Faculty Research Associate at the Department of Strategy & Entrepreneurship, Fuqua School of Business, Duke University; and Fellow, Sidney Sussex College, Cambridge University. He is a Faculty Fellow of the Center for Study of Economy and Society, Cornell University. His main research interests are entrepreneurship, entrepreneurial team formation, gender and entrepreneurship, and evolutionary theory.

Preface and Acknowledgements

For most of the twentieth century there was considerable confidence that large-scale activities could help create more effective and more stable societies and companies. However, the collapse of the Soviet Union and various problems associated with economic and political stability in the United States and the European Union have challenged this assumption. In fact, some of the most successful countries in terms of economic prosperity, quality of life, and human development are fairly small and rather homogenous. Among these are the Scandinavian countries, Switzerland, and the Benelux countries. The bailouts of General Motors and a number of gigantic banks show that even very large companies may face cessation of operations. Factors such as innovation and adaptability are often as important for survival as financial resources. National economies and organizations may even become so large and complex that they are almost unmanageable. Two possible examples are the United Nations and the European Union.

The Resilience Framework describes the resiliency factors at companies and organizations that sustain them when they face crises—financial, managerial, and operational—and the characteristics that help them maintain their success over time. The book goes beyond the traditional perspective on organization resilience as the ability to avoid or recover from accidents and disasters. The reason for this is that it is not very common that catastrophic accidents determine the survival of companies and organizations. Of course, it is important to take actions intended to avoid accidents and disasters even though such actions cannot guarantee organizational survival.

The book also analyses why companies and organizations may fall into stagnation despite their previous achievements. These analyses are based on a new framework of organizational resilience that focuses on how financial, technical, and social resources can be combined to manage global, economic, and environmental challenges and to seize market opportunities. The book's claim is that a resilient organization needs to use such resources in order to strike a dynamic balance between reliability, efficiency, and change capacity. With this perspective, the book presents a new response to the classic question of how companies and organizations can achieve and maintain long-lasting success.

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We thank everyone associated with the book including the people at the companies and organizations where we conducted our research. We also thank our colleagues at the University of Borås and the University of Skövde and, of course, our universities for their support that made this book a reality. Our thanks also to the representatives from SACO-Posten for their comments on the book, to Ola Håkansson and Carina Blohmé at Studentlitteratur for their excellent help on an earlier (Swedish) version of the book, and to Marcia Halvorsen for translating the book from Swedish for the international audience. In addition, we extend our deepest appreciation to Forte (the Swedish Research Council for Health, Working Life and Welfare), the Jan Wallander and Tom Hedelius Foundation, The Swedish Foundation for Humanities and Social Sciences, and Vinnova for their financial support for much of the book's research.

Skövde, Sweden — Stefan Tengblad
Borås, Sweden — Margareta Oudhuis
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Abstract

The Resilience Framework: Organizing for Sustained Viability is a book about organizational prosperity and survivability. Its theoretical framework poses a challenge to many schools of management thought in that it recognizes the complexity and unpredictability of managers' and leaders' work. A key theme is that organizations and leaders must be prepared and willing to deal with the inevitable occurrence of unexpected events by using their financial, technical, and social resources in ways that empower employees in lateral as well as horizontal decision-making processes. The book's chapters are based on empirical research conducted at many real companies and in many important business areas. The empirical chapters, for example, present case studies of such events as the BP Deepwater Horizon disaster, the rise and fall of Circuit City, the turn-around of a fashion company, and many others.

The book presents two new theoretical managerial models: (1) an organizational resilience resource model based on a combination of financial, technical, and social resources; and (2) an organizational capability model that incorporates the three key concepts of reliability, efficiency, and change capacity. Within the framework of organizational resilience, these models can be used to analyse what makes some organizations viable and others not, to integrate important spheres of knowledge into managerial operations, and to understand the role of boards and top managers who work in complex and uncertain environments. While the book offers no easy recipes for achieving organizational resilience, it does offer a holistic explanation of the challenges modern organizations must master.

Keywords Organizational resilience · complexity · Evolutionary theory · Followership · High reliability organizations · Organizational learning

Part I
Introduction and Development of the Organizational Resilience Framework

Chapter 1
Organization Resilience: What Makes Companies and Organizations Sustainable?

Stefan Tengblad and Margareta Oudhuis

Abstract Organizational resilience deals with companies' and organizations' ability to survive, or more positively stated, to maintain their vitality in a changing world that constantly requires adaptation. This chapter introduces and describes the concept of organizational resilience and presents an overview of the book. A resilient company or organization is in the chapter defined as the capacity to use its technical, economic and social resources in order to develop long-term skills and competencies, in an efficient, reliable and flexible manner, and in a way it could manage challenges and exploit opportunities. This definition is developed both by acknowledging previous definitions and also by using the theoretical framework of the book consisting of evolutionary theory, complexity theory and practice theory of management.

Keywords Organizational resilience · Resilience engineering · Unpredictability · Complexity

Organizational resilience deals with companies' and organizations' ability to survive in a changing world that constantly requires adaptation. In this chapter, after we introduce and describe the concept of organizational resilience, we present an overview of the book's chapters.

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1.1 Introduction

With their coherent and logical self-presentations, companies and other organizations are often very convincing. Leaders are like temple builders when they present their specific goals, values, activities and performance measures as carefully hewn stone blocks, fitted smoothly without crumbling plaster or gaps. Observers of such presentations may be easily misled into thinking that leaders mostly burnish policy formulations, polish future scenarios and refine PowerPoint graphics while operations and administrative processes run smoothly in the background. Or that managers and employees, with their target documents, governance models and instructions at hand, use structured meetings and clear communications aimed at the implementation of these activities and policies and the achievement of these goals. In large measure, these perceptions are false.

Research shows that leaders in actuality face hectic work schedules and challenging situations that are characterized by a constant stream of unexpected problems of considerable complexity (Hannaway 1989; Kotter 1982; Mintzberg 1973; Tengblad 2012; Watson 1994, 2001). Many of these problems have no clear resolution. Even when the needed strategies and structures are in place, nearly always a troubling gap arises between the plans and the reality. Leaders (and organizations) must deal with such gaps.

The researcher, Mats Tyrstrup (2006), captures that idea in his book *On the Brink of Failure.* The book describes the improvisational leadership style that is so common in business despite efforts to cloak it in more "proper" management techniques. The reason for this state of affairs in management practices is that when events do not turn out as expected, leaders must cope as best they can, hurriedly and often with little guidance from formal techniques. We agree with Tyrstrup that leaders are more likely to try to avoid failure by taking improvisational action than to follow original plans rigidly.

A key message of this book is that because unexpected events frequently occur, organizations (and leaders) must be prepared to deal with them. Organizations with the readiness and the willingness to use their resources in situations that call for improvisation and imagination often act in resilient ways although they may be uncertain of the outcome. When setbacks occur, organizations often have the capability to learn from the situation, to tailor effective responses and to innovate.

There are no easy recipes for how to achieve organizational resilience. This book does not present any simple methods for predicting and managing the future. Rather, its purpose is to describe the various factors that interact and influence organizational survival. Thus the book explains how the organization's financial, technical and social resilience resources interact in the web of complexity, uncertainty and unpredictability that is everyday organizational reality.

The book cannot guide organizations in any precise way. Every organization is unique in its own way and therefore must assemble a unique resource combination. However, in describing resilient organizational behaviour, the book can inspire more refined management practices and show how organizational leadership

supports and combines the organization's financial, technical and social resources in integrated and innovative ways that will contribute to the organization's resilience.

The ability to support and integrate these resources may explain, in large part, why small and typically poorly capitalized organizations that seize on emerging market opportunities are often more successful than many of their larger competitors. One such company, Amazon.com, Inc., became the world's largest Internet-based company with its unconventional (at its founding in 1994) business model for online shopping. Yet other leading bookstore chains have failed to become dominant online actors despite their considerable wealth and organizational resources. Besides Amazon, there are many other examples of small companies that have achieved success through innovation and imagination. There are also many examples of powerful companies that have failed, or at least lost competitive positions, because of their inability to innovate and adapt as the business environment changes.

1.2 The Skandia Case: How Expansion with a Focus on Shareholder Returns Can Jeopardize Organizational Resilience

To illustrate the concept of organizational resilience, we next present the story of a company whose top leaders stubbornly clung to an inflexible and risky business strategy that led to serious trouble. The case shows how flexibility in setting strategy is needed when unexpected events occur.

In the 1970s and 1980s, the insurance company, Skandia AB (Skandia), was one of Sweden's largest companies and a leading actor in the Swedish capital markets. In the 1990s, Skandia expanded rapidly outside Sweden by offering a service that linked pension savers with independent investment fund managers. In the same years, the price of Skandia's shares skyrocketed on the Stockholm Stock Exchange because of a combination of strong sales growth and impressive profit projections. Bonus programmes made the company's senior officers and managers very wealthy. However, because the expansion programme required new capital, the company dropped the general (non-life) insurance business (e.g., real estate and automobile insurance) and disposed of other revenue-generating assets.

In September 2001, at a meeting in St. Andrews, Scotland, Skandia's top managers launched a new and even bolder expansion plan intended to increase the company's managed funds from 100 to 600 billion euros. The intention was that Skandia, which planned to achieve this increase by offering new products and entering new markets, would become one of the world's largest fund managers (Nachemsson-Ekwall and Carlsson 2004). Company leaders, who were convinced that this ambitious goal would result in a repeat of the past decade's success, began developing implementation plans for the company's local branches.

Events, however, took an unfortunate turn for Skandia. Only a few days after the Scotland conference, two planes tragically crashed into the World Trade Center in New York City. The U.S. capital markets were temporarily crippled. Uncertainty and fear spread among investors worldwide, including Skandia's pension savers. A few weeks later, Moody's, the credit rating agency, warned of a downgrade in Skandia's creditworthiness. According to analysts at Moody's, Skandia's cash flows had deteriorated in 2001 because of the increase in product discounts allowed by the sales people who sold Skandia's products intended to sustain the company's growth trajectory and promises of future profit. The analysts also commented that Skandia could no longer count on cash flows from the general insurance operations. During 2002, Skandia's credit rating continued to deteriorate, causing many of its client companies to cease selling the Skandia products. It was clear that the entire expansion plan was ill conceived. The banks demanded that Skandia obtain more capital or at least reduce its debt by disposing of parts of the business.

Skandia's Board of Directors discussed the possibility of a new issue of shares that could boost the company's share capital and thereby strengthen perceptions of its creditworthiness. However, a majority of the directors rejected the idea because they feared it would adversely influence the market price of the company's shares (Nachemsson-Ekwall and Carlsson 2004). Perhaps top managers took this decision because they were unwilling to see their stock options decline in value. In any case, the company's downward trend continued as its liquidity position weakened still further, sales declined and losses mounted. In November 2002, Skandia was forced to sell its U.S. subsidiary, the company's former crown jewel, to a competitor at a significant loss. Skandia's share price continued to fall, exacerbated by revelations of unethical and illegal real estate dealings and secret gifts to top managers that had increased their personal real estate portfolios. In the spring of 2003, both Skandia's Chairman and CEO were forced from the company in humiliating circumstances. For most observers, these individuals were the personification of managerial irresponsibility and personal greed.

Skandia's new leaders were faced with a company severely damaged, both from a financial and a reputational perspective. The company gradually began to recover, but its former aggressive expansion plans were abandoned. In 2006, the South African investment group, Old Mutual, bid to acquire majority control of Skandia. The bid was accepted despite protests by some shareholders and directors that a foreign company was buying a national treasure.

In 2012, Skandia Liv, the Swedish-based mutual insurer, acquired what remained of Skandia in the Nordic countries from Old Mutual. Skandia Liv, a former subsidiary of Skandia that had no role in the Old Mutual merger, was now the parent company. Perhaps we may say this was the happy ending to an otherwise sad tale. However, Skandia Liv/Skandia does not have Skandia's strong position in the Swedish capital markets of fifteen years before. In 2015, in relative numbers, the Skandia Group is less than half the size it was in the 1990s.

Although much more could be said about the Skandia story, we have described only the most dramatic events in order to highlight the case's most important conclusions about organizational resilience.

First, when Skandia invested almost all its resources in a single area—long-term savings—it compromised the classic strategy of risk diversification at insurance companies. By insuring different segments, an insurance company can cover one segment's losses by another segment's premiums. Risk diversification is at the very heart of the insurance industry. Skandia's ambitious growth goal, which became an obsession, led the company down a very dangerous path (Kayes 2014). With the early success of its new strategy, Skandia's managers became over confident about their ability and much too positive about future performance. Moreover, the onerous compensation package based on stock performance had a toxic effect on the quality of executive decision-making.

Second, Skandia dangerously linked its destiny to future (and uncertain) profits. Because the sales people had to be paid their commissions when the products were sold, the company's initial cash flows from product sales were negative. The financial situation only worsened as the company borrowed to pay these commissions. Skandia was draining its capital and increasing its risk exposure as its activities increased exponentially. As a result, its financial balance was severely weakened. Blinded by the soaring share prices, the company's leaders ignored (or chose to ignore) the impending crisis. To equate a company's financial status and performance with the (short-term) rise in share prices is a dangerous folly. We address this subject in greater detail in Chap. 4.

Third, perhaps because of the company's very favourable bonus programme, Skandia's board members and top managers were too focused on increasing the company's share price. In the later stages of the crisis, they tried to hold the company's share price steady so as not to frighten investors with the "bad news" about the severity of the situation. In trying to support the share price, the board members and top managers acted according to their own short-term interests rather than the long-term interests of the company. Even when their own economic interests were revealed—in a very public and embarrassing way—they were unwilling to admit to the short-sightedness and selfishness of their earlier decisions.

Fourth, Skandia was not sufficiently responsive to the expectations and demands of its various stakeholders, including the financial institutions that had provided the company's debt capital. Skandia's narrow focus on expansion and share price support, with its strong bias in favour of shareowners (i.e. a shareholder value emphasis on a high share prices), was a fatal perspective. The company's expansive growth numbers and profitability forecasts did not fool Moody's; the ratings downgrade, stemming from concerns about the company's deteriorating balance sheet, contributed to Skandia's crisis.

In less than a year and a half, from the luxurious conference at St. Andrews where the goal of becoming a world leader was announced, Skandia became the largest scandal in the modern history of the Stockholm Stock Exchange.

1.3 The Concept of Organizational Resilience

As stated above, this book's main focus is the ability of organizations to survive or, more positively stated, to maintain their vitality. To develop this theme, the book focuses on organizational resilience, which derives from organizations' qualities and abilities. In brief, the resilient company or organization uses its financial, technical and social resources:

1. to develop long-term skills and competences
2. in an efficient, reliable and flexible manner
3. in order to manage challenges and exploit opportunities.

1.4 The Resilience Concept: Origin and Development

Resilience derives from the English verb *resile,* which derives from the Latin word *resilire* ("to bounce back"). Resile, in English, means "to return to a former state or original position" (MSB 2013). The word resilience was used, for example, in the mid-1800s to describe the ability of Japanese society to recover from an earthquake (Alexander 2013). In physics and engineering, resilience refers to one material property: the ability to absorb energy without deformation, that is, to handle stress and disturbances while still retaining form, strength and function (Ibid).

For example, the resilience of a board is measured by its ability to withstand pressure without cracking and to return to its original shape when the pressure is removed. Resilience is influenced by various factors, including, for example, in the case of boards, the tree variety, the growing conditions, the wood seasoning and weather conditions. If growing conditions result in dehydration or freezing of boards, they become brittle. Both internal and external factors thus affect board resilience.

Another word closely related to resilience is *elasticity*, which is also a material property. In scientific research, elasticity is a measure of a material's ability to stretch under pressure without breaking. An example is metal forging in which stretched metals do not return to their original form after removal of the stretching forces (Alexander 2013). Gold, for example, can be hammered to a thickness of 0.1 μm without shattering.

The resilient company or organization uses its financial, technical and social resources

1. to develop long-term skills and competences
2. in an efficient, reliable and flexible manner
3. in order to manage challenges and exploit opportunities.

The concept of resilience, variously defined, has gradually spread to other scientific areas (MSB 2013). One such area is ecology where resilience has become an important concept in the analysis of ecosystems' ability to experience change and disturbance without altering their fundamental equilibrium (Berkes et al. 2000; Holling 1973).

Another research area is psychology where (human) resilience describes people's ability to maintain their health and well-being even as they cope with life-changing events and other adversities (Haglund et al. 2007; Mallak 1998a; Tugade et al. 2004). Resilient people, for example, can lead productive lives despite difficult and trying life circumstances such as family alcohol/drug addiction, poverty and so on (Masten 2014).

In recent decades, organization and business researchers have begun to use the resilience concept more extensively (e.g., Bhamra 2015; Christopher and Peck 2004; Home and Orr 1997; Kayes 2015; Mallak 1998b; Riolli and Savicki 2003; Sheffi 2005; Sutcliffe and Vogus 2003; Weick and Sutcliffe 2007). For a recent review of this literature, see Bhamra et al. (2015) and Linnenluecke (2015). Psychological studies on coping mechanism in times of crisis, trauma and bad luck have clearly influenced this research. Previous research on organizational resilience is largely the examination of organizations' and employees' ability to handle crises, cope with traumatic changes and deal with adverse and challenging situations (Bhamra et al. 2011; Hesketh et al. 2015; Kayes 2015). Despite several articles on organizational resilience—beginning in the 1970s, in particular with Thomson and Lehner's (1976) article—there is no commonly accepted theoretical foundation for the concept. Bhamra et al. (p. 5389) asked: Is resilience a measure, a feature, a philosophy or a capability?

This book's theoretical contribution is its argument that organizational resilience is not only a capability but also a philosophy of how organizations can face adverse, complex and uncertain environments in responsible and proactive ways, often even before crises have occurred. In Chap. 14 we present this holistic understanding of resilience as a framework that consists of traits, processes, resources and capabilities.

1.5 Previous Definitions of Organizational Resilience

Most previous definitions of organizational resilience take a dynamic perspective in which a resilient system or organization is described as one that can cope with stress and difficulties using its current or its strengthened performance capacity. Weick and Sutcliffe (2007, p. 71) define organizational resilience as follows: "(1) the ability to absorb strain and preserve functioning despite the presence of adversity […] (2) an ability to recover or bounce back from untoward events and […] (3) an ability to learn and grow from previous episodes of resilient action".

In a similar vein, Sheffi (2005) describes resilience as an organization's ability to quickly recover from disturbances in its supply chain or production process

(e.g., a fire or a natural catastrophe). The relevancy of this definition stems from the increasing number of extreme weather phenomena in recent years. Another influential researcher in this area is Erik Hollnagel (Hollnagel et al. 2007; Hollnagel et al. 2011). In writing about resilience engineering, Hollnagel highlights the importance of the adaptive capacity that gives a system the ability to prepare for and handle unforeseen events and situations. He defines resilience as follows:

> The intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions. (Hollnagel 2011a, b, p. xxxvi)

In resilience engineering, the focus is on avoiding various kinds of technological hazards and accidents using a combination of standardized safety routines and flexible, improvised actions in unexpected situations. Thus, the resilient system (or organization) can manage both foreseen and unforeseen risks.

Zolli and Healy (2012) define resilience somewhat more broadly. For them, resilience relates not only to disturbances and crises but also to persistently changing conditions for ecosystems, society, companies and individuals:

> Accordingly, we frame resilience in terms borrowed from both ecology and sociology as *the capacity of a system, enterprise, or a person to maintain its core purpose and integrity in the face of dramatically changed circumstances*. (p. 7). [Emphasis in the original]

In general, we agree with this definition of resilience because we believe the ability to prepare for unexpected crises or disruptions is essential. Moreover, it is important to acknowledge that organizations rarely return to "the old conditions" after a major change or disruption. To use the materials property analogies, an organization that is resilient must be elastic, whether in its ability "to bounce back" from a temporary crisis or disturbance or in its ability "to stretch" by adapting to more permanent change events. A company that has an outdated business model, old technology and weak financial resources may not be resilient even if it copes well with natural disasters or disruptions in logistics flows. Therefore in this book, we have broadened the resilience concept.

Organizational resilience is not merely reflected in successful crisis management; rather, organizational resilience is reflected in the successful management of all kinds of threats, disturbances and changes—some of which are minor, some major. Organizational resilience may be required in times of financial crises, technological shifts, resource depletion, the emergence of low cost competitors or loss of market confidence. An example is the Volkswagen scandal that began in September of 2015 when it was revealed the German company had manipulated emissions testing for millions of cars over a number of years. Such corporate cheating was motivated by a doubtful and cynical effort to reap economic returns at the expense of good corporate ethics. The long-term effects of the scandal remain unknown, Volkswagen will in a positive scenario restore consumer and public trust, at worst it will contribute to a substantial decline of global trade and distrust among different nations.

The successful management of an unanticipated crisis requires resource development and organizational learning (Kayes 2015; Wildawsky and Wildawsky 2008). Given this conception of organizational resilience, this book emphasizes that organizations must use their financial, technical and social resources in an all-inclusive way. These resources, which often must be employed at short notice, should be constantly developed and maintained. As Välingkangas (2010, p. 3) succinctly states, the ambition should be to "make resilience an everyday habit rather than something grasped for only in moments of crisis."

1.6 Theoretical Inspiration for the Book

In addition to the resilience and organizational resilience sources cited above, this book is also inspired by the extensive work of mainly Swedish researchers on companies that have recovered from crisis situations through their reorganization and long-term renewal following the deep structural crisis many Swedish industries (mining, steel, ship building, textile/clothing, etc.) suffered, especially in the 1970s (e.g., Edström et al. 1989; Hedberg 1981; Jönsson and Lundin 1977; Normann 1971, 1993; Polesie 1990, 1991). Although some of this research has been published in English, the greater part is available only in Swedish.

Several biographies and autobiographies of industrial and bank leaders also inspired this book. For example, the business philosophies and accomplishments of leaders such as Jacob Wallenberg, Jan Wallander, and Per Gyllenhammar (see Chap. 6), at their companies and in the world, showcase the importance of leadership business acumen, improvisation, will power, independence and effective resource utilization.

Yet another inspiration for the book is the story of the recovery of the textile/clothing industry in the Borås region in Western Sweden (see Chaps. 11, 12 and 13). This recovery highlights how a business cluster can support organizational resilience.

Finally, Aldrich's (1999) evolutionary approach to explaining organizational change in and across sectors is an important inspiration for the book. The ability of organizations to evolve through new routines, new processes, and new forms influences how well their products and services will be selected or deselected. Another way to describe successful evolution from the organizational point of view is organizational resilience. Chapter 2, which contains a more thorough presentation of the theoretical framework of the book, elaborates on this theme.

1.7 Negative Aspects of the Resilience Concept

Although resilience is generally viewed in a positive light (and the perspective this book takes), the word can have negative connotations. For example, in social usage, resilience may describe an individual's unwillingness/inability to respond to

rehabilitation. In medical usage, resilience may describe the resistance of bacterial strains to antibiotics. In business usage, resilience may also describe the "success" of environmentally destructive or unethical companies.

Another negative aspect of resilience may refer to the actions of outdated and unmodern companies that delay much-needed renewal of a community and its commercial sector due to its importance for local labour markets and ties with political decision-makers that can provide subsidies and barriers against competitors. In such cases, companies may take stopgap actions in response to various disturbances and crises. These actions, which suggest organizational resilience, may be too little, too late. Over longer time periods, for example, fates are sealed for manufacturers with obsolete, poorly located ironworks or labour-intensive industrial production in high cost regions. Delaying inevitable closure or delaying change/innovation means that productive resources are not freed up for use where they might contribute more to the community. Therefore the termination of companies can be positive for society.

The concept of resilience also has implications for many economic areas. The primary focus of the book is the individual organization and its leaders. However, one chapter deals with the business cluster concept (Chap. 12). Other chapters deal more theoretically with organizational resilience in healthcare (Chap. 10), in supply chains (Chap. 8), and in regional renewal (Chap. 13).

1.8 The Aims of the Book

The book's principal aim is to show how organizations can prepare for the always-unpredictable future by focusing on resource development and deployment and on the capability for swift action. In its analysis of organizational resilience, the book takes a somewhat different view of reality than is typical of many management books that examine other management concepts. The analysis of organizational resilience in this book, at its simplest, builds on the idea of an organic (evolving) view of organizational reality. Such a view contrasts with the idea that organizational reality is fixed and predictable.

Therefore managing current business environments, with their many unexpected events, is as important as predicting future environments, with their many unimaginable events. Organizational resilience, then, refers to the ability of the organization to manage surprises, whether positive or negative. This is the management of change in which the organization's resources should be assembled and used collectively. This requirement highlights yet another aim of the book: the need to study the whole organization rather than its characteristics and parts in isolation. Chapter 2, which develops these theoretical issues, concludes with a capability-oriented model that emphasizes reliability, efficiency and change capacity.

Table 1.1 A resource-based model of organizational resilience (abbreviated version)

Financial resources	Technical resources	Social resources
– Capital assets	– Products/services	– Relationships with customers, suppliers and bankers/investors
– Revenue-generating assets	– Production technology	– Relationships with owners and employees
– Intangible assets	– Supply chains	– Relationships with other stakeholders

1.9 Financial, Technical and Social Resources for Resilience

A complementary way of conceptualizing organizational resilience is to focus on the kinds of resources an organization needs so that it can operate in a reliable, efficient and flexible way. Table 1.1 presents an abbreviated version of the book's resource-based organizational resilience model. See Chap. 3 for a detailed version of the model.

Financial resources consist of revenue-generating (primarily, operating) assets and intangible assets. These assets, and the results of their use, are presented in the organization's financial statements. Technical resources consist of the hardware and software used in the production of products and services as well as employee/organizational "know-how". Social resources consist of the organization's relationships with its many and various stakeholders. Typically, these relationships, which are based in internal and external trust, are among an organization's most valuable assets.

In this analysis of organizational resilience, one goal is to explore the linkages among these resources: How can a company or an organization combine its resources effectively? They are all linked. For example, a virtuous cycle is the following: good relationships with company owners and other stakeholders lead to financial flexibility; such flexibility leads to investments in technology; such investments lead to profit/success; and profit/success leads to mutually beneficial relationships with the owners and other stakeholders.

The resilient organization is able to manage the complexity of assembling and integrating these resources. There is little doubt that the task is complex. Various groups—customers, employees, shareholders, lenders, suppliers, regulators, government agencies and the general public—all have their demands and priorities. The resilient organization succeeds in balancing these demands and priorities while, at the same time, achieving its own goals.

To manage complexity successfully, the organization needs a steady flow of reliable information, creative and problem-solving capabilities and an aptitude for learning. It is easy to look back and rethink events after they have occurred. Hindsight, as the familiar expression goes, is 20/20. The real challenge is in looking ahead, or, more realistically, in looking at on-going events. The book's ambition is that readers will gain insights, as well as inspiration, on how to manage the complexity of the resources that make an organization resilient.

1.10 Arrangement of the Chapters

Next we present an overview of the book's chapters, divided into four parts.

1.10.1 Part One: Introduction and Development of the Organizational Resilience Framework

Following this chapter, Chaps. 2 and 3 introduce and develop the organizational resilience framework. Chapter 2 develops the theoretical framework starting with the evolutionary view on economic development and research about organizational resilience. Chapter 3 presents the resource-based model of organizational resilience in greater detail. The discussion focuses on the need for a comprehensive resource structure that can provide flexible responses to unexpected events and challenges.

1.10.2 Part Two: Applying the Organizational Resilience Framework

The next three chapters (Chaps. 4, 5, and 6) illustrate how the organizational resilience framework can be used to analyse company success and company failure at both the national and international levels.

Chapter 4 describes the insolvency and liquidation of a once very successful electronics retail chain. The chapter is also a criticism of one of the most influential management books of recent times: *Good to Great* by Jim Collins.

Chapter 5 describes the 2010 catastrophic oil platform explosion and fire in the Gulf of Mexico and the subsequent oil spill. The chapter uses the organizational resilience framework to analyse the accident in terms of what the framework can tell us about how companies can prepare for and manage (and even prevent) such devastating events.

Chapter 6 describes three legendary twentieth century leaders who successfully led their companies through many challenging years. The chapter draws lessons on leadership from their business philosophies, personal characteristics and leadership styles, as well as their differences/similarities, as they dealt with the uncertainties and complexities of managing large companies.

1.10.3 Part Three: Examining and Deepening the Resilience Factors

The second half of the book develops various aspects of organizational resilience with analyses of several important resources, balance sheet structure, supply chain management, followership and community relationships.

Chapter 7 focuses on financial resources in its analysis of organizational resilience. The chapter analyses a number of Swedish companies and banks in terms of their ownership, profitability and business model choice.

Chapter 8 deals with the importance of reliable supply chains for flexible, agile and dynamic companies. The chapter argues that in managing cooperation across company borders, a focus on creating win-win situations for all supply chain members is a necessity.

Chapter 9 illustrates how important social resources, such as employee engagement and commitment, can positively influence production and thereby contribute to company success. The chapter also discusses how a local company, with proud community spirit, can succeed in highly competitive markets.

Chapter 10 examines the need for organizational reliability in health care and the concern that, to some degree, there is no guarantee of such reliability. The chapter emphasizes the importance of teamwork and trust in achieving organizationally resilient health care.

Chapter 11 describes how stagnant companies can break the stagnation spiral and regain their vitality and regenerative capacity. The chapter analyses how a fashion company rejuvenated its brand, developed new customer strategies, created new supplier arrangements, and restructured its leadership–employee relationship.

Chapter 12 analyses the support of business clusters—especially in crisis times—for companies in close geographic vicinity in the same business sector. The chapter concludes that a business cluster may help rescue companies, employees, suppliers and local communities, especially after an industry-shaking crisis.

Chapter 13 deals with how people's attitudes and values may influence the flexibility, entrepreneurial spirit and resilience of organizations in an entire region, leading to what we call regional resilience. In this case, organizational resilience was created in harmony with external factors. This is also an important insight of the book.

1.10.4 Part Four: Conclusions

Chapter 14 summarizes the book's lessons as seven conclusions about organizational resilience. The ability to adapt and take holistic action, using financial, technical and social resources in order to maintain reliable, efficient and flexible operations, underpins these seven conclusions.

Each chapter's author poses several discussion questions at chapter end. Some questions generally explore the organizational resilience concept and models. Other questions are more specific in that they deal with issues, leaders and events described in the chapters. All discussion questions, ultimately, aim at provoking thought about how organizations can use their resources to achieve resiliency when crises arise.

1.11 The Authors and Their Common Research Interests

The authors share a common interest in the issues and problems related to the long-term viability of companies and organizations. Their research deals with how companies and organizations grow, manage change and survive. Their research fields include health care, business clusters, leadership, financial analysis, crisis management and more. Using case studies and empirical data from interviews, surveys, commentaries and documents, they examine the business sectors of retailing, banking, manufacturing and several others. The common focus of the chapters is the organizational resilience framework.

The authors are researchers at three regional universities in southwest Sweden: the University of Skövde, the University of Borås, and Jönköping University. The three universities lie in adjacent regions that feature small towns and cities whose inhabitants are quite thrifty and independent-minded with relatively little formal education.[1] To a large extent these regions were a source of inspiration for the authors as they researched examples of organizational success and survival that do not depend on a concentration of economic, cultural and educational influences.

1.12 Discussion Questions

1. What can we learn from a book on organizational resilience? What does the book tell us about leading a company or organization? Discuss whether the conventional understanding of strategic management may be misleading.
2. What does it mean to describe a company or organization as resilient? Describe the various resources an organization or company needs to survive and succeed. Discuss how these resources are mutually supportive.
3. Identify a company that has suffered serious problems. How might these problems have been avoided?

Author Biographies

Stefan Tengblad is Professor of Business Administration at the University of Skövde, Sweden. He has written and edited various books and articles on managerial work, leadership and followership. Among his edited books are *The Work of Managers* and *The Art of Science*. He is the leader of the research specialization centre Enterprises for the Future at the University of Skövde.

[1]At the time of this research, the three regions had about 800,000 inhabitants. About one-third of these inhabitants lived in the regional centres of Jönköping, Borås, and Skövde.

Margareta Oudhuis is Professor in Work Science at the University of Borås, Sweden. As a researcher in organization, she has written books and articles on management models, leadership and work organization as well as on culture and the characteristics of enterprises in the Borås region of Sweden. She is a member of the research collaboration "Enterprise for the Future" between the University of Skövde and the University of Borås.

Chapter 2
Organizational Resilience: Theoretical Framework

Stefan Tengblad

Abstract In this chapter, a general theoretical framework of the book is presented. The framework builds on various sources of literature and in particular on an organic view on economic and organizational development. Using the classical concepts of variation, selection and retention, organizational resilience is seen as the capacity of a company to over time become a selected variation in the marketplace. Furthermore, the framework builds on findings from complexity theory that highlights the centrality of unforeseen events and unanticipated consequences. Such events and consequences can be both positive and negative (serendipities as well as severe challenges). The chapter ends in a new model that emphasizes the importance for a resilient organization to find an adequate balance between reliability, efficiency and change capacity.

Keywords Evolutionary theory · Planned and unplanned change · Complexity · Serendipity · Variation · Selection · Retention · Sustainability

Why is the idea of organizational resilience new and different, as well as useful, in the study of companies and organizations? And how can we conceptualize the idea in a holistic way? Answers to these questions provide the conceptual basis for the research in this book that explores organizational resilience from the perspective of evolutionary theory.

2.1 The Evolutionary Approach: Explaining Change

It is not easy to spot market opportunities and take advantage of them in a way that defends a company's current and future position. These are complex, demanding, and not always successful processes. For example, of the top 30 companies listed

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on the Fortune 500 in 1970, only 11 companies were still Fortune 500 companies in 2014. In this 40-year period, 17 of the 30 companies had fallen out of the Fortune 500, either because other companies had acquired them or because their gross revenues were too small to qualify for the listing. Two companies (Bethlehem Steel and Eastman Kodak) were bankrupt.[1] If this pattern repeats in the next 40 years, we can expect new companies will likely replace many of today's Fortune 500 companies.

Organizational resilience, as described in Chap. 1, is based in the idea that economic development both follows and does not follow traceable patterns. Therefore, economic patterns, such as business cycles, are very difficult to predict with any great precision. Moreover, many economic events are so unusual that no amount of pattern watching could have foreseen their occurrence. To further illustrate this point, consider the developments in the telecommunications industry and how they have affected the Swedish company, Ericsson, one of the top players in this industry. Around the year 2000, Ericsson was among the highest valued companies in the world owing to the telecom bonanza. A few years later, when the entire industry was in deep recession, Ericsson emerged as the perhaps most successful telecom-system company compared to its prior competitors Siemens, Motorola, Nokia, Alcatel, Lucent, and Nortel. But few observers of the telecommunications industry could have predicted that within a decade a small and at that time little known Chinese company, Huawei Technologies, would emerge as the world's largest company in the telecommunications equipment and network market within 15 years.

Ericsson's future as an industry leader now depends on its ability to deal with the new competitive landscape in which most of its major competitors have merged their operations into a single company. Nokia and Siemens, as well as Alcatel and Lucent, merged. In 2015 Nokia-Siemens purchased Alcatel-Lucent. Although it is impossible to predict Ericsson's future, it seems inevitable that the company, 10 years hence, will likely be a very different company as far as its technology, products, employees and customers. In a bleak future scenario, Ericsson will cease to exist as an independent company and its operations be reduced dramatically. The company's survival depends on its ability to strengthen its resources, which requires establishing new business relationships and creating new capabilities. The evolutionary approach to organizational resilience can provide some understanding of what is required to achieve sustainability in a highly competitive and uncertain business climate.

The evolutionary approach to explaining change theorizes that human development—and, as this book proposes, economic development—evolved from environmental opportunities and limitations. Life on earth evolved hundreds of million years ago in the sea because the land was too warm and lacked oxygen. Gradually, as vegetation released more oxygen into the atmosphere and lowered the

[1]Data were retrieved from http://fortune.com/fortune500/ and http://archive.fortune.com/magazines/fortune/fortune500_archive/full/1970/.

percentage of carbon dioxide, the earth's temperature cooled. Terrestrial animals (small, slow, and herbaceous) evolved from aquatic animals. By natural selection, larger, faster, as well as predatory, animals evolved. Like new entrants in the world of commerce, new animal (and plant) species took advantage of the opportunities in the environmental market. For example, giraffes on the African Savannah browse on tree top leaves, fat and thick-furred polar bears survive the Arctic cold, and fertile rodents everywhere scamper, hide and reproduce (abundantly) in as few as 20 days. The voracious and prolific killer snail (also known as the assassin snail) is another example of environmental adaptability. Killer snails thrive in homeowners' gardens where they feast on prize plants. Because they can endure cold winters, reproduce rapidly, and have few natural enemies, there is little to slow their increase.

In organizational theory, the explanation of evolutionary change is based in theories about the competition for survival in the animal kingdom and other kinds of ecosystems. Companies compete with other companies in the same way that animal species compete with other animal species for limited resources. A company's survival depends on the availability of resources as well as on its ability to use those resources effectively. This is analogous to the natural world where animal survival depends on the ability to find digestible food that is sufficiently high in nutrient and energy content to maintain body heat and other biological functions. Companies, too, must husband their various resources—financial, technical, and social—if they are to survive in the niche they have chosen.

There are always companies willing to exploit openings when another company loses direction, veers too radically from its core competencies, or fails to generate sufficient survival resources. At the most fundamental level, a company must have customers willing to buy its products and services (at least, in the short term) at a price that equals cost, and ultimately (in the long term) at a price that exceeds cost. Frequently, products emerge and then disappear. Over the years, telegraph equipment, mechanical calculators, cassette players, "thick" television screens and film cameras have largely disappeared from the market. Some manufacturers have successfully managed rapid technological changes by adapting their products accordingly. However, less adaptable manufacturers have seen their factories and warehouses fill up with outdated, unsellable goods.

With favourable market and environmental conditions, established companies expand, and new companies are founded. It is no coincidence that densely populated South Korea has one of the world's most extensive broadband networks. The commercial climate of South Korea is characterized by a technically minded population, a national government that supports the Internet, and a home-grown, technological sector. Because of the short distances between communities, it is far cheaper to build a broadband network in South Korea than, for example, in Australia, a country 75 times the geographic size of South Korea with only half as many inhabitants.

Of course, significant differences exist between animal life and commercial life. One of the most obvious differences, and the one most relevant for this book, is the fast pace and discontinuity of commercial change. Evolutionary change in the

animal kingdom takes far more time. In the absence of human intervention, such evolution often takes hundreds of thousands of years. In the world of commerce, evolutionary change—the result of plans, luck, or breaks from historic trends—is often very rapid. Nevertheless, given mankind's impact on our planet, rapid changes in the world's ecosystem are increasingly common.

2.1.1 Planned and Unplanned Change

There is a tendency in management and organizational theory to assume that organizational stability is the norm and that change is the exception. Stability, in this assumption, just "is"; altering the status quo requires special planning and action. In his classic model for planned change, Lewin (1951) described change as a three-step process: "thawing" the frozen state, "changing" to a new state and "freezing" the new state (unfreeze–change–freeze). According to this perspective, most organizational activities consist of stable behavioural patterns that, over time, managerial action institutionalizes.

An alternative perspective on change, which this book supports, regards change as a continual, inevitable process that can be managed only partially. Even organizations whose leaders resist change are often forced to make changes, some of which may be contrary to their values and convictions. Pressure from competitors, customers, creditors, owners and even employees is often more influential than top management's plans for strategic action. In the political sphere, even in totalitarian, centralized states those in power may sometimes be unable to stop certain changes. In the company sphere, where leaders lack such absolute control, few people are willing to submit passively to another's will, and any effort to exert authoritarian control may have unintended and unfavourable consequences. At one extreme, employees may openly resist change; at the other, they may exhibit lack of work motivation and commitment. Unilateral coercion in organizations is likely to result in futility or failure.

The idea that changes, including unplanned changes, occur *continually* does not mean that dramatic changes occur *constantly*. Moreover, a large amount of change effort (for instance, reorganizations) is often rather superficial because the organization's dominant work practices remain the same. One explanation is that some change is only for "show"; the intent is to make the organization look good to outsiders (cf. Brunsson 1985). With such change, organization actors pretend to support change but secretly behave as they always have. Or, somewhat perversely, they slyly promote different changes than upper management supports. For instance, recently hired employees can introduce new values and ideas that, from a long-term perspective, may have a major influence on the organization. As an example, younger generations may exert their influence when they challenge older generations' behaviours and norms in areas such as environmental issues, work hours flexibility, and participatory leadership.

The fact that organizations are subject to continuous change means they experience many small change events. Employees join and leave organizations, new ideas are proposed, minor organizational restructurings occur, new equipment and machinery are purchased, and customers come and go. In this view, the sum of these small changes determines organization strategy and policy (Mintzberg and Waters 1985). Top managers may plan and support some of these changes, but many changes, perhaps most, simply occur without their involvement or influence. What is perhaps most interesting is that the organization's employees often spark such unplanned changes that can contribute to an organization's renewal and resilience. They may see areas where strategic resources are needed for organizational resilience that top management does not. Human capital is typically very multidimensional.

2.1.2 Complexity and Predictability in Evolutionary Change

Another important aspect of evolutionary change, which applies to both ecologies and economies, is that its complexity increases with time, especially in areas of high population density. New knowledge is often developed in dense networks, ideas become innovations that are tested for the first time, and then these innovations spread around the globe. If an innovation is to develop fully and spread on its own, its innovators must have access to industrial and marketing know-how and proximity to important scientific institutions, financial institutions, affluent buyers and consumers, etc.

The principal driving force in economic evolutionary change is the interaction among the various actors that facilitates exchanges of past experiences/innovations and of new ideas/inventions. Today's automobile companies, for example, have advanced technologies and gadgetry not imagined when Henry Ford built his first Tin Lizzies. In the early twentieth century, automobiles had petrol-powered, four-cylinder engines, simple transmissions and basic styling. In this century, automobiles come in an enormous variety of models, colours and sizes. A large mining truck, for example, can transport 100 small Daimler Smart cars. The modern family car now has all kinds of safety features plus cruise control, electric motors, video systems, seat heaters and cup holders, just to mention a few popular innovations/gadgets.

Economic evolutionary change is difficult to predict because, by its very nature, it is discontinuous. Evolutionary trends are very difficult to identify or forecast (Harari 2014). When unexpected, and therefore unplanned for, events occur, many companies' goals and plans may seem outdated, even irrelevant. At such times, flexibility and manoeuvrability are called for. This economic unpredictability has parallels, as well as relationships, with political unpredictability. For example, in the 1980s few people thought China posed a major economic threat to Western companies; still fewer looked at China as a profitable business opportunity. Even into the 1990s, outsiders were sceptical of China's economic future. Would the

Chinese government continue to support market reforms? Would China return to a more traditional planned economy? Would China, like the former Soviet Union and the former Yugoslavia, ultimately fail with its economic and political structures? Such fundamental questions may be asked about the longevity of many recent economic and political developments. The Internet, mobile telephones, unmanned aircraft and the Euro are examples.

Kahneman (2011), the 2002 recipient of the Nobel Prize in Economic Sciences, summarizes the research on decision-making in complex situations involving forecasts, predictions and selections in his book, *Thinking, Fast and Slow*. He demonstrates that predictions are often no better than random guesses, financial plans are often unrealised, and company leaders tend to exaggerate their decision-making expertise and control of future events. Predicting the future, for example, is akin to betting on horse races. A lucky few win, but most people are only occasional winners (at best) or compulsive losers (at worst). The few successful gamblers are often hailed as geniuses. Most gamblers, however, lose because they lack luck, skill and information, or a combination of these factors.

Given the unpredictability of economic evolutionary change, it is only in retrospect that evaluations of decisions are possible. Such after-the-fact evaluations, to mention only a few, include evaluations of the decision to hire new employees, to make additional investments in products/services and markets, and to issue additional company shares. In hindsight, it is possible to evaluate the success or failure of decisions. However, decision-makers have no way to gauge how future evaluators will judge their real-time decisions (Harari 2014).

2.1.3 Organizational Control and Complexity

As Alvesson (2013, p. 94 ff.) notes, exerting organizational control is a complicated and difficult endeavour—primarily because of unforeseen events beyond the actors' control and the unintended outcomes of actions. Very often a huge gap exists between plans for and the reality of reorganizations, implementation of new technologies, and new market entry. Such actions typically take much longer than planned. One important explanation is captured by the classic concept of *friction* that Carl von Clausewitz' (1832) proposed in his analysis of warfare. Friction can result from misunderstandings, resistance, bad luck, lack of knowledge/skills, unexpected events and, not least, wishful thinking by planners. Planners often underestimate the difficulties in the implementation of their plans, and small disturbances often create even more friction in a chain reaction pattern that makes the plans obsolete or even useless. There is also the danger that organizations do not learn from their mistakes, accidents, and poor results. In such cases, organizations continue their unreliable and hazardous practices (Buchanan 2011).

Achieving and maintaining organizational control from the evolutionary perspective points requires environmental feedback when companies try different things and respond to their external stimuli. In his longitudinal data acquired at 16

Scandinavian companies, Polesie (1991) describes the influence of internal/external political power struggles on the companies' strategies and actions, particularly in uncertain times when the way forward is unclear. He found that individual courage and imagination were two qualities lacking at the companies that did not survive. When companies face difficult challenges, they need to mobilize their various resources. Mastery of such challenges, in the best of circumstances, can lead to organizational learning that can be used when other challenges arise. Not infrequently, however, there is a mismatch between the challenges and the responses. Such is the case when solutions are tested and fail, creating even greater problems.

Researchers have proposed various control measures in order to deal with complexity. One popular method is the balanced scorecard (Kaplan and Norton 1992), which has virtues but can also lead to considerable time and effort spent in data collection. The data may or may not be useful for actual decision-making. Data, thus painstakingly collected, may be buried in what in reality is a "digital graveyard" because decision-makers have neither the time nor the ability to use the information. Moreover, advocates of certain administrative control measures are often met with passive or even active resistance (Andersson and Tengblad 2009). Still another problem is that control measures can be manipulated to make results look better than they are (Alvesson 2013). In such cases, outcomes only partially reflect reality.

Ralph Stacey has written several books about leadership and management in complex settings. He describes the limitations of formalized management techniques built on simple instrumental rationality and the unrealistic hope that future events can be anticipated and controlled. One such limitation in formalized management techniques is that "issues which are complex, ambiguous and uncertain are side-lined and covered over" (Stacey 2012, p. 115). To overcome such problems, Stacey presents the technique of reflexive inquiry that is characterized by spontaneity and improvisation in developing more appropriate responses to the complex challenges organizations increasingly face.

2.1.4 Organizational Innovation and Serendipity

Stacey's theories on reflexive inquiry and the dangers of formalized and instrumental tools of control have implications for innovation. Close and elaborate control of innovation can often be counterproductive. Efforts to streamline research and development by setting cost budgets, deadlines and narrow specifications may result in innovations that produce only marginal improvements on previous products. At the same time, innovations that may result in radical product improvements are often rejected for lack of time and money. Successful innovation, managed with sensible yet imaginative control measures, is a challenging work. The best innovations are the result, in many cases, of fortunate circumstances when products are reformulated and remanufactured in various ways.

In recent years, a new concept in the business literature—Serendipity Management—has become popular (Kakko and Inkinen 2009). The concept derives from the recognition of the weaknesses in "linear" planning, a concept similar to Stacey's mechanistic approach. In this context, serendipity—the ability to make "fortunate (i.e., serendipitous) discoveries" accidentally—refers to management's ability to exploit such discoveries. Serendipity Management has many parallels with the evolutionary perspective on organizational resilience (Välingkangas 2010, p. 17). Resilience, which is difficult to plan, requires fortuitous space for exploration and organizational learning that can support as well as transform established structures.

Opportunities for making fortunate discoveries depend in part on how relationships among company employees and managers have developed. A certain level of empowerment is most probably needed in order to develop a constructive relation (c.f. Wilkinson 1998).

Every company's actions are influenced by its history, including past conduct in internal/external relationships. Thus development is controlled partially by the actions people at companies want to take and can take, and partially by the opinions of outside stakeholders, such as competitors, society and customers (Polesie 1990, p. 102).

In company management, it is essential to strike the right balance between discretion and control. This means those in control need to understand the short- and long-term effects of their control measures. Achieving effective control is more than a matter of regulating employee dress/behaviour, of adopting modern communication tools, of assuming impressive titles, of awarding high salaries to a select few, of imitating ideas from popular management books (see, e.g. Chap. 4) and of adopting trendy management fads (cf. Kahneman 2011).

2.2 Three Central Processes in the Evolutionary Approach: Variation, Selection and Retention

Three processes, derived from ecology, are central to the evolutionary approach (e.g. Aldrich 1999). These processes—variation, selection and retention—are useful in explaining how business systems, which are characterized by partially independent actors in interaction with other actors, compete for scarce resources.

2.2.1 Variation

Variation refers to differences that occur as a result of planned changes, initiatives, and random or unforeseen events. One can say that variation in systems in which there is human interaction and involvement is something of a natural law.

A significant portion of variation is the result of the diverse cultural, political, economic and climatic conditions of communities and regions. In the world of commerce, variation may appear in new products, changes in production methods, restructured work organization or new customer–supplier relationships. Thus, variation is a central process for companies as they try to seize new opportunities. Such companies employ people who are often highly imaginative in devising ways to solve problems innovatively and unconventionally.

Not all variation in business is successful. Quite a lot of variation in fact ends in technical and commercial failure. The classic example is the failure of Edsel, Ford Motor Company's automobile model that was introduced in the late 1950s.[2] Variation does not attract customers when the variation is too insignificant, too extreme, and/or poorly commercialized.

2.2.2 Selection

Selection refers to how variations are chosen. Without variation alternatives, there can be no selection. There must be options for selection. For example, if the moon has no housing accommodations, then one cannot choose between living on the earth and living on the moon.

Selection is a continual process in which the choice is not only among activities but also among the best times to make the choice. Selection may occur in the "market" or, as in the Ford Edsel example, within the organization. For example, if a company needs to standardize its payroll system across all operations, it must choose between selecting a new system for the entire company and maintaining previous systems. Or if a company offers an alternative product/service, at minimum it must create a new website or modify an old website and hire new marketing, managerial and production employees. In the absence of significant indications of interest from the consumer public, variations can create a substantial economic burden for companies. Therefore, most variations are not selected, primarily for reasons of cost. Another common reason for not selecting an alternative variation for a product/service is insufficient demand. Many start-up companies that offer a competitive alternative simply fail to generate enough demand to be profitable.

2.2.3 Retention

Retention, which generally implies the capacity of upholding something, refers to how the selected variation is maintained over time. However, few products or services remain so satisfactory that they cannot be modified, sometimes improved, with new features or with changes to existing features.

[2]An amusing example of consumer fickleness: the Edsel is now a collector's item.

A well-known example comes from The Coca-Cola Company (Coca-Cola), the manufacturer of some of the world's most successful products. The company has frequently sought to maintain its market position by changing its formulas and products. In 1982, Coca-Cola successfully replaced its diet cola, Tab, with Coca-Cola Light. The company has since introduced many other variations of the original product including Coca-Cola C2, Coca-Cola Cherry, Coca-Cola Vanilla and Coca-Cola Zero. With each variation, the company uses "Coca-Cola" in the name and retains the familiar script logo and red colour on its cans and bottles. We caution, however, the effort to maintain a product/service can sometimes fail rather spectacularly. For example, in 1985, in response to stiff competition from PepsiCo, Coca-Cola introduced a formula change with "New Coke". However, many customers, who resented the change, began a very public campaign to reintroduce the original formula. Eventually the company, with considerable embarrassment, did so, successfully rebranding the former and original product as "Coca-Cola Classic".

Companies with high retention often have strong brands. Thus, they are better positioned to resist the pressure for change and to withstand competitive price wars than companies with weaker brands. For example, Rolex and other Swiss watch manufacturers have survived the Asian competition better than other Western European watchmakers. In fact, of the Swiss watchmakers' annual turnover of more than 10 billion Euros, most sales in recent years are to Asian customers! (http://www.fhs.ch/en/history.php). This example highlights how essential it is to build and maintain a loyal customer base by providing high quality service and adding innovative additional features (e.g. luxury watches with perpetual calendars, world time functions, and precious jewels). Equally important, a company must develop its brand identity to maintain its market niche.

A company that has good retention capability is organizationally resilient. A company may benefit from the reluctance of customers to change brands even if they think other brands are better and cheaper. Customers are often slow to accept new technologies and to crossover geographic and cultural barriers. However, the resilient company will not rely on such customer inertia for protection.

Company stagnation, or inertia, can take different forms. Because of *insight inertia*, companies may not respond quickly enough when customers' tastes and buying habits change or when competitors enter their markets (Hedberg and Ericsson 1978). Often, in the latter situation, companies may not notice a change has taken place, or they may underestimate the importance of the change. A classic example comes from the automotive sector. "The Big Three" automobile manufacturers in the United States (General Motors, Ford, and Chrysler) did not see Japanese car manufacturers as a threat in the 1950s and 1960s when cars made in Japan were first sold in the US market.

Manoeuvrability inertia describes companies' delay in adapting their behaviours and activities when they become aware of changing conditions. It often takes a long time for companies to translate words to actions. There may be many reasons: insufficient cooperation between departments, functions and employees, lack of expertise and knowledge or poor customer contacts. Both insight inertia and manoeuvrability inertia can negatively affect retention capability, leading to weakened organizational resilience (Björkegren 1984; Hedberg and Ericsson 1978).

2.3 Using Variation, Selection and Retention Strategically

The concepts of variation, selection and retention are easy to understand. Because they are linked logically, they are suitable analytical concepts when we try to understand organizational resilience. Used strategically, the concepts are particularly useful in an organization's marketing programmes. Next we pose some important questions related to the three concepts.

2.3.1 Variation

In what way are an organization's products and services unique? Do these products and services differ from those of competitors as far as technical performance, design, service, reliability and credit terms?
How can an organization increase the uniqueness of its products and services and thereby provide new qualities for customers?
What may be the effect on consumer behaviour if competitors add some new variation to their products or services?
How can an organization compete with a competitor's new variation in a product or service? What countermeasures are possible?

2.3.2 Selection

How do customers choose vendors of products and services?
Which vendor qualities are most important to customers?
In what ways do promotional strategies such as marketing programmes, discounts, warranties, credit terms and good service influence customers when they choose vendors?
Which new customers or customer segments are worth pursuing?

2.3.3 Retention

How satisfied and loyal are the organization's customers?
Is it possible at an early stage to detect signals that important customers are considering changing their suppliers?
How can dissatisfied customers be retained?
What effect do changes in customers' buying patterns and competitors' responses to those changes have on an organization's retention capability?

2.4 Disturbances and Crises: A Part of Organizational Reality

It is not unusual to see organizations, when they follow their organizational guidelines and policies, manage disturbances passively and ineffectively. Such mismanagement generally deepens the crisis. A prime example is the recent failure of business leaders and politicians to manage the severe financial problems that had accumulated over many years. For example, General Motors Company's debt was so great that it had to seek bankruptcy protection in 2009. In the first decade of the twenty-first century, several European countries, notably Greece, have faced severe income/expenditure problems that, in some cases, required them to seek bailouts from the European Union, the European Central Bank, and the International Monetary Fund. Similarly, the inability of some companies to repay their loans is creating problems in the Chinese credit market. The unpredictable consequences of this situation are worrying.

Other crises that have called for organizational resilience are the earth's many natural disasters in recent years—earthquakes, storms and floods as well as periods of extreme drought. For example, the 2011 earthquake and tsunami that struck Japan, with damage to the Fukushima Daiichi nuclear power plant, resulted in over 15,000 deaths and horrendous environmental and structural destruction. Another result was increasing criticism of nuclear power as an energy source. Still another example of a human and environmental disaster was the 2010 oil spill in the Gulf of Mexico. Chapter 5 explores this disaster from the perspective of the failure of risk management in a sensitive ecosystem.

Companies naturally try to avoid crisis situations, but this is not a simple task. Even very competent and well-managed companies can be surprised by very serious events, especially natural catastrophes. Companies need resources to use as buffers against such events. These resource buffers may include low levels of debt, a history of strong profitability, good customer relationships, loyal employees and expert technical competences. Some adverse, unexpected events—such as the loss of a large customer, an increase in interest rates, declining product prices, etc.—need not create an acute crisis. If the company has resource buffers, it may be able to deal with the disruption without a crisis. Consider an analogy to a ship. Flooding in one watertight compartment will not sink a seaworthy ship because it has bulkheads that separate the compartments. However, if the bulkhead seal fails, and the water floods other compartments, then the ship is in danger of sinking. Companies also need safe organizational bulkheads.

If a company's products are vulnerable in one way or another, even noncore component supply problems, routine mechanical breakdowns or accidents in the supply chain can have dramatic consequences. A recognized example is Ericsson (see Chaps. 7 and 8), which lost its position as the world's largest mobile phone manufacturer when a fire damaged a subcontractor plant where advanced microchips were manufactured. Ericsson's main competitor, Nokia, reacted very quickly to this news and "commandeered" all the spare capacity for manufacturing these

key components (Sheffi 2005). Without immediate alternative suppliers, Ericsson lost billions of dollars and its premier world position in the manufacture and sale of cell phone handsets.

2.4.1 Positive Aspects of Disturbances and Crises

There are many examples in which organizational crises have been handled effectively. In such crises, when things are not going well or environmental conditions change, wise leaders will make long-term changes that use organizational learning, strengthen employee morale and create conditions that spur innovation.

A well-known example comes from the history of Apple Inc. In the mid-1990s, when the company was experiencing severe problems and was thought to be bordering on bankruptcy, Steve Jobs, the company's co-founder, was reinstated as CEO. On his return, Jobs revived the company's original spirit of risk taking and innovation. He cancelled a series of unprofitable projects, using the freed-up funds for new projects. With products such as iTunes, iPod and iPhone, Apple Inc. returned to profitability and strong cash flows. (When this book was written, Apple Inc. was the world's largest company in terms of market value.) The company had reinvented itself. Had Apple Inc. not experienced such grave managerial and operational problems, it is unlikely Jobs would have been rehired (even at his $1/year salary!). Because of the crisis, radical change was required and implemented.

Another example comes from Sweden. In the early 1990s, when Sweden was in a deep financial crisis, the national government responded with sweeping economic measures that resulted in a balanced budget, decreased government spending and low inflation. In the crisis, the government strengthened its budgetary discipline, took ownership of the largest banks and reduced the rate of inflation. Thus, in the aftermath of the 2008 global financial crisis, Sweden's economy fared better than the European economy as a whole, thanks to these reforms. Given the unpopularity in some quarters of the actions the Swedish government took in the 1990s, without such a crisis, the reforms would probably not be approved by the parliament/voters.

Yet another example of how crises provoke action comes from the Second World War. Following the devastating and humiliating losses at Pearl Harbor and in the Philippines, the United States mobilized its industrial resources, as well as the will of its people, to help defeat the Axis powers. Without these crises, it would have been difficult to overcome the isolationist reluctance of the United States to engage in yet another foreign war.

Moreover, an organization may have unproductive assets and innovative potential that are not fully used until a crisis occurs. It is not unheard of that

management may create a crisis mentality among employees intended to stimulate and legitimize change. In these situations, such crises can be used to demonstrate and strengthen organizational resilience.

A final example of such a managed crisis comes from Ericsson again. After a period of explosive growth in the 1990s, Ericsson saw a sharp reduction in its mobile phone orders, in large part because consumers found them less attractive than competitors' phones. In the years 2001–2003, among other things, the company had to reduce the number of its employees by half and sell additional shares. In the years 2004–2007, when the crisis finally was over, Ericsson exceeded its pre-crisis profit levels. As the result of the crisis, Ericsson became a more effective and agile company. See Table 2.1 for Ericsson's financial results between 1998 and 2007.

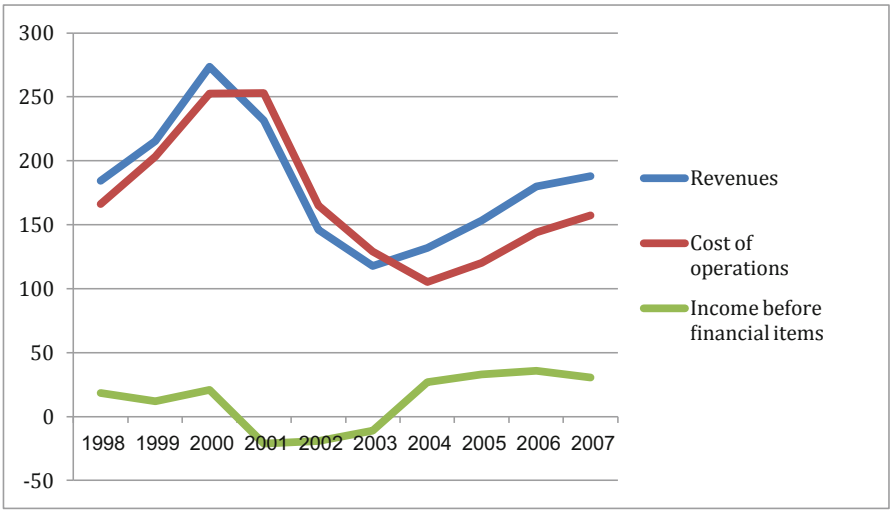

Table 2.1 Financial results: Ericsson 1998–2007

Billions: Swedish crowns	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Revenues	184.4	215.4	273.6	231.8	145.8	117.8	132	153.2	179.8	187.8
Cost of operations	166.2	203.3	252.6	253.1	164.8	129	105.3	120.1	143.9	157.2
Income before financial items	18.2	12.1	21	−21.3	−19	−11.2	26.7	33.1	35.9	30.6

2.5 Sustainability and Organizational Resilience

In recent years, sustainability has become an important business dimension. The sustainability perspective—which highlights the environmental, economic, and social effects an organization has on its surroundings—concerns the use of finite resources, such as fossil fuels, and the contributions to environmental pollution, such as greenhouse gas emissions. Sustainability and organizational resilience are linked concepts because the sustainable use of natural resources contributes to organizational resilience, and vice versa. Several technical resilience resources, such as production technology and supply chains (see Chaps. 3 and 8), often have a significant environmental effect. Company sustainability policies and decisions have far-reaching influences on all life, present and future.

However, there are differences between sustainability and organizational resilience. An organization's resilience depends mainly on many factors other than its environmental influence. For example, it is not assured that investments that increase a company's environmental commitment will increase its resilience when various disturbances and unexpected events occur. An example is the enormous loss the Swedish power company, Vattenfall, sustained after it acquired the Dutch power company, Nuon, with its natural gas plants. A few years later, Vattenfall's 2009 investment (more than 10 billion Euros) was written down by some 40% of the original purchase price. Most commentators thought these write-downs were insufficient. The ambition to be a leader in environmentally friendly energy production has so for been detrimental for the company's resilience.

It is an unfortunate reality that while most consumers and companies claim they favour measures that will result in a cleaner and safer environment, they are most often reluctant to pay for the increased cost of such measures. This is particularly the situation with the cost of electricity produced by natural gas (or nuclear power) versus the cost produced by coal. Therefore, we suggest that sustainability issues should be discussed in the context of technical and social resources as well as financial resources. How much influence, for example, do customers and others have on a company's sustainability management? Because a company's coworkers are its ambassadors, a good start is to anchor the concept of sustainability within the company itself.

Related issues deal with how companies can introduce sustainability in their production and supply chains, how companies can present themselves as environmentally aware and how companies' sustainability measures affect employee safety, rights and compensation. These issues must be managed in ways such that customers are willing to accept somewhat higher product/service prices as trade-offs for the sustainability measures.

Another difference between sustainability and resilience is sustainability's stronger association with preserving and maintaining historic conditions (Zolli and Healey 2012). The resilient company is change-oriented, change capable and willing to challenge the status quo. Radical change is sometimes a must for corporate survival.

2.6 Resilience as High Reliability and Risk Management

An overarching theme in this book is that organizational resilience has broader implications than a focus on the management of real, and often very serious, problems and risks related to natural disasters, equipment failures, accidents and disruptions in logistics flows and IT systems. Thus, in its conclusion, the chapter looks at the research on the High Reliability Organization (HRO) and Resilience Engineering.

The HRO, as a concept, describes the kind of organization capable of avoiding catastrophic events (or, at least, minimizing their effects) such as nuclear accidents, airplane crashes and chemical and toxic emission leaks. HROs exist in environments where the risk of such serious incidents or disasters is a daily concern. Therefore, HROs prepare for such risks with a variety of organizational measures. They provide employees with continuous training, implement effective reward systems, conduct frequent process audits and adopt a continuous improvement management philosophy (Source: Wikipedia, "High Reliability Organization"). HROs also promote risk awareness at every level and decentralize responsibility for risk management to these levels. In this way, trained, experienced and resourceful managers and employees of the HRO are ready to respond quickly and efficiently (Weick and Sutcliffe 2001). Such responses often include actions that do not conform to standard procedures. The ability to perform—performability—is more useful in a crisis than the current dominant emphasis on responsibility in which the focus is on the person or persons in charge who are blamed for errors (Buchanan 2011; Czarniawska 2009, 2013). For additional commentary on the HRO, see Chaps. 5 and 10.

Resilience Engineering is a concept that is closely related to the HRO concept. Resilience Engineering, which is associated with new ideas on safety management, emphasizes dynamic flexibility in responses to unpredictable accidents and risks. As an example, an airplane pilot may have to take innovative rather than established measures to avoid a crash. Or companies may have to improvise impromptu crisis management responses on short notice when accidents or serious disturbances occur. Because it is impossible to anticipate or prepare for all risks and unfolding events, in this perspective, resilience means to "be both prepared, and prepared to be unprepared" (Paries 2011, p. 26).

Resilience engineering focuses on four resilience abilities that are essential for maintaining resilience of sociotechnical systems: the abilities to *monitor*, to *anticipate*, to *respond* and to *learn*. If an organization has these abilities, it is much better equipped to analyse and solve problems in a structured and practical way, and even more important it has the capacity to learn from experience and improve the functioning of the system itself. See Fig. 2.1.

In writing about the dimension of learning, Kayes (2015) points to the lack of appropriate organization learning as a major cause of severe accidents, corporate failures and faulty policies. This book presents several explanations for the breakdown of learning:

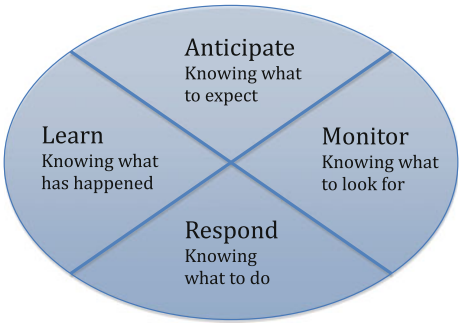

Fig. 2.1 Four dimensions of the resilient organization (adapted from Hollnagel et al. 2011)

- Group-thinking: People dare not express their opinions for fear of losing face if they are wrong or having a deviant opinion.
- Positive thinking: Leaders are often overly optimistic about the future and their ability to foresee, lead and control future outcomes (see The Skandia Case in Chap. 1 for an illustration).
- Rigid adherence to goals: It may be counterproductive to stick to goals for instance when environmental changes make them unrealistic (see The Skandia Case in Chap. 1).
- Strong performance pressures: The effort to achieve certain financial results may leave organizations vulnerable to shocks and oblivious to safety concerns (see The BP Case in Chap. 5).
- Practices of "rational" decision-making: Traditional practices of decision-making can make organizations unwilling to make adjustments of decisions when unexpected outcomes occur.
- Power and dominant norms: Subordinates may conceal or downplay information that may be perceived as negative because of fear of reprisals.

In order to avoid breakdowns in organizational learning, Kayes (2015) argues that companies should be prepared for worst case scenarios, should apply contrarian thinking (i.e. by stimulating people to think differently and to express their concerns) and should see decision-making as a continuous process informed by experimental learning. According to Kayes, companies that work systematically to avoid hazards by using a systematic safety and risk management have a good chance of maintaining long-term resilience.

2.6.1 Risk Management the Safety-I, Safety-II Model

Good risk management of both foreseeable and unforeseeable risks means having enough resources available when needed. This means that safety measures and margins must be built into technical systems. It is far easier, cheaper and safer to add a sprinkler system to a building that can extinguish small fires than to deal with

a major fire and its consequences. The temptation, in risk management, however, is always to save on costs, hoping for the best. Such short-term thinking lies behind many very serious catastrophes that might have been avoided. Recent examples are the Gulf of Mexico oil spill (see Chap. 5), the Bhopal gas tragedy, and the Challenger and Columbia space shuttle disasters.

Thus, when such catastrophes occur, the failure is typically attributed to some breakdown in the organization. Despite the likely, if partial, truth of this conclusion, it is probable that a kind of narrow-minded trade-off thinking was behind the decision to prioritize cost over safety. However, in making trade-offs, the possibly detrimental consequences on efficiency and productivity cannot be ignored. For example, a freight delivery company that rigorously enforces safety measures (e.g. safe loading/unloading procedures, driver training rules, hours-of-service limits) may find itself at a competitive disadvantage with other, less safety-minded companies.

Hollnagel (2014) labels two important concepts in Resilience Engineering as Safety-I and Safety-II responses. A Safety-I response concerns risk elimination of errors in technical and human systems. Most safety instructions follow the logic of Safety-I responses. Yet situations exist in which an automatic and pre-determined response will not produce the best outcome. While such situations are rare and unexpected, they can still have an important effect on human lives and invested capital. In such situations, if skills and expertise are available, a Safety-II response is called for. In Safety-II situations, human actors should carefully monitor conditions and act proactively using their knowledge and expertise.

A combination of Safety-I and Safety-II responses is recommended. Employees should be trained to respond to situations that have not been anticipated by the Safety-I responses. In using Safety-II responses, organizations may not only achieve better outcomes than those achieved by Safety-I responses, but they may also learn how to improve the Safety-I responses. The philosophy of Safety-II thinking is similar to the perspective taken in this book that emphasizes preparation by organizations so that they can deal with complex, uncertain and often adverse situations.

Resilience Engineering has also developed another useful concept in this context: "the efficiency-thoroughness trade-off"—the ETTO Principle (Hollnagel 2009). This principle posits that it is impossible to maximize both efficiency and thoroughness simultaneously. A narrow focus on efficiency or on thoroughness—one at the expense of the other—is an unfortunate decision because it means the preparation for an activity (or risk) requires more resources than the management of it, and vice versa. Although it is quite normal at times to sacrifice thoroughness for efficiency, according to the ETTO Principle, organizations should balance the requirements of efficiency against the demands for thoroughness. This is another way of looking at the balance between cost and safety. Organizations that strive for resilience are well advised to consider this balance carefully.

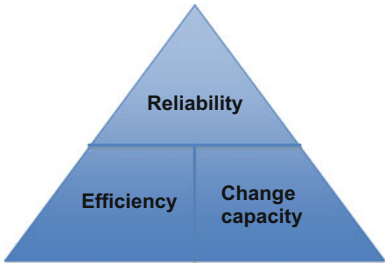

Fig. 2.2 The REC model (author's model)

2.7 Conclusions: A Capability-Oriented Model for Organizational Resilience

The chapter, which takes a holistic approach to organizational resilience, also deals with risk and crisis management. The concepts of variation, selection and retention help us understand how and why new companies originate, grow and prosper. These concepts are also useful in explaining why other companies stagnate, gradually fade away or simply vanish. Through seizing and developing market opportunities in a complex interaction of variation, selection and retention, a company can achieve the essential organizational resilience this book describes.

Predicting the future is best left to fortune-tellers with their crystal balls. Business leaders, who have no such clairvoyant powers, are better off preparing rapid and effective responses to possible and imaginable (as well as nearly unimaginable) events and crises—since they cannot know when, or if, such events and crises will occur. Because unintended consequences are common, leaders necessarily require some humility as they prepare and integrate their financial, technical and social resources in readiness for such situations. Figure 2.2 depicts an equilateral triangle,—The REC model—with the three qualities of the resilient organization: namely, reliability, efficiency and change capacity.

In the model, *Reliability* refers to operational safety, well-functioning risk management, and quality in products, services and customer care (i.e. everything that causes customers and other stakeholders to *rely* on an organization).

In the model, *Efficiency* refers to productivity and to positive economic exchanges with the environment that producers, customers and others find beneficial. In other words, *Efficiency* describes an organization's ability to create value such that stakeholders' expectations are met.

In the model, *Change capacity* refers to flexibility and innovation. A flexible organization responds relatively quickly to changes in customer demand and preferences. An innovative organization can renew itself by developing new products and services and internal processes in the effort to position itself as an industry leader.

We claim these three qualities are essential for the resilient organization. Without reliability, stakeholders will not trust the organization and there are risks of severe breakdowns and accidents. Without efficiency, the organization will suffer

financial problems and resource depletion. Without change capacity, the organization will be unable to respond to fluctuations in customer demand, to the introduction of new technology and to other environmental changes. However, the appropriate balance of these qualities varies from organization to organization, from industry to industry and also over time (business cycles, technological development). While some organizations should focus strongly on reliability (HROs), others should emphasize efficiency stronger, and still others should emphasize change capacity.[3] We will return to a discussion of this issue in Chap. 14 in which we draw conclusions based on the evidence from the empirical chapters.

2.8 Discussion Questions

1. Describe some business examples in which time and cost constraints may have negative implications for product reliability and safety. Specifically, what was involved in the trade-off thinking in these examples?
2. What are the implications of using the biological and ecological concepts of variation, selection and retention in the analysis of organizations, companies and industry sectors? Are these implications useful in understanding how these entities originate, develop, thrive and/or decline? Why or why not?
3. What might be the organizational and managerial consequences if the concepts of uncertainty and unpredictability are given more central attention? Support your answer with examples.

Author Biography

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[3]Related to the cases in this book we suggest the hospital in Chap. 10 should focus relatively stronger on reliability, the supplier in Chap. 9 on efficiency and the fashion company in Chap. 11 on change capacity.

Chapter 3
A Resource-Based Model of Organizational Resilience

Stefan Tengblad

Abstract This chapter presents a three-dimensional resource-based model of organizational resilience. The first dimension is financial resources, i.e. economic assets, earnings capacity and intangibilities. The second dimension is technical resources which include products, services, production and supply chains as well as know-how in areas such as innovation, information systems, management of human resources and commerce. The third and final dimension is social resources which relate to various kinds of relations to stakeholders: employees, customers, suppliers, owners, creditors, etc. The importance of a constructive followership is stressed. In the end of the chapter, it is discussed how these three dimensions interact with each other. Therefore it is a need of taking a holistic perspective in decision-making and the ability to act swift, agile and imaginatively for preventing crises and to exploit opportunities.

Keywords Financial resources · Technical resources · Social resources · Followership · Agility

As defined and discussed in Chapters 1 and 2, organizational resilience is the power over time to retain a selected variation among users and customers by operating in a reliable, efficient, and flexible (change-competent) way. The way in which organizations develop this capability is the subject of this chapter.

The chapter begins with a conceptual model of financial, technical, and social resources. Table 3.1 presents these resources with their five sub-resources, all of which are mutually influential, and the building blocks of the resilient capabilities. (Chapter 14 summarizes the relationship among resources, capabilities, and processes for organizational resilience).

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Table 3.1 A resource-based model of organizational resilience

Financial resources	Technical resources	Social resources
Ability to pay (liquid assets)	Products and services	Followership and relationships with unions
Creditworthiness (financial balance)	Production technology and work organisation	Customer relationships
Earnings capacity (cash flow and profitability)	Logistics and supply chains	Relationships with suppliers and partners
Financial contracts and economic rights	Information systems	Relationships with owners and other financiers
Intangible assets (e.g., patents and goodwill)	Technical know-how and innovation	Relationships with other stakeholders

Table 3.2 Financial resources for organizational resilience

Financial resources
Ability to pay (liquid assets)
Creditworthiness (financial balance)
Earnings capacity (cash flow and profitability)
Financial contracts and economic rights
Intangible assets (e.g., patents and goodwill)

3.1 Financial Resources

Companies use their financial resources to create economic value and to satisfy financial obligations to external/internal parties such as employees, lenders, and shareholders. Financial resources consist of assets with calculable market value (e.g., cash, payment claims, and financial and real estate investments) and of assets with earning and cash-generating power (e.g., factories, machinery, and inventories). Table 3.2 presents these financial resources.

3.1.1 Ability to Pay (Liquid Assets)

Companies meet their immediate financial obligations with liquid assets (e.g., bank deposits and proceeds from the sale of relatively liquid investments such as company shares and bonds). Such assets, which provide a safety buffer against unexpected expenses or declining revenues, give a company financial flexibility, especially if the company plans a major investment or acquisition. The build-up of such assets is the result of continued profitability and the retention of earnings.

3.1.2 Creditworthiness (Financial Balance)

Companies' creditworthiness, which influences whether they can borrow in the financial markets, is primarily based on the evaluation of their ability to fulfil credit conditions even in harsh times. Creditworthiness is largely a function of the relationship between a company's assets and its liabilities. If a company's assets (at book value) are double its liabilities, owners' equity is equal to its liabilities, and then the company's equity ratio (the percentage of assets financed by owners' equity) is 50%. Owners' equity, of course, is neither an asset nor a liability; it is merely the arithmetic calculation of how much assets exceed liabilities. In the unfortunate situation when a company's liabilities exceed its assets, owners' equity is a negative number. In this situation, unless the company can recapitalise with the issuance of new shares or obtain debt relief (by reducing or renegotiating its delinquent debts), generally the company faces bankruptcy.

Outsiders' evaluations of a company's credit history, ratings, and reputation as well as of the industry risk level determine its creditworthiness. Much of this evaluation depends on a company's ability to finance its growth and expansion from its own (retained) earnings rather than from loans and shareholder capital injections. Chapter 7 explores this concept of financial balance in more detail.

3.1.3 Earnings Capacity (Cash Flow and Profitability)

Companies' earning capacity derives from two financial resources: cash flow and profitability. Cash flow is a liquidity calculation that measures the relationship between cash revenues (inflow) and cash expenses (outflow): here we refer only to cash flow from operations. A company's profitability is a calculation that measures the difference between these operating revenues and expenses or, in another calculation, how operating assets change relative to operating liabilities. If the results of the calculations are positive (i.e., revenues exceed expenses, and the increase in operational assets exceeds the increase in operational liabilities) then the company is making a profit from its operations. The more positive this calculation is, the greater the company's profitability.

In the long run companies typically need an annual return on equity between 5–10% to remain financially stable. However, fast-growing companies often require a higher return because a considerable amount of capital is always tied up in the expansion. Such companies are likely to have negative overall cash flows even though ROE remains satisfactory. Such companies usually need to increase their capital base through new loans and emissions even if they have a good profitability.

3.1.4 Financial Contracts and Economic Rights

Companies' financial positions also derive from their financial contracts and their economic rights. An easily understood example of the value of a financial contract is the player contract between a football club and a player. A club's current, long-term contract with a star player increases in value if other clubs seek to buy out that contract. On the other hand, as the contract reaches maturity date or if the player is injured, for example, the contract value decreases. For players who are not stars and are not highly sought after, their contracts inevitably decrease in value over time.

Another example of a financial contract is an option contract that gives its owner (in this discussion, a company) the right to buy or sell an asset at a predetermined price. The value of such a contract depends on the current market price of the asset relative to the exercise price of the option. In most countries, publicly traded option contracts are regulated by law.

3.1.5 Intangible Assets (e.g., Patents and Goodwill)

Companies' intangible assets are quite different from their financial assets (such as shares and bonds) and their tangible assets (such as property, plant, and equipment, and inventories). Intangible assets, which are nonmonetary and nonphysical, include company reputation, patents, trademarks, copyrights, mailing lists, and more. Many of these assets are listed at very minimal amounts on the balance sheet while others, such as intellectual property, do not appear on the balance sheet. However, "goodwill" (the premium price paid by a company over the fair market value of an acquired company's assets less liabilities) is on the balance sheet. Because the calculation of goodwill is subjective, under current accounting rules "goodwill" is tested annually for impairment.

Because the value of most intangible assets (goodwill is the exception) is underreported or not reported, companies' accounting records often fail to reflect their true value. This is the case even though companies refer to their intangible assets when they apply for loans.

3.2 Technical Resources

Companies use their technical resources in their operations to create and maintain profitability, viability, and sustainability. Such resources—some tangible, some intangible—usually have financial value, but it is their use in everyday operations that creates value. They include not only the products and services that are the reason for a company's existence but also its technological developments and

Table 3.3 Technical resources for organizational resilience

Technical resources
Products and services
Production technology and work organisation
Logistics and supply chains
Information systems
Technical know-how and innovation

processes originating in management science and engineering. Communication networks, logistics systems, supply chains, and production systems that create and distribute goods and services are examples. The concept of technical resources, which is considerably broader than that envisioned by the technical sciences, includes commercial, administrative and social technologies (for instance, accounting, marketing, sales, Corporate Social Responsibility, and Human Resource Management). Such technical resources are based in knowledge, primarily as "know-how" or the results of "know-how". More specifically, in business slang, technical resources reflect the "can-do" company spirit that gets things done. Table 3.3 presents these technical resources.

3.2.1 Products and Services

Companies produce products and/or services intended to satisfy market demand. Quite simply, that is why companies exist. Although varying in quality, price, and customer appeal and satisfaction, many companies' products and services are similar to those of other companies. Competitive advantage is, in part, the result of adding some distinguishing feature to products and services (cf. Porter 1990). Differentiation in such elements as design, add-on features, and safety features as well as customer service and support can strengthen a company's organizational resilience. For example, a diner who orders a sirloin steak dinner at a Michelin-starred restaurant will expect to pay more for the meal than if the steak dinner were eaten at the local pub. The quality of the steak may not differ hugely, but the service, the ambience, and the taste and presentation of the side dishes will certainly differ.

3.2.2 Production Technology and Work Organisation

Companies' success depends in part on their ability to offer products and services that can be sold at competitive prices, quality and service delivery. Such success cannot be achieved without the appropriate means for producing goods and services. Production technology is in this sense a much wider concept than manufacturing technology. Production technology includes the processes and work organisation

related to goods/services, marketing, and delivery as well as maintenance, construction, and monitoring. In addition, research/development groups and academic institutions have production technologies and work organizations of their own.

Although production processes vary industry-to-industry and company-to-company, still there are similarities in the quest for efficient production methods, regular maintenance and repair routines, and adequate staffing levels on the factory floor. In the administrative offices, the quest is for smooth recruiting and training processes, functional paperwork flows, and proper financial planning and monitoring. Moreover, coherence between technology and work organisation is needed so that the employees' competences, motivation, and innovation capacities are used to full advantage. As digitalization increases, computers and robots will take a large proportion of human work and it may be the case that human-robot interaction and robot to robot interaction will be an important issue for organizations to master.

3.2.3 Logistics and Supply Chains

Companies depend on other companies for the products and services they cannot produce themselves. An automobile manufacturer, for example, depends on suppliers for many components including sheet metal, tires, windows, electrical systems, interior designs, and finishes. In addition, the automobile manufacturer purchases machinery, tools, office supplies, computers and printers, office furniture, and more. Electricity, water, oil, etc. are also purchased. Therefore, it is absolutely essential to establish and maintain effective logistics systems for the delivery of such products and services (Palin 2015). For some products, the supply chain may be very long indeed when suppliers are in other geographic regions or other countries. Miscommunications, manufacturing delays, misunderstandings about a supplier's capability, and transportation problems are more common than not. The organizationally resilient company manages this large and complex puzzle of purchase and delivery so that operations run smoothly. Chapter 8 describes the role of the supply chain in organizational resilience.

3.2.4 Information Systems

Companies require information systems that provide employees with the information they need to perform their jobs. The systems must also facilitate sending information internally from employees to managers, company leaders, and boards of directors as well as externally from company to customers, suppliers, shareholders, lenders, and government agencies. The essence of a good information system is its ability to collect information efficiently, to communicate it clearly on a timely basis, and to interact with other information systems (Koh et al. 2006). The importance of accurate and timely information is of extra importance when crises occur which can require daily assessments (Siemieniuch et al. 2015).

In the modern economy, we now have a multitude of electronic information systems such as email programmes, accounting software programmes, production control systems, scheduling devices, and web-based order and payment systems. These systems are critical elements in the operations of a company's various processes including scheduling meetings where managers and employees can discuss problems and make decisions. Companies risk production, customer, and financial difficulties when their information systems do not collect and disseminate essential communications. An area of increasing importance for organizations is cybersecurity, which is defined as the security for preventing theft of vital information and digital property and for protecting IT systems from malicious software and hacker attacks, which in the worst case can have a devastating impact on organzations (Gordon and Loeb 2006).

3.2.5 Technical Know-How and Innovation

Companies' growth and success depend partially on their technical know-how and innovation. This is true even for small, service companies. Competitors are always thinking ahead so companies must keep pace. Without adequate technical know-how and value-creating innovation, a company will fall behind its competitors as it loses customers, reputation, and money. Knowledge of the world, of customers' preferences and behaviours, of efficient production processes, of technological developments, and of business management is essential if a company is to offer innovative products and services. For that reason, the organizationally resilient company employs knowledgeable and skilled people. Innovation can also refer to changes in organizational practices (i.e., ingenious solutions to technical problems and efficient coordination routines).

The modern organisation often requires a great deal of technical know-how. Among the many areas where know-how is essential are engineering, accounting, financial controls, human resource management, purchasing, marketing, sales, communication systems, and legal matters.

In the wake of the Volkswagen emissions scandal it is worth noting that high technical know-how can be very risky if the know-how is used in unethical and irresponsible ways. External actors (customers, shareholders, authorities, etc.) place considerable trust in the expectation that companies will behave ethically. When companies break this trust, they incur severe damage to their reputations as consumers and society lose confidence in them.

3.3 Social Resources

Companies use their social resources as they interact with their internal and external environments—in short, with all their various stakeholders as they seek and acquire technical and financial resources. To be organizationally resilient, a company must

Table 3.4 Social resources for organizational resilience

Social resources
Followership and relationships with unions
Relationships with customers
Relationships with suppliers and partners
Relationships with owners and financiers
Relationships with other stakeholders

develop mutually trusting relationships with committed coworkers, loyal customers, reliable suppliers/partners, supportive owners, and various other stakeholders. Table 3.4 presents these social resources.

3.3.1 Followership and Relationships with Unions

Employees and managers (here referred to as coworkers) are key resources for creating and maintaining organizational resilience. For instance, the technical resources described above require dedicated groups of coworkers so that the resources are used to their fullest capacity. The economic consequences of negative coworker behaviours and attitudes can be enormous. These include shirking, irresponsibility, embezzlement and other dishonest acts, arrogance, negligence, and other unacceptable behaviours. The importance of trust is of immense importance. As Siemienluch et al. (2015: 192) put it:

> What binds a company together is not its technical quality and expertise, nor is it the professionalism of its management, important though these things are; the glue is the organisational and human quality of trust.

In the book, we use the concept of followership to refer to coworker behaviours and attitudes such as work engagement, responsibility, cooperation, and trustworthiness (in particular, see Chap. 9). Because managers report to a higher authority, they are also followers. They need to develop their ability to follow because their followership has a large impact on the way the organisation develops and combines its resilience resources. One common problem in managerial followership, however, is a lack of sincerity in communications; important problems may be hidden and/or inferior decisions are accepted passively without critical discussion (Tengblad 2004; Wilkinson 1998).

Followership implies there is, or at least there should be, a reciprocal relationship between leaders and their followers. Furthermore, followership means that followers have an important role as co-producers of leadership and co-creators of workplace conditions (Hollander 1992; Van Vugt 2006). Ideally, coworkers should be as committed to the good of the organisation as to the advancement of their personal interests. Moreover, a positive followership atmosphere requires mature leaders. These leaders delegate tasks, assign responsibilities, follow-up on these tasks/responsibilities, and provide feedback and encouragement as they pursue the

shared company goals. Several chapters in this book explore the followership concept in greater detail (see Chaps. 9, 10, and 11).

The management–labour relationship is inevitably adversarial, more so at some companies than at others. However, a company strengthens its organizational resilience if it builds a mutually respectful relationship with its unions. A cooperative and productive relationship between management and labour can be a valuable resource, especially in worst-case scenarios when staff is reduced.

3.3.2 Relationships with Customers

Companies must, of course, have strong customer relationships. Today unhappy consumers vent their wrath in the public forum of the Internet on the many corporate complaint websites. Dissatisfied customers rage against every actual and perceived blunder by the airlines, railways, telecommunication companies, insurance firms, and banks, to mention only a few industries. Therefore the organizationally resilient company puts a great deal of time and effort into establishing and maintaining good relationships with its customers. The first task is to offer high-quality products and services that perform as advertised so that customers think they have received value for the price paid. The second task, responding promptly and sensitively to customers' requirements and grievances, requires companies to understand their customers and their expectations (Simon and Jonason 2013). A company will grow when customer satisfaction ripples through the consuming public. Some companies even create very loyal followers who cannot imagine abandoning a favourite brand. An example is Apple with its "halo effect." Apple's devoted fans (especially of computers) are generally inclined to purchase other Apple products.

In a certain sense, customers are owners of company brands. This is true despite all the analysis and planning companies put into "brand management". For example, Adam Opel AG, the German manufacturer of Opel-branded passenger cars, may try to position itself as a luxury car manufacturer by offering premium models aimed at BMW and Audi customers. However, customers really determine the position of Opel cars based on their perceptions of the cars' styling, appeal, and technology (Hatch and Schultz 2008). Repositioning a brand, ultimately, is better achieved through good customer relationships in which promises are kept and expectations are met rather than with large-scale and expensive marketing programmes (see Chap. 11 for a description of brand repositioning).

3.3.3 Relationships with Suppliers and Partners

Companies recognize that good relationships with their suppliers (and partners) are valuable resources. In addition to fulfilling contractual terms about products and

services, established suppliers often give purchase discounts, offer reasonable credit terms, and take care to meet delivery deadlines. The quality of a company's products and services depends to a great extent on the quality of the components its suppliers provide. Dissatisfied customers rarely look to suppliers when there are problems; quite naturally, they assume all responsibility lies with the company that sold them the product or service (e.g., shoes, clothes, cars). There is considerable risk of reputation damage for a company whose suppliers do not behave responsibly. Nike and Adidas, the sporting goods retailers, learned this lesson the hard way when facts about their suppliers' use of child labour, their unfair employee treatment, and their hazardous work environments were revealed. Chapter 5 presents another example in its description of how British Petroleum's poor supplier communications and collaboration worsened the Gulf of Mexico oil spill disaster.

3.3.4 Relationships with Owners and Financiers

Companies also depend on good relationships with their owners and financiers. Unhappy owners can replace company management or sell the company to competitors, thereby ending the company as a legally independent entity. Some owners, who take a rather short-term perspective, even see companies as cash cows that exist to provide them with large annual dividends (see, e.g., Chap. 4). In good company–owner relationships, however, company owners can be a powerful resource in their support of management's new strategies and new investments.

Companies need good relationships with commercial banks and other credit institutions for the normal borrowing activity that, for many companies, is part of everyday business. However, in tense borrower–lender situations, when it is a struggle to meet debt obligations, a company may need to borrow more money or arrange loan restructuring. In such difficult times, a company's history of its banking relationships is crucially important. The company then needs to be seen as a reliable borrower, capable of meeting all its financial obligations.

3.3.5 Relationships with Other Stakeholders

Companies should establish good relationships with the wider community. This group includes government agencies, commercial and non-commercial neighbours, the media, and not-for-profit organizations. Poor relationships with members of this group can have grave consequences for a company. Governments make and enforce laws that directly affect how companies do business. The others have the power to influence company image, erect barriers to expansion, turn away customers, damage borrowing relationships, and provoke employee discontent.

A now classic example of damage to company image was the fate of British Petroleum (BP) following the oil spill in the Gulf of Mexico when the media and

the community directed its anger at the company (see Chap. 5). In the general crisis of confidence that followed that grim event, BP lost half its share price, which was disproportionate to the actual economic damage to the company.

Good relations between a company and its external stakeholders and the surrounding community can lead to the development of a certain spirit best described as the community's concern for the well-being of the company. Examples of this spirit are presented in Chap. 9 on the "Floby Spirit" and in Chap. 13 on the "Peddler Spirit". Both chapters describe the community work ethic of loyalty and diligence demonstrated by coworkers.

3.4 The Connections Among the Resources: An Example

Although the organizational resilience model—the three main resources and their sub-resources—is fairly complex in its holistic conception, nevertheless it simplifies the reality that companies (and other organizations) face. The intention of the model is to specify which kind of resources a company needs to develop and display and how these resources relate to each other. Consider the following fictitious, although possible, example.

> A SME manufacturer implements a new production technology based on much more standardised processes that are intended to improve production efficiency (i.e., a change in a technical resource). However, after the new process is implemented, many experienced co-workers find the new process not only monotonous but also inadequate. Because they feel less empowered (i.e., a decline in a social resource), the co-workers are less committed to their work and to customer service. Some skilled co-workers even take jobs with the company's competitors. Of course, their departure means the company loses know-how and skills (i.e., a loss of a technical resource). Within a few months customer satisfaction and loyalty began to deteriorate (i.e., a social resource). Customer relationships deteriorate (i.e., a decline in a social resource) and delivery problems increase (i.e., damage to a technical resource). As customers begin to switch to other companies, revenues and profit decrease (i.e., a decline in a financial resource).
>
> Following these events, the company realises it needs to make another investment that will improve the new production process (i.e., a second change in a technical resource). However, the shareholders decline to make additional capital contributions, and the bank is reluctant to make additional loans given the company's poor economic outlook (i.e., deteriorations in economic resources). At this point, a company partner gets cold feet and takes steps to sell its company shares (i.e., a deterioration in a social resource). The company, now forced to finance the additional investment itself, faces a liquidity crisis that is only exacerbated by a major customer's failure to make timely payments because of its own financial troubles. Next, the company has difficulty paying its suppliers (which impairs relations with key suppliers). The company now experiences increasing pressure from its bank as well as its suppliers.
>
> What is to be done? Should the owners try to sell the company? Should they try to raise capital through a new share issue? Is it possible to restructure the bank loans? If any of these stopgap measures appear to work, are the co-workers content to remain at a company with such a dubious past and even more dubious future? A simple change in a production process has led the company to the verge of bankruptcy.

This example shows that a change in one resource can influence other resources, directly and indirectly, and, as in this example, can even lead to unexpected outcomes of great magnitude. Positive results from changes in resources, of course, are also possible. In our example, if the new production process had reduced costs significantly, and management had taken early measures to support coworker relationships, perhaps customer relationships might not have deteriorated. Then, without the threat of insolvency and the liquidity crisis, the company might have raised the needed funds from its owners and bankers.

The BP Deepwater Horizon disaster and the Volkswagen emissions scandal exemplify the interrelationship of financial, technical, and social resources. Both BP's and Volkswagen's irresponsible use of their technical resources resulted in major negative effects on their social resources (loss of reputation and trust) as well as on their financial resources (loss of goodwill and fines and other costs).

The strength of this model is its holistic understanding of the complex resource base an organisation requires for its development and resiliency. While most management models focus on much narrower aspects, this model takes a more analytic and multidimensional perspective and can be used for reflexive inquiry that leads to learning and a broader understanding by participants (cf. Stacey 2012).

3.5 External Factors for Resource Development

The resources in the organizational resilience model are described in terms of current conditions. For example, the model does not include potential relationships with future customers or projections of future revenues/profits. The model is applied to a company or an organisation at a particular time in the same way that a balance sheet presents the financial assets and liabilities at the report date.

Companies can create (or strengthen) their resources in various ways. For example, using financial resources to make various investments can create other tangible and intangible assets, such as new products, improved production facilities, better customer relationships, and monetary surpluses. Alternatively, companies can change the mix of their different resources so that resources are combined in new ways. For example, financial and technical resources can support social resources so that expensive assets are used more productively (e.g., previously vacant warehouses adapted for storage; underemployed coworkers assigned more meaningful work).

Misallocation of resources, where one resource is emphasized at the expense of others, may also create problems. Many companies spend enormous sums for administrative activities such as data collection, internal controls, and coordination efforts that might have been better spent on meeting customer demands and developing product/service innovations. In such situations, despite large-scale production and dominant market positions, large companies with millions of employees often find, in times of economic crisis, they are administratively

Table 3.5 External influences on organizational resilience

External resources for resilience
Natural resources and other raw materials
Labour
Economic ecosystems
Transportation/communication networks
Social capital

top-heavy because they have prioritized internal control activities over meeting customers' demands.

In this context, it is also of interest to address the other influences on a company's use of its resources that provide organizational resilience. No company operates in a vacuum. Frequently, organizational resilience depends on the availability and cost of raw materials, a competent labour force, and assorted other external factors. Five of these factors are described next: natural resources and other raw materials; labour; economic ecosystems; transportation/communication networks; and social capital. These factors are the ingredients or the building blocks that support the financial, technical, and social resources that in turn provide organizational resilience (Table 3.5).

3.5.1 Natural Resources and Other Raw Materials

Many companies are involved in extracting or refining various natural resources or in growing and processing other raw materials. As an example, the food and agriculture industry supplies the world with grains, milk, fruits, vegetables, poultry, meat, etc. Private farmers, farm co-operatives, and giant agricultural companies need dependable markets for the sale of their products and reliable supplier relationships for the purchase of fertilizers, fuel, machinery, seeds, and chemicals, as well as the purchase/rental of grazing land and storage facilities.

There are many other examples. Mining companies have mines and quarries with high-grade ores. Textile and clothing companies require raw cotton and wool, dyes, and energy. Paper companies use wood fibre and chemicals. The sources of such raw materials are unevenly distributed worldwide. Therefore, because such materials vary in quality and in ease of acquisition and transportation, many companies have competitive advantages over other companies in the same industry sector.

3.5.2 Labour

Companies clearly need to develop and maintain good working relationships with their coworkers, whether they are full-time employees or temporary employees hired for special projects and defined time periods. To perform their work, coworkers often need on-the-job training, which can be expensive and time-consuming. For most

skilled tasks and complicated, specialized work, coworkers (e.g., accountants, financial analysts, engineers, and human relations experts) must be highly educated and often highly experienced. Companies whose worksites are in areas distant from major population areas often have difficulty in hiring such people.

Another problem (or perhaps it is an opportunity) is that labour costs vary greatly across the world. These variances only partly reflect real differences in people's productivity. For this reason, many companies retain their headquarters in their home country or in low tax countries and locate their manufacturing facilities elsewhere. In this way, companies acquire cheap, unskilled labour abroad and retain the managerial activities of purchasing, research, etc., at home. Sometimes the benefits of cheap labour, however, become a problem when labourers' substandard wages and working conditions receive public attention. Problems with quality and coordination can also offset large differences in labour costs.

3.5.3 Economic Ecosystems

In addition to proximity to areas with natural resources, raw materials, and labour, organizationally resilient companies benefit from business-friendly environments. These so-called economic ecosystems generally have a network of financial and business experts (e.g., bankers, consultants, and venture capitalists) and often have a business cluster identity from the concentration of interconnected businesses (see Chap. 12). Such networks and clusters are typically found in or near national and regional centres where there is a large consumer public, a good infrastructure of services and facilities, government agencies, and not-for-profit organizations. It is worth to mention here that a location within major population areas is not an advantage for many companies. Wages and facilities are more expensive at such places and employee commitment may be lower compared to more rural areas. A good combination for a smaller industrial firm could be a location 1–2 hours driving time from a major population and transportation hub. It can be worth mentioning that the world's by far largest private employer, WalMart originates from Bentonville in Oklahoma, and there are many similar cases (VW, IKEA, Néstle).

3.5.4 Transportation/Communication Networks

With the rapid globalisation of the world's markets in the late twentieth century and early twenty-first century, companies are increasingly dependent on the availability of first-class transportation/communication networks. Companies that buy and sell goods require excellent transportation networks. These networks are usually identified as their production and supply chains (see Chap. 8). Companies that transport large products such as automobiles or bulk cargo such as grains are best located

near ports and/or railways. Steel mills, for example, which receive raw iron ore and coal and ship finished slabs and ingots, are preferably located near deepwater ports.

Companies also benefit from well-maintained motorways and efficient rail systems because coworkers can live some distance from work, often in more desirable communities than their places of employment. Companies also need access to national or international airports and to high-speed Internet infrastructures. It is difficult for a company to be organizationally resilient without such transportation/communication networks.

3.5.5 Social Capital

Companies benefit from what sociologists identify as the social capital of a community (Putnam 2011). Social capital is the sum of a society's values, relationships, and economic, political, and social norms. These include its labour force, its legal, social, and political institutions, its entrepreneurial spirit, and its tolerance for differences, all of which underpin and sustain society (see Chaps. 11 and 13).

At the company level, such social capital can support coworker empowerment, managerial openness to new ideas, relationships of trust (company and coworker, company and supplier, and company and customer) and productive management–labour relations. It is essential that company owners and managers embody and promote this spirit of "better together". Without the cooperation, reciprocity, and harmony of these social networks, communities and their companies are less likely to develop economically.

3.6 Resilience for (Fast) Adaptability

Access to these resources by itself is no guarantee of a company's profitability and sustainability. A key aspect of the organizational resilience model is the integration of the various resources. Thus, a company's relationships with its owners and its customers (i.e., social resources) influence (in a somewhat simplified way) its product/service development (i.e., technical resources) and its profitability (i.e., financial resources). For example, product development should recognize customer preferences, processes, and innovations should be promoted, transportation/communication networks should be developed, and coworkers should be actively engaged in solving the inevitable "teething problems" in the early stages of system and product development.

The organizationally resilient company combines its resources effectively and efficiently. Additionally, it is often necessary to change and reconfigure how the resources are used. Organizationally resilient companies can make such adaptations quickly. Companies that are burdened by resources that they use only marginally, or not at all, lack this adaptability. It is poor strategic policy to tie up capital in

unused assets that could have been used to pay down debt or to make new investments in more productive assets.

Similarly, it is poor management policy to build customer relationships by predatory pricing, to support coworker relationships with non-market (i.e., excessive) salaries, or to overpay suppliers for goods and services. Such short-term policies rarely support long-term strategies. It is a real challenge for an organisation to use its resources in a reliable, efficient and adaptive way. Often the challenge involves personnel and departments. For example, sales personnel may want to give discounts to promote sales even though the practice may reduce profit. Or managers in production may request more people instead of dealing with problems of weak productivity. Or the IT department may request a larger budget for the purchase of costly IT systems with only meagre effects on overall efficiency. These are only a few of many such demands. Management is in a tricky position. Agreeing to these demands often implies acceptance of low efficiency. An effective allocation of resources should create a certain pressure on departments to make improvements. However, there is also a risk that too tight resource allocation will result in resource depletion.

The real company challenge is to act flexibly and imaginatively, as customer preferences and demands change, in the production of products and services that can be sold at competitive yet profitable prices. The art of organizational resilience is deciding which combination of, and emphasis on, resources works; because experience is the best teacher, the challenge is to generate organisation learning based on experience.

3.7 Discussion Questions

1. Analyse an organisation you are quite familiar with in terms of the resources for the resilience model. In your analysis, discuss which resources in the model seem most important for this company, and whether and why the company should focus on other resources as well.
2. Discuss the linkage between financial, technical, and social resources in terms of specific business activities (or business sectors) you are acquainted with. In your answer, explain how a change in resource emphasis can influence the use of other resources.
3. Which practical measures can a company (or other organisation) take that will improve its use of financial, technical, and social resources as a whole?

Author Biography

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Part II
Applying the Organizational Resilience Framework

Chapter 4
The Champion Company that Disappeared: A Resilience Resources Analysis of Circuit City

Stefan Tengblad

Abstract *Good to Great* by Jim Collins and colleagues (2001) is one of the most influential management books in the last decades. In this chapter, a critical analysis of the book is made using the framework developed in the book. This is made through an analysis of the fate of Circuit City, one of the heralded companies in *Good to Great*. The critique contains displaying methodological flaws and the one-sidedness in *Good to Great* where simple and timeless business models fanatically applied is seen as a general recipe for success. On the contrary, the fate of Circuit City demonstrates the need of developing a strong financial base, efficient operations, good stakeholder relations as well as the ability to alter existing business models and to develop new models.

Keywords Good to Great · Circuit City · Resilience analysis

The resource-based organizational resilience model presented in Chap. 3 can be used to analyse both organization successes and failures. This chapter examines why a formerly successful company, in a short time, became insolvent and then went out of business. The analysis is of interest also because it is severely critical of one of the most-praised management books of our time: *Good to Great: Why Some Companies Make the Leap. ... And Others Don't* by Jim Collins.

4.1 *Good to Great*: A Handbook for Wanna-Be Top Executives

To date, one of the most successful management books in the twenty-first century, in all categories, is Jim Collins's *Good to Great,* published in 2001. By 2007, the book had sold over three million hardback copies and had been translated into 35

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languages (Niendorf and Beck 2008). One important explanation of the book's success is that its central theme deals with how and why companies, in the course of their normal activities, achieve, and sustain success. This is an issue of intense interest to all business leaders.

Unlike many other popular management books, *Good to Great* is based in systematic research that was conducted by a 20-member team. Collins claims that this research resulted in the uncovering of five universal leadership principles for sustainable success: (1) Leaders of successful companies place their companies' success before their own, (2) recruit the right kinds of employees, (3) base decisions on business facts, (4) specialize in defined areas of knowledge, and (5) work continually to uphold the company's guiding values. The book's claim is that these five principles, which are then combined with the *hedgehog concept*—when the focus is on one ingeniously simple idea—and the *flywheel concept*—when the focus is on a disciplined fanaticism in anticipation of a major breakthrough—form a kind of general recipe for business success, regardless of industry, location, or time.

Good to Great analyses 11 companies in order to illustrate the validity of these five principles. These companies, which were in various industries (e.g., banking and finance, retail, and pharmaceuticals), were selected for the research because they enjoyed greater stock market returns than their industry averages. According to Collins, a "level 5-leader" at each company achieved success by following the five principles based in the hedgehog and flywheel concepts. However, there is a critical problem with Collins's analyses. Two of 11 "champion companies" in the study went bankrupt less than a decade after the book's publication: the giant home mortgage corporation, the Federal National Mortgage Association, commonly referred to as Fannie Mae, and the electronics corporation, Circuit City.

Fannie Mae was drawn into and was an active participant in the American housing bubble that eventually burst in 2008 when homeowners could not service their mortgage loans on their overpriced houses in the real estate and economic downturn. Collins writes that Fannie May had developed an ingenious concept for evaluating credit that was pivotal in transforming the financial institution into a champion company. Nevertheless, Fannie Mae turned into an economic catastrophe as foreclosure rates increased. The situation led to the most costly bankruptcy ever for American taxpayers.

This chapter describes in detail events at Circuit City, which, unlike Fannie Mae, was much less subject to government regulations and accountability requirements. The chapter compares Circuit City with Onoff, a Swedish retail electronics chain that went into bankruptcy in the summer of 2011. The chapter concludes with a discussion of the problems related to leadership concepts and values. A company's success depends on its ability to adapt to change, to deal with crises and challenges, and to achieve a comprehensive build-up of its various resources. Before this analysis, I offer some comments on the book *Good to Great* and on Circuit City's rise and fall.

In *Good to Great,* Collins is very critical of the many management books that praise leaders as the heroic creators of enormous companies that continually increase in size and worth because of their leaders' brilliance and forceful

personalities. Collins charges that company leaders who talk more about themselves than their companies in interviews in popular business magazines are dangerous for the general economy. Such interviews focus more on the leaders than on their jobs, namely to lead the company. With this perspective, Collins appears to be critical of "heroic leadership" (cf. Sveningsson and Alvesson 2010).

Collins describes the leaders in the champion companies as fairly uncharismatic, ordinary, and disciplined people who are intensely focused on their companies. These leaders usually promote the company values of thrift, hard work, discipline, caution, and perseverance. If Collins had chosen a Swedish company leader for his research, it surely would have been Ingvar Kamprad, the founder of IKEA, the world's largest furniture retailer. Kamprad, who controls enough resources to buy Volvo AB and Volvo Car Company as well as some other automotive companies, is the personification of these values. He still drives an old Volvo and flies economy.

It is easy to admire the professional and praiseworthy kind of leader Collins venerates and that Ingvar Kamprad and others may embody. Leaders enjoy reading that because of their self-sacrifice and hard work, their companies have flourished. Does not such martyrdom justify their large salaries and bonuses? If a company reflects the leadership style of its top management, then the modest leader of a successful company who declines to burnish his or her halo and instead enthusiastically buckles down to the everyday work of running the company is the real hero.

The problem with this view of the "martyr-leader" is that while it is reasonable to conclude that a company leader's behaviour normally has a significant influence on the company, such a leader portrait is much more complicated than the one Collins paints. A company leader is part of a complex context of economic conditions, an ever-shifting competitive environment, new technological developments, intricate business relationships, arrangements with coworkers with specialized and varied expertise, and different kinds of financial assets, product ranges, and production facilities as well as societal relationships. It does seem rather a simplification to conclude, as Collins does, that a company can succeed as long as its leaders perpetually apply the hedgehog and flywheel concepts in their decisions and actions.

Common sense and clarity about what it takes to achieve company success are, of course, important leader attributes. However, what is essential for success is usually not these attributes themselves but rather if leaders, working with many others, can manage all the severe work challenges. These challenges may relate to a decline in demand for products/services, the introduction of new and better technologies by competitors, customer dissatisfaction, production interruptions, cooperation problems, various employer–employee conflicts, insufficient capital investment, and much more.

To draw an analogy with the world of sport, football players know the goalkeeper is in a vulnerable position against "hard and well-directed shots to the top corner". This knowledge plus the awareness of the "general principles of passing and dribbling", however, are not as important as the scorer's physical ability to place the ball with speed and precision when confronted with skilful opponents who will do their utmost to block the ball. It is not the knowing what to do that is difficult in management and in sports; it is doing it skilfully.

To specify, while most leaders are aware they should be visionary, fair, energetic, and able to communicate effectively, very few—probably most—are unable to demonstrate these desirable work characteristics on a regular basis. Communicating well-formulated ideas clearly and enthusiastically should be fairly simple, but in a demanding and chaotic world, this is rather difficult. According to Daniel Kahneman, a Nobel Prize laureate, it is an illusion to think people can handle uncertainty with a few simple and well-formulated recipes. Yet this illusion offers comfort and allows us to perceive the world as more ordered, understandable, and predictable than it really is (Kahneman 2011, Chap. 19). Books such as *Good to Great* satisfy a need for simple explanations of decision-making in times of uncertainty. The main reason such books are successful is that they fulfil their purpose as security blankets for leaders.

From a scientific perspective, other objections to Collins's book may be raised. Collins and his colleagues cannot demonstrate that it is the application of the five leadership principles alone that led to the success of the eleven companies described in his book. There may be other explanations for these successes, but Collins more or less ignores anything except his leadership philosophy. Technical innovations, favourable competition developments, good timing, and luck, for example, may also influence success, possibly even more than his five leadership principles. A study of leadership principles naturally identifies and explains them, but it should be acknowledged that such principles may only be partially contributory factors to success.

Moreover, the 11 companies in Collins's book that achieved greater success on average than the Fortune 500 firms in the United States from 1965 to 1995 were not more successful from 1995 to 2005 (Niendorf and Beck 2008). In a follow-up analysis Resnick and Smunt (2008), using the same criteria that Collins did, found that only one of the eleven companies—Walgreens, the largest drug retail chain in the United States—still qualified as a *Good to Great* company. Even more problematic, of course, is the fact that two of the 11 companies went bankrupt less than a decade after Collins's book was published. Temporary successes seem to have had a large influence on which companies were selected as "champions" in these leadership studies.

There are also troublesome methodology problems with Collins's book. For instance, how can Collins and colleagues claim with certainty that the eleven companies transformed their leadership practices in the years 1964–1984, some 15–35 years before their study was conducted? It is highly improbable, for example, that the companies' board minutes provide information detailed enough on how the "hedgehog" concept was used or what was done to increase the power of the "flywheel" concept. Interviewing retired company leaders and reading old financial reports do not provide the empirical precision needed to inspire confidence in the conclusions about what really occurred at these companies.

In this kind of "rear view mirror" analysis, it is difficult to describe the companies that, in the same time frame, took actions similar to those taken by the *Good to Great* companies and yet failed to enjoy the same success. Company leaders must act in the present without the benefit of hindsight. Yet Collins's schematic representation of the fanatically driven company leader does not address the

inevitable uncertainty found in all phases of a champion company's development. Moreover, his book ignores the fact that such similar, single-minded leadership may result in costly failures at other companies (which are never detected). The book describes only successful cases—at the time of its writing.

The assertive and skilful rhetoric of *Good to Great* can easily convince the reader the whole truth and nothing but the truth is presented. The book does not stimulate critical discussion or a creative search for new answers or alternative explanations. Moreover, it does not focus on important topics such as uncertainties, risks, and threats.

The enormous success of *Great to Good* is not attributable to its underpinning scientific quality, but the book is well written, informative, humorous, and very entertaining. It may remind some readers of the adventure film *Indiana Jones and the Raiders of the Lost Ark.* Collins and colleagues portray themselves to a large degree as fearless adventurers hunting for the business Holy Grail—in this case, a general success formula. The book is also very appealing to the wanna-be business leader. In fact, the book is something of a handbook for leaders because it gives them the chance to reflect on their leadership and to compare themselves with other flesh and blood leaders without feeling inferior or unimportant. Collins emphasises that a successful leader need not be an intellectual genius, a charismatic communicator, or a member of the more glamorous business sectors such as IT, the media, or the telecom industry. It is enough that a leader be a little drab, a little nit-picky, stubborn, and simply focused on achieving good results by following very simplified management principles. Many readers probably conclude: "If it doesn't take more than this to be a successful leader, I should be able to manage it."

However, as the following resilience analysis shows, there are many important aspects of company success that Collins has missed and that contributed to the fate of Circuit City. This story is more complex and doesn't portray business leaders as great heroes, but it is truer.

4.2 Circuit City—A Retailer's Rise and Fall

Circuit City began as small, electronics retailer in 1949 in Richmond, Virginia, primarily selling television sets. At that time, it was called Wards Company. The company expanded in the 1960s through acquisitions, and in the 1970s the company adopted the superstore chain concept that was an innovation in what was then a local and small-scale industry. In 1984, the company was listed on the New York Stock Exchange under the name Circuit City. The company grew rapidly as it established itself as the leading retail chain for consumer electronics in the United States. In 1991, Circuit City expanded into the used car industry with the founding of the company now known as CarMax, which spun-off from Circuit City in 2002. In 2010, CarMax sold about 600,000 used cars and had sales of approximately $9 billion. In 2014, at the time of writing, CarMax was the largest used car dealer in the United States (source: Circuit City and CarMax in *Wikipedia*).

Between 1984 and 1994, shares of Circuit City skyrocketed on the New York Stock Exchange. In these years, shares of Circuit City returned more than 22 times the Fortune 500 average (Collins 2001). In 1999, Circuit City's gross sales exceeded 10 billion dollars for the first time, and it employed nearly 50,000 people. In large part, Circuit City's success was attributed to its standardized service concept based on its "4-S" model of service, selection, savings, and satisfaction that supposedly gave it a competitive edge.

Subsequent events, however, told a different story. Early in the twenty-first century, Circuit City's profits began to fall. Although the company reduced its work force in response to this situation, it still retained its good stock market standing, mainly because it bought back many of its own shares. In total, the company repurchased shares valued at 1.2 billion dollars in the years 2003–2006 in order to maintain the historic strong stock return. But in the beginning of 2006, profits began to decline precipitously, and by the end of 2008 the company was trying to defer its loan payments under the U.S. debt restructuring rules. However, on January 16, 2009, after it had failed to find a new lender or new investors, Circuit City announced it had ceased operations. All its 567 stores closed, and remaining 30,000 employees lost their jobs. Circuit City published the following statement on its website:

> Circuit City would like to thank the millions of customers who have shopped with us during the past 60 years. Unfortunately, as we announced on January 16, 2009, we are closing our stores.

4.3 A Resilience Analysis of Circuit City

How could a company that had enjoyed such formidable success in the 1980s and the 1990s completely disappear through bankruptcy only eight years after it was hailed as a sustainable champion for its strong corporate values, its simple and clever business concept, and its leading position in the electronics retail market? There is no easy answer to this question because a number of factors are involved. However, using the resource-based resilience model presented in Chap. 3, it is possible to construct a relatively comprehensive explanation.

4.3.1 Financial Resources

The most obvious and direct reason for Circuit City's collapse was its acute liquidity crisis that meant the company could not pay its suppliers and its employees. Given this crisis, operations could not continue without more cash. Basically, a company can raise funds from two sources. The first source is the company's earnings capacity: when customer revenues exceed operational expenses. The second source is the company's capital capacity: when lenders and investors provide funds. Both groups expect, in one way or another, return of and return on their

Table 4.1 Financial data for Circuit City 2005–2008 (millions USD)

	2005	2006	2007	2008, 6 months
Turnover	11,514	12,430	11,744	4692
Operating profit	215	−5	−371	−393
Net income (–loss)	140	−8	−320	−404
Liquid assets	838	740	297	92
Other assets	3231	3267	3449	3308
Liabilities	2144	2216	2243	2323
Equity	1955	1791	1503	1077
Total capital	4069	4007	3746	3400
Equity/assets ratio (%)	48	45	40	32

investments (debt repayment or share appreciation and interest payments or dividends) Table 4.1 presents financial data for Circuit City for the three and a half years before its closure.

From these figures, we can see that Circuit City's liquid assets decreased as their losses increased. Between 2005 and 2008, the company's liquid assets decreased by around 700 million dollars (838–92 million), and losses totalled around 732 million dollars from 2006 to 2008. Continued business losses ultimately lead to cash flow problems when there is insufficient money to pay suppliers, lenders, and employees. As a company's losses increase, its financial position, including its creditworthiness, deteriorates. In this situation, a company's liabilities do not necessarily increase in absolute terms, but as losses increase, financial assets and equity decrease, thereby threatening solvency and liquidity. Solvency (i.e., equity/assets ratio) is a measure of a company's creditworthiness. As this ratio decreases, repayment of the lenders' current loans is at greater risk, and lenders are increasingly disinclined to renew old loans or make new loans. Circuit City was unable to get new loans to cover the losses in its operations and it went very rapidly bankrupt as the financial data in Table 4.1 indicates.

One way to avoid a liquidity crisis and the nearly inevitable decline in creditworthiness is to ask the shareholders to buy more company shares. However, Circuit City did not call for new share purchases, probably because of the difficult economic years in this time frame, especially the worldwide financial crisis that began in 2007–2008. Moreover, in 2006 and 2007, company management thought it could ride out the storm by streamlining operations and without seeking capital injections. However, company management was mistaken, the financial resource-base proved to be insufficient. As the losses escalated, the investment community lost confidence in Circuit City. Banks would not loan the company more money, and the suppliers began to demand advance payments for deliveries.

The Circuit City case shows that profitability is essential for maintaining needed financial assets as well as for maintaining the world's confidence, especially in challenging economic times. If a company operates in a cyclical industry, with ups and downs in profitability, a wise plan is to hold considerable financial assets and to maintain a low debt structure. A strong balance sheet provides comfort to lenders

and investors. From bitter experience, many companies have found the most difficult time to obtain new capital is when their capital needs are the greatest. In good times, a company finds it has many friends; there are far fewer friends when adverse events arise.

It is notable that Circuit City's equity and liquid assets were rather small compared to its turnover numbers. Equity in 2005 was equal to the turnover of about two months, and liquid assets were equal to the turnover of about one month. Circuit City, therefore, was very vulnerable in a negative and unpredictable economic environment where labour unrest, financial crises, and changes in the competition and in market demand were possibilities. With hindsight, it is now evident that Circuit City's share repurchase programme of 1.2 billion dollars (in the years 2003–2006), which was intended to support its share price, was very reckless. Liquid assets and equity, which were already reduced by the share repurchases, continued to decline with the losses in 2006–2008. Furthermore, Circuit City had no long-term contracts or patents. In May 2009, Circuit City's main intangible asset, its identifiable brand—its logo, etc—was sold for the modest amount of 14 million dollars, an amount that was barely equal to a half-day of sales revenue before closure.

If Circuit City's management had focused more on the company's financial risks and had strengthened its financial position, the company might have survived the economic downturn. With its narrow focus on shareholders and their investment that was apparent in the large dividends and the share repurchases, the company significantly increased its vulnerability in crisis times.

It is quite remarkable that *Good to Great* does not address the importance of financial resources for a champion company. There is no discussion on whether such companies are more profitable, more liquid, or less leveraged than other, less acclaimed companies. In addition, Collins and colleagues do not comment on any financial issues and their importance except for some remarks on shareholders' returns. It almost seems they find financial assets irrelevant: a company's future depends on how its leaders refine the hedgehog concept, spin the flywheel, and communicate corporate vision with a single-minded fanaticism. A company's success is measured only on the movement of its share prices; the only criterion for being a Champion company in the book is a long term, above average increase in its share price.

Given the fate of Circuit City, *Good to Great* leadership principles seem more to explain why once-successful companies fail. For example, Circuit City increasingly simplified its original business concept rather than adapt it to the changing retail market (e.g., online shopping and mega-malls) and to the more aggressive competition in the industry. Far from being a champion company, Circuit City, despite its position as a Fortune 500 company, was revealed to have remarkably weak financial resilience. Therefore, the company was very vulnerable to external changes.

4.3.2 Technical Resources

The first technical resources in our resilience model are products and services. Circuit City as a typical retail company has no manufacturing capacity or proprietary products, but buys its products from the same manufacturers as its competitors. With such a business plan, it is difficult to position a company brand and to attract loyal customers in the same way a company can that manufactures and sells unique products, adapted to customer preferences. However, Circuit City did have an important resource in its linkage of products and service: originally the company employed well-educated and highly motivated sales people. Collins emphasises that the high quality of service that Circuit City provided was a key factor in its success. Unfortunately, mismanagement destroyed this resource.

Under the pressure of its decline in profitability, Circuit City decided in 2003 to reduce costs by firing nearly 4000 sales people who were on commission. The company replaced these people with employees who had low, monthly salaries (Eames 2009). Management acted similarly at the end of 2007 when most of the remaining "associate employees" were replaced with poorly skilled and poorly trained personnel. According to an interview in *The Washington Post*, this action was not well received by the consumer public (Joyce 2008). Here ended the last hope of turning the company around. Service deteriorated with the decline in employee competence and commitment; the employees had become store clerks rather than product sellers. It was now very difficult for both customers and other stakeholders to recover their confidence in a once very successful company. The change towards unskilled employees decreased both the reliability and the change-capacity of the organization (see the REC-model, Fig. 2.2).

The second technical resources in the resilience model are production technology and work organization related to productivity and quality. A company with high productivity can often offer lower prices than its competitors. Here also Circuit City fell short because of its dwindling market share and its inability to turnover its inventory as fast as its competitors. Consumer retail giants such as Walmart and Home Depot in the United States can take advantage of their massive retail networks that allow them to offer their consumer home electronics at lower prices than Circuit City ever could.

As far as logistics and supply chains, in the 1980s Circuit City had a valuable resource in the form of its unique superstore chain concept with stores throughout the United States. However, competitors, notably Best Buy, soon copied this concept. At the beginning of the 1990s, Best Buy clearly had an inferior market position to that of Circuit City (Best Buy had only 70 stores while Circuit City had 400 stores). However, Best Buy's store locations were more strategically selected because they were adjacent to the new and modern shopping malls. Best Buy was willing to pay the high rent such locations could demand (Eames 2009).

For Circuit City, store relocations created a problem. If the company wanted to open a new store in a better location, it was likely to have to close a nearby store and thereby incur a loss. In the short term, the store relocations would reduce

overall profitability; in the long term, however, not relocating stores proved devastating financially. By 1996, Best Buy's sales surpassed those of Circuit City. By 2008, Best Buy's turnover was 2.5 times that of Circuit City.

The fifth technical resources in the resource resilience model are technical know-how and innovation. Circuit City's advantages in this area perhaps best explain why Collins described the company as a champion. The company showed its flair for innovation partly when it conceived of itself as a nationwide superstore for home electronics and partly when it entered the used car market with the CarMax chain that eventually became almost as big as Circuit City (before Circuit City's collapse). However the CarMax venture was founded on principles as far from the hedgehog and flywheel concepts as could be imagined. Collins makes no reference to this successful diversification in his book. Perhaps this new venture did not support his cherished framework. Taking a different perspective, adherence to those concepts could be the very reason that Circuit City did not become a successful, e-commerce actor. Circuit City continued to focus on the traditional superstore concept that others copied and surpassed through more dynamic competition. Is it possible the extravagant praise of Circuit City in *Good to Great* contributed in some way to the company's conservative, "passive approach to change in its final years?" Did praise from one of the world's most influential management books, persuade Circuit City's owners/managers there was no reason to respond to a changing business environment other than to even more intensively stick to the existing business model?

4.3.3 Social Resources

A company's social resources consist mainly of its relationships with its employees, customers, suppliers, owners and lenders. The sales people initially employed by Circuit City were motivated by their commission arrangement to provide excellent service and to sell as many products as they could. They also knew their products. It was clear that a functional human resource approach disappeared when less qualified, salaried sales people replaced these highly qualified people who sold on commission (Eames 2009). Complaints about an unengaged and incompetent staff were legion in the last years of Circuit City as its service reliability severely deteriorated. With the dismissal of the many specialist positions, Circuit City could no longer be described as a high quality, retail chain. Now Circuit City was just another home goods retailer like Walmart or Home Depot—although a substantially smaller retailer with a much narrower product range and somewhat remote store locations.

This rebranding of Circuit City as a more traditional, low price retailer had a customer effect. Customers who were less focused on the quality and features of the products began to comparison-shop at competing stores. Customers who valued good service and a broad assortment of quality products shopped at specialist chains such as RadioShack.

In addition to its problems with unengaged, unknowledgeable sales people and with disillusioned, dissatisfied customers, Circuit City had difficulties with other stakeholders who were unwilling to step into save the company. The suppliers, who also sold to competing companies, were uninterested in relaxing their credit terms, the banks required collateral for new loans, and the shareholders declined to inject new capital. Even the increase in dividends did not strengthen Circuit City's relationship with its shareholders despite the amazing return on investment they had enjoyed in the good years. Unlike the situation with the home mortgage giant, Fannie Mae, there was no government support (or even community support) for Circuit City in its crisis. This was not surprising given that Circuit City was a private sector enterprise for which the loss of some 30,000 jobs, spread across the United States, did not pose a serious problem for the national economy or for any particular region or community.

It is rather remarkable that Collins and colleagues call so little attention to the importance of a company's social resources (except for dedicated employees). For Fannie Mae, a federal government takeover saved the company because various officials and leaders feared that, without a massive rescue, millions of conscientious homeowners would suffer; even more, bankruptcy by Fannie Mae would spread uncertainty and chaos throughout the entire economy. This was certainly not the case with Circuit City.

4.4 Onoff—A Swedish Parallel to Circuit City

On July 11 2011, the Board of Onoff Sverige announced the company had filed for bankruptcy status. This story of the rise and fall of this consumer electronics/appliance company has many similarities with the Circuit City story, although, with a staff of only 900 employees, Onoff was a much smaller company. Both companies had a business concept that was imitated, even improved upon, and both companies developed and used their resources poorly. When Onoff's bankruptcy was announced, few industry experts were surprised. The company's market position had weakened, its profits were declining, and its store network was rather unattractive and unfashionable. In addition, Onoff's products offered no particular competitive advantages. Like Circuit City, Onoff's shareholders were unwilling to invest more funds in the company despite their impressive, earlier gains on their investments.

Hans Westin, a Swedish entrepreneur, opened the first store in Onoff's retail chain in 1973. The store, called Telecall, was in the Stockholm community of Åkersberga. In 1982, after the acquisition of Sigges Radio, the company changed its name to Onoff. During the 1980s, Onoff entered the superstore arena for consumer electronics/appliances in Sweden, with, among other things, interest-free instalment plans and customer satisfaction guarantees. After another acquisition in 1990, Onoff had 18 stores and 400 employees. In 1997 and 1998, after still more acquisitions of

regional competitors in the country, Onoff had a nationwide presence and was the market leader in the sale of home electronics and appliances. The company then had 79 stores and 1000 employees. Like Circuit City, Onoff was very profitable in the 1980s and 1990, and paid the family owners large dividends.

Onoff, which focused on becoming a leader in e-commerce for home electronics/appliances, opened its first Internet store in the year 2000. The company received several awards for its website. However, competition in the sector increased, especially from Elgiganten that is owned by the British Dixons Retail plc, Europe's largest home electronics company, and from Media Markt, a major German chain that opened its first store in Sweden in 2006. In the years before Onoff's bankruptcy, price competition increased enormously in the sector, leading to large losses. Onoff, as a relatively capital poor company, suffered greatly from the competition. The losses from the Onoff bankruptcy amounted to almost 300 million Swedish crowns (approximately 30 million Euro).

To summarize, the European competitors, who had more and larger stores and a greater assortment of products, left Onoff behind. Companies that simply drive in the old, traditional way, in a smooth rut although at a higher speed, à la Collins's descriptions, may crash. Companies must take risks, develop new concepts, and think in new ways when faced with robust competition. A business concept such as the superstore for home electronics invites others to compete with and even to outperform the concept's pioneers. Ideal settings for store locations will also change as consumer shopping preferences change, for example, when shopping malls become popular. Competing successfully in the consumer market involves the never-ending search for new store locations, more appealing store designs, and more original marketing plans—all of which create a store identity. It is wishful thinking to imagine that a retailer can survive following its original business concept in the expectation that it can survive price wars by ruthless competitors, especially when its only defensive strategy is to just do everything much more simply.

4.5 Conclusions

The chapter illustrates how a resilience analysis can explain company success and failure. Circuit City was not a resilient company. It did not create/retain the loyalty of its customers because it failed to offer unique variation in products and services. As staff expertise decreased and social relationships with shareholders and other financiers weakened, the company's collapse was all but inevitable. A narrow focus on efficiency is not enough to sustain a company; the ability to adapt to change and to offer reliable services is essential. Circuit City's fate demonstrates that stock market valuation is only one measure and perhaps not a very good indicator of a company's success. Companies must take a more holistic perspective on business performance if they want to succeed over time.

Unlike the thesis advanced in *Good to Great*, this chapter demonstrates that companies that simply tinker with their original and historically successful business concepts may not succeed. The management philosophy in *Good to Great* is better adapted to stable conditions than to times of change and turbulence. That philosophy supports the idea that companies that repeat what they do today, only somewhat better tomorrow, over and over again, eventually will be rewarded for their strong discipline. However, betting on only the hedgehog and flywheel concepts is a risky and narrow business strategy; companies must be ready to renew themselves when circumstances warrant. The top managers of Circuit City clearly had too much confidence in the company's business model that, at one time, explained its success in the 1980s and 1990s (see Kayes 2015).

When high reliability is needed, the management concept in *Good to Great* is inadequate because it champions simplicity when complex responses are needed. The same is true when high change capacity is a survival necessity.

Perhaps this chapter's most important message is that following simple recipes for success can be dangerous. The company that is too conservative, too self-confident, and too change-averse is not prepared to handle the surprises business life inevitably springs.

Seven Lessons from the Circuit City Case

- A successful business concept is not static. It should be continually refined and reworked; sometimes, it should even be abandoned.
- Previous successes can mislead leaders who think the future will duplicate the past. Blinded by past successes, they may realize too late they are not so uniquely talented and clever as they thought.
- Even the most ordinary or extraordinary leader may not make a difference to company success. It is the comprehensive support of company resources (e.g., employees' abilities and skills) that is the greatest contributor to company success.
- Financial, technical, and social resources are all extremely important in the effective management of crises.
- Companies are dependent on their shareholders and owners for capital injections in times of crisis.
- Meeting profitability problems by removing essential resources (such as skilled personnel) can lead to even greater financial problems.
- Management gurus' books should be read with great care and a critical eye!

4.6 Discussion Questions

1. Why may authors of popular management books ignore the importance of organizational complexity?
2. Discuss why many management books argue that leadership, as one of management's most important roles, has such decisive influence.
3. What could the management of Circuit City have done differently in the decade before its bankruptcy? Could those actions have assured the company's success?

Author Biography

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Chapter 5
BP and Deepwater Horizon: A Catastrophe from a Resilience Perspective

Margareta Oudhuis and Stefan Tengblad

Abstract The chapter summarizes the BP-Deepwater Horizon accident 2010 in the Mexican Gulf, which caused 11 deaths and the largest oil spill in history. The chapter builds on secondary sources and a resilience analysis is made using the theoretical framework developed in the book. It is described what the main causes of the accident were and the events that took place before, under and after the accident. The resilience analysis clearly shows that maintaining time limits and budget was made at the expense of reliability and safety, and that unnecessary risks were taken in order to improve project economy. The end results were one of the most costly human made disasters in the history (over 50 billion USD).

Keywords British Petroleum (BP) · The BP-Deepwater Horizon Oil Spill · Resilience analysis · Oil exploration · Risk management

What can we learn from the world's largest marine oil spill by taking the perspective of organizational resilience? How can companies avoid such catastrophic events? These are the two questions this chapter addresses.

5.1 Organization Resilence as Disaster Management

The oil company, British Petroleum (BP), working with the offshore drilling rig, Deepwater Horizon, which was owned by Transocean Ltd. (Transocean), at the Macondo Prospect oil field in the Gulf of Mexico, is forever associated with one of the world's largest environmental catastrophes. On 20 April 2010, a gas explosion and

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subsequent fire on the platform killed eleven people and injured seventeen more. An almost unimaginable five million barrels of oil spilled into the sea during the discharge. For BP, this was the worst crisis in its history, and its stock market value more than halved within a few months. BP's share price has over the years since 2010 recovered to some extent but is still (in January 2017) well below its pre-crisis level.

In this chapter, we use the resilience framework to analyse BP's actions before, during and after the oil spill accident, both internally within the company and externally with the world. This chapter shows how the framework can explain why the accident occurred and how BP dealt with its aftermath. Much can be learned from the hot spring and summer of 2010. However, before describing and analysing this accident and its subsequent events, we present some important conclusions and factors from previous research on "human catastrophes"—that is, accidents in which human decision-making played a role in causing accidents and/or in their handling.

An important factor in organizational resilience is *the realization of one's own vulnerability.* No company (or person, for that matter) is immortal. In the world of companies, many accidents and bankruptcies are the result of human pride or lack of common sense. On 13 January 2012, the captain of the large luxury cruise ship, Costa Concordia, for example, thought he had control of the situation when he steered the ship close to an island in the Tyrrhenian Sea so he could hail a colleague. But the ship hit a rock, which teared up a large hole in the hull. Because the captain thought the ship damage was not serious, passengers were not immediately evacuated. However, 32 people died in the tragedy. If a more responsible captain, who understood the risks involved with leaving a charted sea-lane, had been at the helm, the whole catastrophe would never had happened (Schröder-Hinrichs et al. 2012).

A second factor in organizational resilience is *the willingness to cooperate,* even at the cost of personal sacrifice, in what we may describe as the everyday hero mode. This is the kind of quiet heroism shown, for example, when quite ordinary people find another person in distress and provide aid quickly and selflessly. In the organizational setting, we find such heroism when employees act cooperatively in times of crisis (e.g. the bankruptcy of a company's largest customer). Chapter 7 describes how the employees of Scandinavian Airlines (SAS) agreed to reduce their salaries and to accept less favourable working conditions as part of a loan restructuring agreement with the company's bankers. Such actions may also involve a company's external partners, such as its owners, the State and society, lenders, customers and suppliers. When these actors agree to cooperate and even make sacrifices, a company's survival chances improve.

A third factor in organizational resilience is *the power to act courageously and forcefully* (i.e. the ability to act with speed and agility) even when the situation is at its grimmest. Metaphorically, this may even mean clutching at straws in the hope that somehow a solution can be found that will determine one's destiny. Even when events are most traumatic, the resilient individual looks forward without dwelling on the past. On the personal level, the traumatic event may be the loss of a life partner; the widow or widower must survive. On the organizational level, the traumatic event may be the imminent failure of a company; the leader must turn the company around.

A fourth factor in organizational resilience is *the ability to use different competences and to lead by encouraging improvisation and learning*. Sometimes certain actions cause a problem or a crisis. A new course of action is then required to resolve the situation. Of course, this is easier said than done; it is easy in a crisis to develop tunnel vision that may create a worse crisis. af Trolle (1996), the Swedish business professor and consultant, observed that managers of companies in crisis often exacerbate a problem or crisis. It is often necessary to hire a CEO with a new understanding of a company's difficulties and of the corrective action that should be taken.

Four factors of organizational resilience

- *Risk awareness (a sense of own vulnerability)*
- *Preference for cooperation*
- *Agility: The ability to act courageously and forcefully*
- *Improvisation skills and knowledge integration*

Source Developed from Zolli and Healy (2012) and others.

These four factors of organizational resilience are based on our interpretation of the book *Resilience* (2012) by Andrew Zolli and Ann Marie Healy as well as on other sources cited in their book. In addition, organizational resilience also relates to the five guiding principles of highly reliable organizations (HRO), summarised next, that Karl E. Weick and Kathleen M. Sutcliffe describe in their book, *Managing the Unexpected* (2007):

- **Preoccupation with failure**. Systems and practices exist for reporting risks and disruptions (e.g. possible failures). Management and employees should be attentive to these reports. For example, what do abnormally high operating temperatures or ball bearing squeaks mean as far as reliability and safety at a paper manufacturer? Or what do indications of flawed designs mean for the market-readiness of a new product?
- **Reluctance to simplify**. By accepting that reality is complex, changeable and unpredictable, people can avoid making decisions based on insufficient simplifications. It is essential to weigh a number of factors and possibilities in decision-making. Decentralisation of authority is also needed so that the people with the best understanding of a problematic situation have the mandate to make decisions.
- **Sensitivity to operations**. By giving "frontline staff" sufficient resources and education, they can perform their jobs in a way that ensures high confidence in their activities.
- **Commitment to resilience**. When an organisation suspects that problems may arise, its members should try to prevent or at least minimise them. It is well-known that systems and individuals are not infallible.
- **Deference to expertise**. By allowing experts to offer their opinions and by giving them some measure of control over events, it is possible to avoid many mistakes that are the result of inexperience and lack of knowledge.

After we have described the events before, during and after the Gulf of Mexico oil catastrophe, we return to these principles at the end of the chapter.

5.2 The BP-Deepwater Horizon Oil Spill

To begin, it should be stated that deepwater drilling for oil and gas is a very complex and highly technological endeavour that requires special technical expertise. From drilling in shallow water near land, oil and gas drilling has moved to offshore drilling in deepwater. This change occurred when offshore drilling became more economically viable and technologically possible early in the twenty-first century. Between 1992 and 2008, the number of deepwater oil platforms in the Gulf of Mexico increased from three to 36. However, drilling for oil in deepwater creates new risks. Even today it is not entirely clear how safe such drilling is, what can go wrong, or how accidents can be handled. Oil platforms have many kinds of dangerous machines and equipment, and the deepwater environment is often geologically precarious. Moreover, the oil and gas reserves discovered by deepwater drilling are under very high pressure, which increases the risk of blowouts.

Such a risk existed at the Macondo Prospect oil field in the Gulf of Mexico where BP was drilling. People in positions of responsibility knew that a blow out could be catastrophic, both to human life and to company reputation.

Based on the available reports, we present a short description, including the main causes, of the Deepwater Horizon oil spill.[1] We do not claim this description is fully comprehensive or technologically authoritative. Our intent is to describe the main facts of the oil spill and its causes from a resilience perspective.

It is essential to understand that offshore oil platforms require regular and competent maintenance. A safety audit conducted by BP in 2009 of the Deepwater Horizon oil platform—at a different site from the Macondo Prospect—identified 390 urgently needed repairs that would require more than 3500 h of work. It was not revealed until after the Macondo Prospect blow out that its platform had not been in the dry dock for repairs since 2001. Furthermore, the platform had been in continuous production in the period between the 2009 audit and the oil spill in the Gulf of Mexico in April of 2010 (Ingersoll et al. 2012).

Transocean, which owned the oil platform, employed Mike Williams as the technical control manager in charge of the maintenance staff on the platform. Individuals in this position must have great skill in devising solutions that will keep platforms functioning properly. Therefore, Williams was responsible for monitoring three computers that controlled the drilling technologies. If all three computers for

[1]This description of the accident and its causes are based in large part on the National Commission's report on the oil catastrophe: *The National Commission on the BP-Deepwater Horizon Oil Spill and Offshore Drilling 2011*; see also www.oilspillcommission.gov/media/history/history-of-offshore-oil.html, that was presented in the USA on 1 March 2011, and Barstow et al.'s (2010) article, "Deepwater Horizon's Final Hours", *The New York Times*, 25 December.

some reason failed to function as intended, the drilling activity would soon be completely out of control. These computers often seized up. Williams repeatedly reported on these software problems and the urgent need to correct them. However, he received no response.

As far as the actual activity at the drilling site, the work was very complicated and challenging. Because test drillings were delayed, the platform was far behind its production schedule. BP had estimated the discovery work would take 51 days and cost about 96 million dollars, but at the time of the blowout, it was day 80 of the work schedule, and costs far exceeded budget. BP had leased the platform from Transocean for 500,000 dollars per day and had paid the sub-contractors approximately the same amount (Ingersoll et al. 2012). As the drilling continued, the technicians often had to modify their plans because of the geological conditions thousands of metres below sea level. Despite these problems and setbacks, BP was convinced it had discovered oil. However, because Deepwater Horizon was a platform for exploration, it was decided to shut down the drilling activity temporarily and wait for the arrival of another platform that could continue with the oil and gas extraction.

The accident occurred at 21.45 on 20 April 2010, just as the test drilling was scheduled to finish. BP's drilling technicians were on the platform to observe these last hours of work. Curt Kuchta, the captain of Transocean's platform, who had arrived that day, took command of the platform. In addition, four other senior managers from Transocean came to the platform to monitor its closure. An engineer from Halliburton Company (Halliburton), the company that provided the cement, had arrived on the platform four days before the accident. He was available to help with cementing the well that was approximately 4000 m deep. Some of the workers on the platform referred to the well as "the well from hell".

To avoid further cost overruns, BP used less cement than the original estimates called for, and also reduced the pumping speed of the cement. Furthermore, the use of a lighter and cheaper grade of cement mixture than was normally used reduced the effect of the isolating shield around the well.[2] These actions caused huge complications in the work and contributed significantly to the accident. The seal required the use of cement dense and strong enough to resist the pressure of the released hydrocarbon gases.[3] According to Zolli and Healy (2012, p. 198) the chief driller, Dewey Revette (who died in the accident) was very critical of these actions. Another problem concerned the "centralizers", devices that increase the stability of the well casing. Drilling experts from BP's technical staff had estimated twenty centralizers were needed; however, on the advice of BP's chief operations manager, only six centralizers were used.

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[2]*The National Commission on the BP-Deepwater Horizon Oil Spill and Offshore Drilling 2011*, pp. 77–81. See also p. 91 on the difficulties in ensuring that the pressure of the hydrocarbon gas counterbalances the pressure of the drilling mud in the well.

[3]See National Academy of Engineering and National Research Council: Macondo Well *Deepwater Horizon* Blowout (2012). For more detailed information regarding the foam cement density change (p. 30 ff).

On the morning of the accident, a so-called positive pressure test on the well casing showed good results. Around 17:00 in the afternoon, a negative pressure test was made to check for leaks in the drilling pipe and to check if the pressure inside the pipe was stable. This test was conducted when the night shift team was replacing the day shift team. While the results of the test were not entirely clear, there were signs that hydrocarbon gas from the well had leaked out, which led to a heated discussion between the two teams. However, a Transocean employee, a well-respected man who had been on the platform since it was built, was not concerned. His explanation for the leak seemed reasonable. Despite some people's doubts, the Macondo Well was declared stable.[4] It is also clear that alternative completion techniques and operational processes were available (and could have prepared the well for temporary abandonment) were not used.[5]

Investigations later revealed that Halliburton had ignored cracks in the cement of the well casing in the weeks just before the catastrophe. Moreover, BP's chief operations manager knew about the cracks but did not deal with them.

Just before the accident, gas began increasingly to leak into the drilling pipe. This leak caused a sharp increase in pressure. According to the report by the risk-consulting firm, Det Norske Veritas,[6] the pipe could not withstand the pressure. The result was the "blow out". Another direct cause of the accident was that a vital emergency safety system, which should have capped the well and released the platform, failed to function. In addition, it appears that the blow out prevention system as a whole was neither designed nor tested for the dynamic conditions that very likely existed.[7] The huge amounts of gas that leaked onto the platform eventually exploded, and a horrifying fire broke out. Millions of barrels of oil began to pour into the Gulf of Mexico. Two days later, the oil platform sank.[8]

5.3 The Aftermath of the Blow Out: Causes and Consequences

The oil spill accident can be described as two phases. The first phase was the uncontrolled blow out followed by the failed closure of the well. The second phase was the explosion and fire that destroyed the oil platform. This second phase, in which people were injured or died, has not received the same intensive

[4] *The National Commission on the BP-Deepwater Horizon Oil Spill and Offshore Drilling 2011*, pp. 5–6.

[5] See Macondo Well *Deepwater Horizon* Blowout (2012). See Footnote #3 for a more detailed description.

[6] *Det Norske Veritas Final Report for United States Department of the Interior Bureau of Ocean Energy Management, Regulation and Enforcement*. Report No. EPO3084220, March 2011.

[7] See also Macondo Well *Deepwater Horizon* Blowout (2012), 71 ff.

[8] For a more detailed description of the different steps and actions before the blowout, see Macondo Well *Deepwater Horizon* Blowout (2012), Chap. 2.

investigation as the first phase; in fact, initially the destruction of the oil platform was regarded as the unavoidable consequence of the blow out. However, according to the National Commission (a bipartisan, Presidential commission), this was not the case. The Commission's report claims that mismanagement by all the companies involved in the drilling project resulted in technical mistakes, and thus the destruction of the platform. We describe these consequences and the management mistakes in this section.

According to an article in *The New York Times*[9] that was based on a survey with 21 people who were on the platform at the time of the blow out and on the written reports by most of the 94 people who escaped the platform, the blow out aftermath should not have been so catastrophic. The report by the National Academy of Engineering and National Research Council (2012) emphasised this point. The Academy's reasons were the following: safety equipment was available to divert the released oil and gas from the platform in the event of a blow out, the platform could be detached from the drilling site, and safety detectors could quickly warn of dangerous gas leaks. But scarcely any of these Deepwater Horizon safety systems were used on the night of the blow out. Certain safety systems did not work and others were activated too late to be useful. Moreover, the warning system, including the main alarm that should have sounded automatically when a high level of gas leaked, was not operational. This alarm had been switched to the manual activation mode in order to reduce the risk of nightly false alarms.

Moreover, the cause of the deaths and severe injuries following the blow out was the failure of these safety systems.[10] At a critical point, the night crew did not take the necessary safety measures. Communications broke down, warning signals were overlooked, and the members of the crew at critical sites on the platform failed to coordinate a proper response. The result was paralysis. For nine, seemingly very long, minutes, the crew struggled with the blow out until the gas alarm finally sounded on the bridge. For many crew members, this was the first sign that a catastrophe—the powerful explosion—was about to occur.

There were two reasons for the paralysis. The first reason was the failure to prepare for the worst-case scenario: a serious gas leak that would cause an explosion and subsequent fire in which power and control systems fail. The members of the crew were therefore unprepared to handle such an event. Yancy Keplinger, a manager in the control room the night of the blow out, stated: "I think no one was trained to handle all the alarms that went off that night". The second reason was the complexity of Deepwater Horizon's safety systems and of the guidelines that explained their use.

Deepwater Horizon's owner, Transocean, had given members of the crew a detailed handbook that explained how people should act when an explosion might be imminent. The problem with the handbook, however, was that it called for fast

[9]Barstow et al. (2010). "Deepwater Horizon's Final Hours", *The New York Times*, 25 December.
[10]See Barstow et al.; National Academy of Engineering and National Research Council Report, 2013.

action at the same time that it warned against over-reaction. The fundamental question of how to determine when a situation was critical enough to require immediate action was not addressed. The handbook was ambiguous about the decision criteria for action. Nor was it clear who should make these decisions. Because the control room personnel were, among other things, unsure if they had the authority to activate the emergency shut-off of the platform's motors, they decided to wait for instructions from their supervisors. There was also a concern that (over)reacting could lead to costly downtime. In addition, warning signs, including the gas leakage, during the accident were ignored. According to the interviews, some people survived because of others' courage and sacrifice and not because of the technical systems.

Thus, a long chain of events and decisions was behind the USA's largest environmental catastrophe that also took and destroyed lives. In totality, the causes of the catastrophe can be blamed on the many neglected and failed safety systems.

5.4 As the Gas Leakage Continued

As the general manager for the project, to a large extent BP was responsible for the catastrophe. BP's managers, flown onto the platform, ignored the warning signs from the use of the unsafe technologies that indicated the platform should be detached from the drilling site as soon as possible. Their pre-accident concerns were, owing to the problems with the bedrock, that deadlines were tight and costs were mounting. However, it is by an analysis of BP's post-accident actions that we can learn some lessons about organizational resilience.

From the beginning, BP's internal information system did not function as it should have. As a result, BP's top managers did not receive reliable information on how much oil had spilled or how quickly the well could be sealed. It was a long time until they understood the immediate gravity of the spill and its disastrous consequences, including the traumatic effect on the lives of thousands of people. The catastrophe was "headline news" for the next three months, and Carl-Henric Svanberg, the newly appointed BP chairman, was forced daily to run the gauntlet in the press. The oil spill and its aftermath seriously damaged BP's image, especially in the United States where several very serious accidents in the decade before the 2010 oil spill had already undermined the company's reputation for safety (Zolli and Healy 2012, p. 196 ff). The worst of these accidents was an explosion at a refinery in Texas some years earlier in which fifteen employees died. Following this accident, BP had promised to prioritise safety issues. However, protests against BP, which began soon after the 2010 oil spill, increased day by day, creating enormous negative publicity for the company.

To add to BP's public relations problems, Tony Hayward, BP's CEO, famously underestimated the seriousness of the situation. Instead of following developments in the Gulf of Mexico and maintaining contact with the rescuers and the press, he went sailing. Even Svanberg underestimated the importance of responding to public

opinion. Jonathan Guthrie, a columnist for the *Financial Times,* wrote Svanberg "is proving lower profile than an agoraphobic prairie dog". The seemingly endless oil spill, which enraged many people, began to have political consequences for the Obama administration. President Obama, therefore, summoned Svanberg to the White House for explanations.[11] Thus, the delayed and insensitive comments by BP's representatives only deepened the crisis. Eventually, Hayward was dismissed from his position as CEO. Relationships with BP's customers, bankers and shareholders deteriorated significantly.

It is also notable that the so-called early warning systems failed to function as intended. The engineers' findings that there were technical problems before the accident were not communicated to BP's top management, contrary to the CEO's request that he wished to prioritise such data. In part, the failure to send reliable information rapidly to top management can be blamed on the sub-contractor, Transocean, which operated the platform.

5.5 BP After the Oil Spill and the Explosion

Somewhat ironically, BP's shares were at a five-year peak—655.40 pence/share—on the day of the accident. Two weeks later, the price had dropped to 560 pence/share, and after 6 weeks to 430 pence/share. Scarcely 10 weeks after the accident, the shares were at 308 pence/share. This gradual deep decline in share price reflected the market's loss of confidence in BP because of the catastrophe's financial consequences for the company. If the oil spill had been controlled in a week, there would have been far less damage to the environment and probably to the share price as well. BP's cancellation of dividends for the remainder of 2010 did not improve the mood of the shareholders. However, BP's creditors and the general public reacted positively to the dividend cancellation. Their attitude was that the company's owners should also suffer consequences from the environmental disaster.

BP made a number of significant decisions following the oil catastrophe. The company established an independently managed fund of twenty billion dollars to assist and compensate individuals for deaths and injuries and companies for lost income. BP sold assets worth thirty billion dollars; the proceeds were earmarked for the various debts resulting from the catastrophe. BP also re-organized on the principle that the company would take greater social responsibility and would become a leader in renewable energy. The company also funded a ten-year research project with 500 million dollars. The aim of the project was to study the environmental effect of the oil spill.

In the year of the accident (2010), BP reported a loss of 3.7 billion dollars. This loss can be compared with its reported profit in 2009 of 16.5 billion dollars.

[11]Svanberg claimed in an interview that, in actuality, BP had tried to arrange the meeting. He called the visit to the White House a turning point for BP. C:\Users\mou\Documents\BP\Svanberg BP var riktigt illa ute—Råvaror—E24.mht.

BP's annual report for 2010 reported costs related to the Gulf of Mexico accident of nearly 40 billion dollars. These staggering costs could fund, for example, annual healthcare for Sweden's 10 million inhabitants. However, the loss in BP's market capitalization, which declined from 124 billion British pounds to its lowest point of 48 billion British pounds, was much more severe. By 2013, BP still had not entirely regained the confidence of the general public and of its investors even though, from a financial perspective, the company had essentially recovered.

Because the accident had such enormous human, ecological and economic consequences, naturally there were complex legal/financial issues in its aftermath. These issues involved deciding who was responsible for the accident and how its costs would be shared. BP had two partners in the project, the American company, Anadarko Petroleum Corporation (Anadarko) and the Japanese company, Mitsui MOEX Offshore, which is part of Mitsui & Co. The partnership agreements stated that project revenues and expenses would be allocated to BP's partners' based on their percentage holdings: Anadarko (25%) and Mitsui MOEX (10%). However, should BP, as the managing partner, be held responsible for negligent and irresponsible actions, the complete financial responsibility would fall on BP. In October of 2011, Anadarko agreed to pay BP 4 billion dollars on the condition that this payment relieved Anadarko of any further responsibility for the accident. Although critical of BP's actions, Anadarko wished to avoid long and uncertain litigation.[12] In February of 2012, Mitsui MOEX settled with BP for the sum of 90 million dollars.

BP also had a dispute with the platform operator, Transocean, one of the world's largest, independent platform operators. At the time of the accident in the Gulf of Mexico, Transocean had almost 140 platforms in operation worldwide with some 18,000 employees. Although the company's headquarters and legal residence are in Switzerland, it is an American company.[13] BP charged Transocean's managers with irresponsible behaviour and the company with technical deficiencies on the platform. In response, Transocean claimed it had no financial responsibility for the catastrophe that destroyed one of its most advanced oil platforms and that took the lives of eleven of its employees.

Because the market was less convinced of Transocean's innocence, in the quarter in which the accident occurred, the company's shares on the New York Stock Exchange fell from 90 dollars/share to less than 50 dollars/share. Although Transocean's profit for 2010 was almost one billion dollars on a turnover of 10 billion dollars, this result was scarcely a third of its profit in 2009. Another negative consequence for Transocean, which specialises in deepwater oil exploration, is that after the accident, licensing of its equipment has become much more restrictive and time-consuming.

[12]"Anadarko announces settlement with BP", www.anadarko.com/Investor/Pages/NewsReleases/NewsReleases.aspx?release-id=1617533.

[13]Information on Transocean Ltd. is from the company's annual report for 2010 and its home page: www.deepwater.com.

BP also had a dispute with Cameron International (Cameron), the company that delivered equipment to the platform. Cameron, a leading provider of flow equipment, systems and services in the oil and chemical industries, is an American company with headquarters in Houston, Texas.[14] Like Transocean, in 2010 Cameron had 18,000 employees worldwide. After the accident, BP claimed that Cameron's equipment, which was intended to prevent the blow out at Deepwater Horizon, was poorly constructed and had serious safety deficiencies. However, another opinion was that Cameron was the hero of the rescue work because it had manufactured the lid cover that eventually capped the well.

Another key actor in this story is Halliburton, the company that supplied the cement to the platform. Halliburton, with headquarters in Houston, Texas, is the world's largest supplier of products and services in the energy sector. In 2010, the company had a turnover of around 18 billion dollars, shareholders' equity of 10 billion dollars, and some 60,000 employees.[15] According to both the National Commission's report and BP's own investigation, Halliburton had provided the wrong kind of cement to the platform, a mistake that contributed to the accident. According to Fred Bartlit, chief counsel to the Commission, Halliburton (and perhaps BP) should have reformulated the cement foam before pumping it into the well. Furthermore, the Commission concluded that Halliburton's representatives ignored the cracks in the cement that they had observed weeks before the accident when a series of tests revealed the concrete was unstable. Thus, the Commission supported BP's claim that Halliburton should share the responsibility for the accident.

In recent years, Transocean, Cameron and Halliburton have all paid substantial sums in settlements with BP. Yet in 2014, four years after the accident, the litigation continued. In early September of 2014, Halliburton agreed to pay 1.1 billion dollars in a settlement for the majority of its claims. In the same month, a US district court judge ruled that BP was reckless as well as negligent. According to *The Guardian*, the judge apportioned 67% of the blame for the disaster to BP, 30% to Transocean, and 3% to Halliburton. It was thought BP would be penalised an additional 18 billion dollars under the US Clean Water Act as well as assessed punitive damages.[16] In fact, in July of 2015, a settlement ended all litigation involving BP, the US government, and the various states. The settlement requires BP to pay a fine of 18.7 billion dollars. With this settlement, the total cost for BP for the catastrophe totalled the staggering amount of 54 billon dollars. Despite these enormous fines, BP's share price rose substantially following the announcement.

[14]Information on Cameron International is from the company's annual report for 2010 and its home page: www.c-a-m.com.

[15]Information on Halliburton is from the company's annual report for 2010 and its home page: www.halliburton.com.

[16]McAlister, T. (2014). "BP could face up to $18 billion in extra fines after US ruling on Gulf of Mexico spill", *The Guardian*, 4 September.

5.6 A Resilience Analysis

In the aftermath of the accident at the Macondo Prospect, almost none of Zolli and Healy's (2012) factors related to organizational resilience (described in the chapter introduction) were in evidence. Thus, BP had no developed risk consciousness based on the recognition that the company's technical systems were vulnerable. Cooperation among the various actors left much to be desired, and organizational learning was very slow. The resilient organisation, faced with a catastrophe of the magnitude that BP experienced, should not make itself conspicuous by its public absence; instead, the resilient organisation should confront public criticism and condemnation directly. Ultimately, BP understood the grave extent of the accident's consequences and recognised the need to cooperate with governmental authorities, environmental organizations and local businesses in the coastal area that were damaged by the accident. It is perhaps too soon to conclude, with any certitude, if BP's change in response and attitude is genuine or is just a temporary response to powerful international pressure.

Nor did BP and the other actors follow the guiding principles of highly reliable organizations that Weick and Sutcliffe (2007) list (summarised in the chapter introduction). The many warning signals were ignored. The decision-makers lacked clarity on how to handle the complexity of the safety systems prior to the accident. Transocean's managers and staff could not operate the safety systems properly once it was evident the situation was very serious. With a greater focus on the operational activities, workers would have been better educated/trained, and the platform would have been better maintained. A more resilient organisation would not have used untested and cheaper technology to seal the well when they knew of the high gas pressure and the geological instability of the bedrock. Finally, a more resilient organisation with better management skills would have paid more attention to the experts with their greater technical and operations competences. BP's engineers and Transocean's chief drilling expert, who had this expertise, pointed to the need for more and better quality cement and more well casing centralizers. However, their cautions were ignored.

Another problem was that BP's top managers lacked sufficient knowledge of the events/conditions on the platform and their associated risks. Assuming they had had this information, it is unclear if they would have understood it. Altogether, BP as an organization demonstrated too little respect for the complex requirements of the operational activities and for the specialised expertise of people who knew how to manage these activities.

To summarise, there was an inadequate safety culture on the BP platform (National Academy of Engineering and National Research Council 2012). Developing such a safety culture, defined by the U.K. Health and Safety Executive as "the product of individual group values, attitudes and perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management", is crucial for organizations involved in risky operations such as deepwater offshore drilling.

A comprehensive systems approach, which could address the multiple interacting safety issues related to these activities, did not exist on the BP oil platform (Ibid. p. 94 ff.). The problem seems to originate in the very nature of the fragmented offshore industry with its many service providers and independent agents. Given their specific responsibilities, these groups often have different goals, safety practices, experience levels and training (Ibid. p. 97).

It may also be added that BP, to a large extent, prioritised short-term economic gains over high reliability and safety. This is an attitude common in the entire oil drilling industry with its strong R&D focus on exploration, drilling and production technology that is often at the expense of safety. With reference to resilience engineering and the ETTO Principle (Hollnagel 2009) discussed in Chap. 2, BP was more concerned with efficiency than with thoroughness (and reliability). A much more balanced approach was needed. Hence, a principal lesson of the BP disaster is that companies involved in such risky and complex operations should be organized as HROs where reliability and change capacity take relative precedence over efficiency.

Drilling for oil under high pressure, at extreme sea depths, through unstable bedrock, is a dangerous, difficult and costly endeavour. Enormous skill and caution are required. However, ironically, it is estimated that another month of drilling at the Macondo Prospect not only would have prevented the blow out but also would have saved BP billions of dollars in sealing costs, clean-up costs and legal costs, to say nothing of the cost to its reputation.

5.6.1 The Linkage Among Financial, Technical and Social Resources

The BP-Deepwater Horizon case is interesting from an organizational resilience perspective because it involves so many different kinds of resources. The core of BP's activities is oil extraction from bedrock, both on land and at sea. While BP also refines, transports and distributes oil products, extraction is its most important and most profitable activity. One fundamental problem in the oil extraction industry is that the costs of drilling in oil fields sooner or later become too high relative to the amount of oil extracted. A second problem is that some oil fields are too small to be worth the drilling costs. A third problem is that some oil fields are simply too inaccessible to be economically viable.

The first oil fields in history were basically just open pits located, for example, in the area around the Caspian Sea and in the southern United States. In these fields, the oil just ran out from the rocks or could be excavated at a depth of only a few metres. Gradually, commercial excavators were able to recover oil from greater

depths on both land and sea. For example, in the 1970s, oil production began (and continues today) in the North Sea. Drilling depths are even greater in the Gulf of Mexico. For example, Deepwater Horizon drilled almost 7000 m through porous bedrock. However, oil extraction at such depths poses huge risks, particularly in capping the wells given the high pressure gush of the oil and gas. An added danger is the close proximity of such oil fields to heavily populated areas lying along vulnerable coastlines with their abundant wildlife. Extreme care and planning is essential when drilling for oil near such areas.

BP had many partners in its work in the Gulf of Mexico. They included, besides Transocean, seven other contractors and manufacturers. Regrettably, these companies lacked the technical resources as far as know-how in the high-risk oil exploration and extraction in the Gulf of Mexico. This lack was evident in the inability of the platform workers to manage the safety systems and to take appropriate action as the danger increased. Moreover, the technology for plugging major oil leaks at such extreme sea depths had not been tested.

It is of interest that BP itself did not undertake the oil exploration in deepwater wells. Because BP contracted this work to others, the company had little control over the actual drilling activity even though it retained most of the responsibility for the project risk. Although BP now states that a very high safety level is required in all its activities, it appears this policy may be less related to their environmental concerns than to their commercial considerations. Today there are a number of unexploited oil fields in sensitive areas where BP shows an interest: the Gulf of Mexico, the Atlantic Coast of the United States, Alaska and the Arctic. If oil companies are unable to convince the public and politicians of their safety concerns and policies, permission to drill may not be forthcoming.

Our resilience analysis reveals that the lack of technical resources explained the Macondo Prospect blow out and its aftermath. In turn, this lack was the result of poor organisation and leadership by all the companies in the project. The catastrophic environmental consequences of the blow out—in addition to the employee deaths and injuries—caused great harm to the BP's social resources (not least, its corporate reputation). Overall, the negative effect on its technical and social resources drastically damaged BP's financial resources as its share prices plummeted, its credit worthiness was downgraded, and huge sums had to be set-aside as the compensation claims and legal costs mounted. As a brand, BP was seriously damaged.

Yet it must be observed that BP still had impressive financial resources and a strong cash flow at the time of the oil spill. Because it could pay for the accident-related costs out of earnings, it did not need to issue new shares in a recapitalization of the company. Thus, it is the sum of the technical, social and financial resources that determine a company's ability to survive in situations where organizational resilience is essential.

5.7 Concluding Reflections: How to Handle Complex Risks

The BP-Deepwater Horizon catastrophe clearly illustrates the complex linkage among the geological, technical, human, organizational and social systems risks in the oil industry. This complexity was simply overpowering for those with operational responsibility on the oil platform. A company engaged in oil exploration/extraction must be resilient enough to handle all these related risks.

5.7.1 The Geological System Risk

Lack of knowledge about the properties of bedrock at extreme depths of the sea is an issue of some concern. Oil has been commercially extracted, at the depths at the Macondo Prospect, for fewer than ten years. Those companies working at such levels need more up-to-date and in-depth information about how the bedrock at such levels reacts. Until more is known, consideration should be given to ceasing such oil exploration/extraction.

5.7.2 The Technical System Risk

The BP-Deepwater Horizon catastrophe also illustrates the importance of well-functioning safety systems on oil platforms. It is essential to identify the risks of potential accidents at each step of the operations and to verify that the safety systems are modern and well-maintained.

5.7.3 The Human System Risk

Our knowledge of major disasters shows that the human factor is nearly always important for understanding the causes and consequences of such events. People make mistakes, ignore warning signs, react too passively, communicate ineffectively and so on. Technical systems should be constructed so as to minimise human inattention, misjudgements and paralytic inaction. In addition, the people who maintain/operate these technical systems should be trained in safety regulations and procedures, and should be able to deal with the stress of work overload when critical situations occur.

5.7.4 The Organizational System Risk

The BP-Deepwater Horizon case illustrates the complicated arrangement in which managers, explorers, excavators and suppliers share responsibility for oil exploration/excavation. Specialisation by companies in niche areas, while often financially rewarding, can lead to poor risk management when consortiums or partnerships are formed. In this case, the shared responsibility by BP and the other companies led to dysfunctional communications that culminated in a chain of lawsuits that put at risk all reputations and future activities. The "blame game" that resulted when the various companies involved in the accident sought to hold others responsible did not enhance the world's respect for any of them.

5.7.5 The Social System Risk

Last, the BP-Deepwater Horizon catastrophe highlights the risk to the environment of oil/gas production in areas with sensitive marine ecosystems and vulnerable, coastal wetlands. Perhaps the greatest risk to a company engaged in such activity is not the inevitable settlement of compensation claims by those damaged. Rather, it is the loss of the confidence in a company by its lenders, investors and customers as well as by governmental authorities, politicians and the general public. For companies, oil companies in particular, this may be the most important lesson from the BP-Deepwater Horizon case.

In summary, the BP-Deepwater Horizon case illustrates the outcome of a combination of dangerous geological conditions, a sensitive and threatened environment and very serious technical, human and organizational deficiencies. This was a combination that may be best described as "a recipe for disaster!"

5.8 Discussion Questions

1. What were the main causes of the Deepwater Horizon accident that had such catastrophic consequences?
2. How should the responsibility for the accident be allocated? Who should make this decision?
3. What lessons can a company in a "risky activity" take from this chapter?
4. What are the contributory (and difficult to accept) factors to organizational resilience and operational reliability at many companies?

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Chapter 6
Resilient Leadership: Lessons from Three Legendary Business Leaders

Stefan Tengblad

Abstract One way of gaining knowledge about organizational resilience is to studying business leaders who have contributed to create companies and business models with long endurance. In this chapter three successful Swedish business leaders are described and analyzed in accordance with the theoretical framework of the book. Some important results emerge from the analysis. First, an emphasis on creating decentralized organizations based on an active followership and trust is revealed. Second, the business leaders in question have shown the courage and capability to develop strategies even if they did not correspond to at the moment popular beliefs in society, and third the business leaders have shown the ability to find creative solution to situations they did not foresee, which included abandoning a previous strategy (i.e. flexible adaption).

Keywords Resilience analysis · Jacob Wallenberg · Jan Wallander · Pehr G. Gyllenhammar · SEB · Handelsbanken · Volvo

There are many ideas on how organisations should be managed. In this chapter, we describe the business careers and management philosophies of three legendary Swedish leaders: Jacob Wallenberg, Jan Wallander and Pehr G. Gyllenhammar, all of whom had great managerial responsibility in the challenging business environment of the mid- and late twentieth century.

6.1 Resilient Leadership

To a rather large degree, popular business trends influence companies and their leaders. Different managerial trends, such as diversification, streamlining, decentralisation, centralisation, customer-orientation, performance management, workplace democracy

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and standardisation, have been fashionable at one time or another. Companies follow one trend and then a different one because of changes in the economic climate and because of the pressure to conform. Although companies always want to present a "well-managed" image, their leaders face a challenge in selecting which trend to follow. If successful in their choice, they are well aware that other companies may imitate them. Among the many companies that in different time periods were trendsetters are Ford, General Motors, IBM and Toyota. Notable Swedish companies that have been trendsetters, particularly in the national arena, are ASEA/ABB, Ericsson, IKEA, Scania and Volvo.

While it is no guarantee of success, imitating another company can be a winning business strategy. However, in using such a copycat strategy, it is often necessary to make major adaptations to the imitated company's formula for success. In some cases, these adaptations may be so extensive that a new, even unique, business model emerges.

Much of the management literature, including biographies of leaders, compares company leaders to experienced sea captains who set a clear course that avoids dangerous shoals and reefs. Sometimes the literature portrays company leaders as almost clairvoyant; much more than others, they are described as having the courage and insight to predict the future. However, empirical research on company leaders does not support this picture (for an overview, see Tengblad 2012). The clear outlines of company leaders' behaviour are most visible in hindsight when their numerous distractions, difficult choices and uncertainties about the future are forgotten or concealed.

In his book, *On the brink of failure* (2006), Mats Tyrstrup describes middle managers' perceptions of their work lives. In many respects, these descriptions are also applicable to the work lives of company leaders. Plans and expectations are often thwarted, unexpected crises arise and serious conflicts develop between people with different interests. These problems require leaders to exert a substantial amount of mental energy. Peace and quiet is essentially non-existent in the high-paced work environment that demands leaders' constant involvement.

Despite these complexities and challenges, there are many leaders who have successfully managed their companies. This chapter describes three Swedish leaders who were unusually successful in managing their companies and whose stories are not based on the defence of post-rationalisation: Jacob Wallenberg (1892–1980), Jan Wallander (1920–2016) and Pehr G. Gyllenhammar (1935–).

Before describing these leaders' business careers, it is appropriate to make a few points about their leadership. First, the intention is not to present them as heroes although these condensed stories may give that impression. Each leader had a specific period of greatest success in which his strategies for organisational resilience were especially evident but they have also experienced some failures and setbacks that revealed some lack of clairvoyance about the future. Sometimes these leaders' responses to their business environments were less creative and productive than at other times. The most innovative years for Wallenberg were the two decades between 1930 and 1950; for Wallander, the two decades between 1960 and 1980; and for Gyllenhammar, the two decades between 1970 and 1990. In all three cases

their most innovate periods starts just before or around their forties and these are the years in focus in this chapter. In particular, our interest is learning from their management philosophies while still recognising that good timing and good luck also influence the success of companies and their leaders.

Second, while this chapter focuses on the three leaders' managerial successes, successful business management, however, is almost always a team effort involving many people's hard work and effective cooperation. It is quite reasonable to assume that many others contributed to the three leaders' ideas that this chapter describes. Without the subordinate managers' initiative and enthusiasm, the companies' results would have been different. Nevertheless, much of the credit for design and implementation of these ideas is owed to Wallenberg, Wallander and Gyllenhammar.

Third, the main objective of this chapter is to link stories of company leadership to organisational resilience. For readers who wish to know more about these three leaders, we recommend the biographies and memoirs cited in this chapter.

Finally, it should be noted that these three Swedish leaders often faced unexpected problems requiring solutions involving comprehensive and innovative mobilizations of financial, technical and social resilience resources. These solutions can offer much inspiration and guidance to other leaders and managers. In particular, I call attention to these leaders' remarkable abilities to manage difficult and challenging environmental situations by stimulating initiative among their managers and employees in collaborative problem-solving and in long-term resource-building. This is the kind of courageous, enthusiastic and innovative leadership that today's business leaders may wish to emulate in these times when there is a relatively strong focus on short-term financial gains and little real courage is displayed at the executive level.

6.2 Jacob Wallenberg and Stockholms Enskilda Bank

In 1971, Jacob Wallenberg, age 79, spoke at the general meeting of Stockholms Enskilda Bank (SEB: i.e. Stockholm's Private Bank). SEB's 115-year history as a family-controlled bank was at an end. Wallenberg's younger brother, Marcus Wallenberg, had initiated a merger with Skandinaviska Banken, a nationwide bank in Sweden that conducted its banking activities very differently from SEB. Although Skandinaviska Banken was less profitable and less solvent than SEB, it had many more employees and customers. Moreover, SEB was an entrepreneurial bank that had more in common with Morgan Stanley in New York and the Rothschild banks in Europe than with the career manager-controlled Skandinaviska Banken. In his speech, Wallenberg summarised his opposition to the merger:

> If I were a young man, I would rather work at a bank like SEB because it offers employees more freedom, more opportunities of various kinds and better connections with the customers. Yet SEB also requires diligence, knowledge and skill… I do not understand the defeatism that seems to me to have taken over SEB's management. Until now, we have

> done well… better than others. Our profits will continue to grow, our costs are low and we have a relatively strong capital position. I believe in the future. I have confidence in our leadership. I therefore suggest we reject the merger proposal. (Quoted in Thunholm 1996, pp. 102–103; translated from Swedish)

In his opposition to the merger, Wallenberg wanted to defend the Wallenberg family bank's reputation as Sweden's most profitable and most international bank. He thought the bank, without entering any merger arrangements, had shown great resilience as it dealt with the many crises and challenges over the years. The bank had the lowest costs in relation to revenues of all Sweden's commercial banks. Moreover, SEB's employees cooperated well with each other and took pride in their work (Lindgren 2007). At the 1971 general meeting, however, a majority of the owners supported the merger, in large part because of Marcus Wallenberg's energetic advocacy for it. Today SEB stands for Skandinaviska Enskilda Banken, the name of the new entity after the merger.

Wallenberg's fear that his family would lose influence over the bank, with its specific corporate culture, became a reality. Post-merger, SEB has gradually lost its position as Sweden's leading commercial bank. In beginning of 2017, SEB had the lowest market capitalisation of the four major Swedish banks.[1]

Jacob Wallenberg (1892–1980) played a central role in Swedish business life for a very long time. After serving as a reserve officer in the Swedish Navy and then earning a degree at Handelshögskolan in Stockholm, he worked for five years in banking in London, New York and Paris. This banking experience was preparation for assuming responsibilities in the family-controlled bank (Lindgren 2007). In 1919, owing to his contacts in the U.S. financial world, he negotiated a Swedish government loan in the U.S. bond market for what was, at the time, the staggering amount of 100 million Swedish crowns. This accomplishment earned him the Royal Order of the Vasa, a Swedish award to citizens for service to the State and to society.

In 1920, at age 28, Wallenberg became Vice-CEO of SEB. Soon he was very involved in the bank's credit arrangements with companies that had suffered in the financial crisis after World War I. In 1927, he became the CEO of SEB. In the 1920s, he was one of two representatives for Swedish commercial banks in the international negotiations on war reparations and maintenance of international capital. In the 1930s, the major issues in these negotiations were avoiding Germany's default on its international commitments and saving the capital markets after the Kreuger Crash in 1932. Important concerns were how to rescue what was left of the Kreuger Empire (that had crashed owing to a Ponzi scheme), including *Svenska Tändsticks Aktiebolaget* (the world's at the time leading match company), and how Sweden's international financial reputation and trust in its currency could be restored following the Kreuger Crash.

[1]According to *Dagens industri*, 4 January 2017, Nordea had a market capitalisation of 419 billion Swedish crowns, Handelsbanken 250 billion, and Swedbank 257 billion. SEB's market capitalisation was 215 billion.

After World War II, Wallenberg became the Chairman of the family's investment companies, Investor and Providentia, as well as board chairman of several large companies. In these positions, Wallenberg's guiding principles were to keep company debt low, to build financial resources and to make long-term investments in new technology. Wallenberg placed great confidence in the companies' CEOs and allowed them considerable decision-making freedom. As he was very conscious of the complexities and uncertainties in business, Wallenberg emphasised avoiding unnecessary risks and always preparing for negative surprises (Sjögren 2005).

The emphasis on strong balance sheet and investments in technology was successful, when Jacob Wallenberg died in 1980 the Wallenberg family had significant influence over companies that represented approximately 50% of the total stock market value of the Stockholm Stock Exchange.

6.2.1 Financial Resilience Resources

Jacob Wallenberg regarded a company's balance sheet as its most important instrument for control. He thought a strong balance sheet was evidence of a well-managed company. A strong balance sheet, in his interpretation, featured low debt and realistically valued assets. He also thought a company should be able, in large part, to finance its investments with retained earnings rather than with loans. Too much debt meant a company's investment opportunities were limited, it might not be able to cover unexpected losses, and management control was constrained (Sjögren 2005, p. 185).

For Wallenberg, good company management meant that a company maintained its independence, free from others' influence. He had formed this business philosophy in the 1920s when he witnessed the difficulties other family companies experienced when they could not repay their large loans and had to surrender their assets to the banks (Lindgren 2007, p. 156). For example, in 1929, Handelsbanken founded SCA, the forest and timber company, with assets acquired after various companies' loan defaults and bankruptcies.

In addition, Wallenberg emphasised that a well-managed company needs strong liquidity as evidenced by its ownership of assets such as cash (e.g. bank deposits) or assets easily converted to cash (e.g. blue chip and money market securities). Because the value of financial assets can change quickly, it is important to have large financial reserves. In his view, with a reserve of liquid assets, a company can afford to wait for better offers from counter-parties when assets are offered for sale. Substantial financial reserves are also necessary because large profits may rapidly turn to significant losses. Moreover, when favourable business opportunities appear, it is essential to have cash and near-cash readily available, for example, to acquire troubled companies (Lindgren 2007, p. 165).

Jacob Wallenberg often claimed he acquired his business principles (e.g. low debt/equity ratio) from his father. However, he regretted he was unable to put these principles into action in various companies because of the lack of support from other board members and company leaders (Sjögren 2005, p. 185). In particular, he thought that company leaders with an engineering background did not have the same respect for debt as older bank managers. Furthermore, such leaders were too convinced of the profitability of their investment proposals. Yet he thought his repeated warnings about the danger of too much leverage often had little effect.

6.2.2 Technical Resilience Resources

Unlike his brother, Marcus, Jacob Wallenberg was not a fan of the formalised and bureaucratic organisation principles that stemmed from large companies in the United States. For example, he opposed large mergers and complex business structures with multilevels of hierarchy. He thought that in such highly bureaucratic organisations, it takes too much time and effort to coordinate the many work tasks. He also worried that in a large, professionally managed company, departments can easily take actions not in the company's best interests. The risk is that departments may work to maximise their own size and influence rather than focus on the company's overall profitability. On the individual level, he was convinced the bureaucratic company structure makes it difficult to oversee employees who may take advantage of their "invisibility".

Wallenberg thought companies should be transparent so that it is easy to evaluate the effort of different departments and managers. Such transparency could also be a motivational factor for employees that increased their loyalty and commitment to the company. He often said that a company's entrepreneurial spirit, which he referred to as *deed power*, which is our translation of the Swedish proverb "dådkraft". With deed power he meant extraordinary courage and decisiveness, which he saw as essential for success.

Wallenberg thought board members should not make impetuous decisions. Good suggestions, if once rejected, will reappear in more thoughtful forms while poor suggestions never will (Lindgren 2007, p. 345). Thinking through decisions requires considerable knowledge and professionalism on the part of the decision-makers.

Wallenberg favoured reinvesting profits in research and development rather than distributing them as shareholder dividends, which were highly taxed during his years at SEB. Because of substantial investments in research and development, Astra, which was originally a mediocre pharmaceutical company, became a very innovative company that developed drugs, for example, used in the treatment of ulcers, asthma and heart disease (Sundling 2003). In 1999, after Astra merged with the British company, Zeneca, the new company—AstraZeneca—was one of the two largest companies on the Stockholm Stock Exchange. The other company was the telecom company, Ericsson, which also had strong ownership ties with the Wallenberg Group.

6.2.3 Social Resilience Resources

Jacob Wallenberg lacked a comprehensive philosophy for social resources such as he had for financial and technical resources. Shareholders who took a long-term perspective were generally satisfied with the performance of the companies under his chairmanship. These companies were profitable, even in difficult times. However, from a short-term perspective, shareholders were concerned about the relatively slow growth of their share prices, the low level of dividends and the "build-up" of hidden reserves (i.e. unrealized gains not recognised on either the income statement or the balance sheet). Furthermore, the companies he governed were rather secretive and did not share much information with the general public or with investors. It seemed that the shareholders outside the inner circle had little insight into, or control over, their investments in these companies.

Wallenberg was less than cooperative with the Swedish government, which he regarded as an enemy with its power to increase taxes and set credit and currency policy. In this respect, he differed from his younger brother, Marcus who had partnered with the government over its purchase of airplanes, power technology and telecommunications equipment. Marcus, who took a much more society-oriented view of industry than Jacob, claimed company decisions should be "musical". He meant that good decisions created a harmonious relationship among the company, its employees and society (Olsson 2000).

However, Jacob Wallenberg's relationships with employees, managers and others reflected an impressive use of social resilience resources, particularly as contrasted with his brother's relationships with such people. Jacob was regarded as an honest, reliable and competent industry leader. If employees worked efficiently and were loyal to their employers, they were given relatively broad decision authority as well as good working conditions. By contrast, people generally regarded Marcus as an impatient, demanding and arrogant leader who could, and did, overrule managers at all levels when he disagreed with them. Many commentators have attested to Marcus's micromanagerial, authoritarian style contrasted with Jacob's low-key, respectful leadership style.

6.2.4 Concluding Words on Jacob Wallenberg and Stockholms Enskilda Bank

Many people describe Jacob Wallenberg's business philosophy as timeless although at certain times it was also seen as anachronistic, particularly in the 1960s and 1970s. It was not a philosophy in tune with the modern trend of company mergers and consolidations, increased demands for corporate responsibility and transparency, and a Swedish government that had become more intrusive and demanding. Prior to the merger with Skandinaviska Banken, the risk that the Wallenberg bank and other Swedish banks would be nationalised was not

negligible. At minimum, a risk existed that the government would begin micro-managing the banking sector through setting credit policies, controlling interest rates and taxing capital gains on investments (Thunholm 1996).

Although the bank merger gave the Wallenberg family a more contemporary face, at the same time it allowed them to continue to exercise their family-centred form of capitalism somewhat secretly. For this reason, the merger was politically controversial. Many people were concerned that a single family essentially controlled Sweden's largest commercial bank.

Unlike the advocates for the merger of the two banks, Wallenberg had less interest in conforming to current opinions and the spirit of the times. In his view, because opinions constantly change, the best focus for a company is long-term development that safeguards assets for future generations. In principle, it is a sensible focus unless taken to extremes, which is quite possible. Nevertheless, Wallenberg left a valuable legacy with his philosophy of industry leadership. Today's leaders may want to reflect on this legacy when confronted with internal and external pressures to conform to currently popular ideas. From a long-term perspective, the adoption of popular business trends may not be in the companies' best long-term interest.

6.3 Jan Wallander and Svenska Handelsbanken

In the early 1990s, the Swedish banking system faced perhaps its worst crisis ever. In total, credit losses were approximately 200 billion Swedish crowns as measured in today's currency (a little more the 20 billion Euros). Without extensive government intervention, the Swedish financial system would have collapsed. Two banks, Nordea and Swedbank, survived only because of government support and reorganisation. Skandinaviska Enskilda Banken (the Wallenberg bank) barely managed to stay afloat without direct financial assistance from the government (Fagerfjäll 1999). Svenska Handelsbanken, which did not ask for government support, was the most profitable of Sweden's commercial banks for a very long time (Wallander 1998). Many claim that Handelsbanken's success since the 1970s is largely owing to the leadership of Jan Wallander.

Jan Wallander was born in Stockholm in 1920 to a family of many cultured individuals and academics (Wallander 1997). His father, Sven Wallander, was a prominent architect and a founder of a successful, nationwide cooperative housing association (HSB). Jan Wallander, whose early career was in academics, was an associate professor of economics in the 1950s. He also co-founded the influential *Studieförbundet Näringsliv och Samhälle* [English: *Study Association for Business and Society*] (SNS) in 1948, and was its first director. In 1953, Marcus Wallenberg appointed Wallander as the CEO for *Industriens Utredningsinstitut* (IUI) [English: *Research Institute of Industrial Economics*], where he worked with the foremost economics researchers in Sweden.

In 1961, when Wallander became the managing director of Sundsvallsbanken, a midsized regional bank, he began a new career. Given his background in research, he began this new position with a study of the bank's profitable success despite its relatively small size compared to its main competitor in northern Sweden, Handelsbanken. Such success did not seem logical given the current positive view of economies of scale and investments in modern technology.

Wallander was well aware of the difficulties of supporting industrial renewal after his involvement with the venture capital firm, Tulwe, which exhausted its cash reserves after some years. From this experience, he learned that general academic knowledge of entrepreneurship and business administration is generally insufficient for managing real firms. Instead, in-depth industry understanding and reliable and detailed knowledge of companies are needed (Wallander 1998, p. 76). He found that specific facts are often more useful than general management models.

As the managing director of a provincial bank, Wallander was a member of the national banking association where he met the most prominent Swedish bankers. These contacts, plus Sundsvallsbanken's several profitable years, led to his appointment in 1970 as the managing director of Handelsbanken.

During his years at Sundsvallsbanken, Wallander had become increasingly critical of how Handelsbanken was organised and of its focus on expansion rather than on profitability. As the new managing director for Handelsbanken, he now had the mandate to reorganise the bank and its operations. Below, we examine his business principles in the context of his coordination of various resilience resources. After some years of the reorganisation under his business philosophy, Handelsbanken improved its profitability substantially. Its credit losses, which decreased at the same time, were much lower than those of any of its major competitors.

In 1978, Jan Wallander became the executive chairman of Handelsbanken. He held that position until 1991. He was also on many other companies' boards. He wrote a number of books about his experience as a company leader in which he focused on the themes of corporate governance and responsibility, budgeting, leadership and employee hiring (see, e.g. Wallander 1990, 1994, 2002).

6.3.1 Financial Resilience Resources

As far as financial resilience resources, Jan Wallander's philosophy was quite simple: Handelsbanken should be more profitable than its main competitors. He recognised that lower operating costs were essential for achieving and sustaining that goal. To that end, Wallander did not hesitate to take unpopular, cost-cutting measures. For example, in 1971 he cancelled celebrations for the bank's 100th anniversary. He also reduced costs by cutting back on the use of executive cars, by curtailing bank-wide marketing programmes, and by eliminating several other kinds of corporate expenses. Such measures had an important real as well as symbolic effect at the bank because employees became more cost-conscious, and cost

approval routines improved. In the longer term, Wallander's philosophy meant greater caution in the bank's lending policies.

Another interesting aspect of Wallander's philosophy of financial resilience relates to his opinion of budgeting. Beginning in the early 1970s, he openly criticised budgeting as a waste of time, particularly in the banking sector. In his opinion, various uncontrollable factors influence banks' yearly performance. Among these factors, he named general economic conditions, interest rates (as set by the national bank) and stock market performance. Budgeting requires making forecasts about the future. For Wallander, an empirically minded banker, this was a dangerous, if not useless, activity. If programmes and projects are approved, which turn out to have been based on erroneous or over-optimistic forecasts, the result is likely failure, with associated, unrecoverable costs.

One of Wallander's first actions at Handelsbanken was therefore to eliminate budgeting. Wallander's experience at IUI undoubtedly shaped his sceptical opinion of budgeting. He had witnessed how difficult it is to forecast, with any great accuracy, future sales, business cycles and company/industry profits. Wallander concluded that, regardless of their level of sophistication, forecasts ultimately are grounded in historical data. Historic economic, political and social development is always in flux and cannot be relied on to repeat itself (Wallander 2002, p. 102).

In addition to his IUI experience, as an Ericsson board member Wallander had seen that other board members failed to appreciate the technical and commercial development of that company's products. This experience only reinforced his poor opinion of budgeting. He concluded that the ability to ward off trouble was more important than the ability to plan. It was just another way of saying companies should be organisationally resilient: the ability to adapt to changing events and conditions is more important than the ability to predict the future. Wallander wrote:

> The reality is that we live in a world of change that we cannot predict or prepare for. It is essential that management be ready to adapt to such change. Management must catch the bird in flight (1998, p. 287). [Translated from Swedish]

Wallander observed in this book, 40 years after he had instituted his reforms, Handelsbanken still followed this philosophy on budgeting. Instead of budgets, the bank sets performance targets, including key ratios, for the branches, the regions and the bank as a whole. Constant comparisons of target achievements are made at all bank levels. Executives and managers cannot be complacent about good results in the past because there are always comparisons with the general performance targets, with other branches, with previous time periods and so on.

6.3.2 Technical Resilience Resources

Wallander's major contribution as the managing director of Handelsbanken was to implement a new organisational form that combined centralised administrative control with decentralised responsibility for operations. This was an organisational

form that was agile, responsive and customer-driven. Wallander was uninterested in making the bank the largest in Sweden with the greatest economies of scale. Instead, he aimed to make the bank more entrepreneurial and less bureaucratic. He disliked the delay, the lack of transparency and the low level of individual responsibility in bureaucratic and centralised organizations.

The bank's new organisational structure had only three levels: central, regional and local. The local bank branches in Sweden (approximately 500) were divided into eight regional units. Staff at the central level was reduced dramatically, and customer relationships became a regional issue. The central level had responsibility for the loan portfolio data and for the compilation and comparison of information on branch/regional performance. This model is also used in the Handelsbanken branches (approximately 350) in five other countries in Western Europe.

Perhaps the most important people in the Handelsbanken model are the branch managers who have full responsibility for the branch office operations. While there are limits on the size of bank loans that branch managers can approve, these limits are much higher than at branches of comparable banks. As far as the general delegation of responsibility to branch managers, Wallander's experience at Sundsvallbanken, where decision-making was almost ten times faster than at Handelsbanken in the old days, was most influential. He had also learned at Sundsvallbanken that local customers would rather do business with people from their own community than with people who work at bank headquarters in Stockholm. Moreover, regional and local bank managers better understand the business life of their communities. Therefore, in the Handelsbanken model, regional banks took on the character of provincial banks with their own boards of directors and considerable delegation of management responsibilities.

6.3.3 Social Resilience Resources

Jan Wallander's management philosophy also derives from his view of social resilience resources. Decentralisation promoted greater employee engagement (cf. the active followership described in Chaps. 9–11), more efficient decision-making, and an improved commitment to meeting customer needs (Wallander 1998). At other banks, a policy of fewer branches, fewer opening hours and fewer cashiers was a way to reduce customer contact. Handelsbanken's policy, in contrast, was to open more branches and to promote more customer contact. In the early 1970s, such a policy was almost revolutionary, although in time it became increasing relevant, especially after the airline CEO, Jan Carlzon, popularised the customer-oriented organisation in his 1985 book *Riv pyramiderna* [English: *Moments of truth*].

Another Wallander innovation, and from its beginning a very controversial one, was the introduction of a profit-sharing plan in 1973 that was intended to strengthen the employees' commitment to Handelsbanken. When the bank was more profitable than other large Swedish banks, contributions were made to the fund. The employees

could take distributions from the fund in connection with their mandatory retirement distributions. The plan has enjoyed great success. According to Wallander (2002, p. 68), each employee who retired in 2002 and who had been in the plan since its beginning received an extra retirement distribution of 4.3 million Swedish crowns. The system was completely egalitarian because each retiree received the same amount, regardless of salary and position in the bank; the retiree's length of service was the only factor for determining the size of the pension. This is a very different practice compared to bonus programmes in most major corporations that typically award top management and those reporting to top management very large cash payments, while most employees receive little, if anything.

Jan Wallander put considerable effort into maintaining good relationships with society and into spreading his ideas about business conditions. Beginning in the early years of his career, he had always worked to create a more progressive and socially robust economy. In his acclaimed book, published in 1975, *I huvudet på en kapitalist* [English: *In the head of a capitalist*], he discussed the problems he saw with the increasing political control of the economy, including the risk of greater bureaucracy and less individual autonomy.

Wallander always wanted to be perceived as an ethical role model. When he was member of an industry and ethics committee in the 1990s, he offered this advice to people in business: "Always act so that you can read tomorrow morning's *Expressen* [a leading Swedish newspaper/tabloid] without worrying you will find your name" (Wallander 1997, p. 314) [English translation].

6.3.4 Concluding Words on Jan Wallander and Handelsbanken

To observers who have followed Handelsbanken's history, it is clear that Jan Wallander's business philosophy has shaped the bank profoundly. The enormous respect people have for Wallander as an individual and as a business leader is also clear. Yet those same observers may also have concerns, should major changes occur in the business climate and/or in the banking sector that the bank's philosophical underpinnings may be at risk. There is always a risk that historical successes may sow the seeds of future failures. However, because the bank's business model emphasis actions that are careful, risk-focused and cost-conscious, Handelsbanken is relatively well prepared for meeting future challenges and risks.

To summarise, in many ways Jan Wallander, as a remarkable business innovator, was a leader ahead of his time. Like Jacob Wallenberg, Wallander successfully devised solutions to problems that were organisation and industry specific. Not all problem-solvers can make that claim. Wallander (1998, p. 186) had this to say about people in business:

> Business leaders view themselves as rational and coldly calculative managers. But in reality, they are often as fashion-conscious as teenage girls—eager in their own areas to follow the latest trend. [English translation]

6.4 Pehr G. Gyllenhammar and AB Volvo

The year is 1981. With two oil crises, a sharp increase in oil prices, a prolonged economic downturn, a loss of some 400,000 jobs, and the Japanese car manufacturers' market success, the European automotive industry is facing its worst crisis ever in peacetime. Many European car companies have had to seek government assistance.

In Sweden, the economic situation was especially challenging because wages, including automotive wages, had increased significantly. Somewhat like Greece in our times, Sweden had a runaway national budget deficit in 1981 (corresponding to 12% of GDP), and industrial production had fallen substantially. But there was one exception to this grim picture. Volvo Group made a profit of 1.425 billion Swedish crowns, with Volvo passenger cars accounting for 525 million (Borgström and Haag 1988, p. 317).[2]

Volvo survived the difficult 1970s without having to seek external capital funding and governmental support. Much of the credit for this success is due to Pehr Gustaf Gyllenhammar, popularly known by the initials "PG". For many people, he was, and is, a controversial business leader. The controversy revolves mainly around the unusual solutions he so often devised for Sweden's largest industrial enterprise that was regarded as something of a national treasure. Volvo's planned merger with Renault in 1993, which Gyllenhammar supported, was as much a political issue as a business issue.

There is no question that Gyllenhammar sparked responses (pro and con) in Sweden to a degree no other Swedish manager ever had or does today. For example, he was voted Sweden's most admired man eight years in a row at the same time that many in the financial world condemned him for his rejection of "shareholder corporate governance" at Volvo.

Gyllenhammar was born in 1935. In the 1960s, his father was the CEO of an insurance company based in Gothenburg, Sweden. In cooperation with Jacob Wallenberg, Gyllenhammar (the father) was involved with several mergers with leading insurance companies in Stockholm and southern Sweden (Englund 1982). The result of these mergers was the large and powerful Skandia insurance company, of which Gyllenhammar (the father) was the CEO. Chapter 1 of this book describes more of the history and fate of Skandia.

[2]In 1999, AB Volvo sold Volvo Cars (its passenger car division) to Ford Motor Company. In 2010, Ford Motor Company sold Volvo Cars to Geely Automobile, a Chinese car manufacturer.

The son, PG Gyllenhammar (hereafter, Gyllenhammar), began his career in 1960s at a subsidiary of the insurance company his father led after he completed his legal studies at Lund University in Sweden and an internship in New York City (Borgström and Haag 1988). He married Christina Engellau, the daughter of the then Volvo CEO, Gunnar Engellau. Following a company merger, he became an employee of Skandia. In 1965, he became assistant manager of Skandia's planning section. In this position, he gained a reputation for his enthusiasm for computerisation and centralised planning.

Gyllenhammar even promoted replacing corporate headquarters with an expanded planning unit capable of predicting the future, developing policy and calculating the odds on best results for various decision alternatives. His belief in technical tools for rational decision-making was very strong in those days.

In 1969, at the youthful age of 34, Gyllenhammar succeeded his father as CEO of Skandia. He had become rather a sensation in the conservative insurance industry where people usually achieve top positions after several decades of hard work at the same company. The explanation for his surprising promotion was the favourable impression he made on the board members. Although the board consisted of a fairly traditional group of senior executives, they liked his energy and innovation.

It was even more surprising that, after only five months as Skandia's CEO, Gyllenhammar took the CEO position at AB Volvo. Skandia's board of directors and the Wallenberg family, who had supported him and had high expectations of him, were gravely disappointed, even angry. One of their very own had "changed sides" by assuming the leadership of another company just after they had advanced his extraordinary career.

When Gyllenhammar joined Volvo, the company had just undergone a very expansive development programme and was on the verge of becoming the largest industrial company in the Nordic countries. Although the company was profitable, because of its size and complexity it had become somewhat unwieldy. One worrisome problem was the extent of staff turnover in vehicle production. Gyllenhammar began by splitting the company into divisions and by decentralising the administrative functions. Whereas the head office had 1600 people when he arrived, he soon reduced its staff to 100 people. He also established close cooperative arrangements with the unions by promoting both efficiency and good working conditions. He invited eminent social scientists, physicians and ergonomists to participate in these matters.

Volvo and Gyllenhammar began to catch the world's attention. The new Volvo factory at Kalmar, Sweden, which was inaugurated in 1974, created considerable international interest (especially in the United States) and contributed to the perception that Volvo was a very progressive and humanistic company. In the 1970s, Gyllenhammar joined an exclusive network of directors and politicians that included the Rockefeller brothers, Henry Ford II, Giovanni Agnelli and Henry Kissinger. His reputation as an international "super star" among business leaders was confirmed in 1982 when he took initiative to the European Round Table of

Industrialists (ERT). This group still exists, with many European top leaders as members. Gyllenhammar was the ERT chairman until 1988 and a member until 1994.[3]

The 1970s were difficult years for the entire automotive industry and Volvo passenger car division was no exception. In addition to decreased demand for passenger cars, Volvo's acquisition of the Dutch company, DAF, was a commercial failure, and Volvo's attempt to merge with Saab-Scania also failed because of opposition from Saab-Scania's leadership.

When Volvo wanted to develop a new generation of cars more capital was needed. Since it was not possible to raise capital at The Stockholm Stock Exchange the search for capital led to the proposed Volvo-Norway agreement in which the Norwegian government was to pay 750 million Swedish crowns for a 40% stake in Volvo at the same time that it offered Volvo concessions on oil fields in the North Sea. Additionally, the agreement called for Volvo to make investments in Norwegian industry. This affair also failed because of strong opposition by many Volvo shareholders, both large and small, who were led by the previously anonymous Swedish Shareholders' Association. In all these dealings, Gyllenhammar was a little ahead of his time. After the 1970s, international mergers and acquisitions became business-as-usual when nationalistic and rather sentimental pride in home-grown industries diminished.

Gyllenhammar's next idea was a Volvo merger with Beijerinvest, a family-owned holding company. The main purpose of the merger, which took place in 1981, was to gain access to the very successful oil company, STC. However, STC's assets were hugely overvalued. In addition, speculation by STC's oil traders resulted in losses for Volvo of several billion Swedish crowns. Yet other companies owned by Beijerinvest were viable and profitable, especially those companies in the food industry. Overall, the acquisition was beneficial for Volvo.

The 1980s were brilliant years for Volvo. As a result of the reduction in the number of employees in the late 1970s, the devaluation of the Swedish crown in 1982, and the introduction of the well-received 740/760 Volvo model, Volvo was very profitable, especially compared to Swedish industry as a whole. Between 1981 and 1985, Volvo's total passenger car sales jumped from around 14 billion Swedish crowns to almost 35 billion, and profit on a yearly basis increased from 500 million Swedish crowns to more than 6 billion. There was no doubt that Volvo had become a viable company once more.

Gyllenhammar became the Volvo board chairman in 1983, a position he held until he left the company in 1993. It is generally assumed he left Volvo because of the proposed (and failed) merger with Renault that had created such strong opposition among shareholders and senior government officials (Hökerberg 2000; Larsson 1994). His next position was board chairman of the British insurance company, Aviva, one of the largest insurance companies in Europe. It is interesting

[3]In 2012, ERT had 45 members. In total, the companies represented by these leaders employed 4.5 million people.

to reflect that, in a sense, the Gyllenhammars (father and son) had come full circle. Both closed their careers as heads of large insurance companies created by national mergers.

6.4.1 Financial Resilience Resources

Gyllenhammar believed a company could benefit from operations in different sectors that could stabilise each other creating new corporate structures (Borgström and Haag 1988). Volvo's entry into the energy, food, and medical sectors was an attempt to make the company more self-sufficient. Such sectors, which can be business lifesavers in economic downturns, are rather easily disposed of when necessary. In the "Gyllenhammar Era", Volvo profits varied significantly year-to-year, and some investments were unsuccessful. Nevertheless, Volvo's assets greatly increased in value while Gyllenhammar was CEO and board chairman. Given Sweden's generally weak competitive position in these years, Volvo's performance was a remarkable achievement.

One difference between Gyllenhammar and Jacob Wallenberg and Jan Wallander is his greater confidence in economies of scale. A second difference is his trust in the possibility that merged entities can create a common corporate culture not encumbered by unwieldy, managerial bureaucracy—a structure he fiercely opposed with his advocacy of decentralisation and employee commitment (Enquist and Javefors 1996). A large sales volume is not in itself a guarantee of profitability. This is obvious from the fact that many of the world's largest car manufacturers have suffered serious losses in recent years. However, with innovative, unique cars, a committed workforce, and a clear niche strategy, small car manufacturers, like Volvo, can succeed.

Volvo passenger cars which had a mediocre development as a division at Ford Motor Company between 1999 and 2010, is now increasing sales and profit under ownership by the Chinese Geely Group. Previously, many Volvo passenger car employees were unhappy with Ford's ownership because of limitations on their freedom.

6.4.2 Technical Resilience Resources

Gyllenhammar was one of the first leaders of a major Swedish company to realise that a company's products could reflect consumers' values. Although Volvo products had almost always been recognised for their safety and quality, Gyllenhammar thought the company's products and their manufacture should also reflect a commitment to social responsibility and environmental concerns (Gyllenhammar 1973, 1977). For example, he thought new production technologies and innovative work organisation could make workers' jobs more stimulating and

less abrasive. His goal was to make Volvo an international role model and a global meeting place for researchers, consultants and engineers.

Gyllenhammar also understood the importance of manager–worker co-determination, worker health and well-being, environmental issues and public relations. Volvo's reputation in these areas was especially strong in the 1980s when its progressive spirit was both imitated and envied. Without a doubt, in the 1970s and 1980s, Volvo was a pioneer in modernising the traditional manufacturing culture in which the workers' position was one of subordination and passivity and where strict boundaries divided workers and managers and separated departments and functions. Volvo, however, showed it was possible to break with these old traditions.

6.4.3 Social Resilience Resources

Far more than most Swedish companies, Volvo has the right to claim it took the national interest into consideration in its origin and development. In some sense, Volvo was a national social–economic project in which manufacturing operations were established in various communities, national self-sufficiency improved, export trade was promoted and human welfare was supported (Tengblad 2011). Gyllenhammar inherited this legacy, which he then developed in new ways. He invested in new factories in regions where unemployment and company downsizing were most severe, and he placed union representatives on boards of directors. These were the actions of a leader committed to the welfare of society and its workers. During all his years at Volvo, Gyllenhammar enjoyed the full support of Volvo's production workers.

Gyllenhammar was also interested in influencing public opinion. In his book, *Jag tror på Sverige* [English: *I believe in Sweden*] (1973), and as a spokesman for industry, he expressed his views on Swedish industrial life. He expressed these views in several other books as well. Under his leadership, Volvo generously supported the City of Gothenburg's opera, symphony orchestra and the annual international horse show.

If there is a weakness in how Gyllenhammar used social resilience resources, perhaps one could point to his relationship with Volvo's shareholders and financiers. Gyllenhammar perpetuated and strengthened the Volvo "independent" tradition in which the board members essentially appointed themselves. Moreover, because the shareholders and bankers had little control or influence over the company, Volvo's relationship with these actors was tense and sometimes confrontational. The failures of the proposed Renault merger and the Volvo-Norway agreement were examples of this uneasy relationship.

Some observers have described the decline in Volvo share prices during these years as the result of the "PG Effect". In his last decade at Volvo, Gyllenhammar's powerful leadership became something of a weakness. His somewhat overpowering communicative and verbal skills were such that meetings became rather a

"one-man-show". His fierce work pace and his meticulous planning left little room for the kind of social activities and human interaction that lead to trusting work relationships. Due to his increasing isolation as a leader, Gyllenhammar finally met internal resistance for the proposed Volvo-Renault merger (Ekman 2002).

6.4.4 Concluding Words on Pehr G. Gyllenhammar and AB Volvo

Under Gyllenhammar's leadership, Volvo enjoyed many years of enviable growth as the company entered the medical, food and even energy sectors. The company's greatest challenge was to find a way to survive during a time of declining demand for its products and a difficult economic environment.

A great deal of Volvo's success was also the result of the large investments in its employees and in its production technologies. These investments led to the decade of the company's greatest success, the 1980s. Thus, the Gyllenhammar Era is a good example of the unpredictability of industrial sustainability. Around 1970, the view was that passenger car manufacturers could expect, at most, to survive another 20–25 years. In particular, the Volvo passenger car was under threat given the predicted end of combustion engines by the end of the century.

The business environment of the 1970s was quite different from that of today. For example, the conditions proposed in the Volvo-Norway agreement today seem somewhat bizarre (Borgström and Haag 1988). But this was before the arrival of Ronald Reagan's and Margaret Thatcher's brands of capitalism that have had such a powerful and long-lasting influence. Previously, the policies of full employment, high inflation and high taxation had been harmful to company profitability and economic growth. In this unfavourable business climate, Volvo found it difficult to attract private capital. When it received no financial support from the Swedish government, Volvo appealed to the Norwegian government to finance production of a new car model. This was a bold and innovative request, hardly imaginable today. However, given the Swedish government's practice of supporting less competitive companies on the brink of bankruptcy, Volvo had little choice.

Despite criticisms of him personally as well as of his ideas and actions, Gyllenhammar's place in business history seems assured. Repeatedly, he devised creative solutions to unforeseen problems. As an evangelist for thoughtful and detailed planning, he demonstrated a remarkable ability to adapt to events and to motivate employee commitment, even in very difficult economic times. His philosophy of creating viable companies rather than of maximising shareholder value in the short term is also worthy of study by future generations of business leaders and commentators.

6.5 Final Reflections

The chapter describes three successful business leaders who demonstrated resilient business leadership by their combination of financial, technical and social resilience resources in the management of large companies. Their management philosophies reflect the importance of managing these resources competently to meet customer demand and to inspire employee commitment and initiative. Their success depended on both individual and collective action. Furthermore, their management philosophies included a blend of operational efficiency, a high level of reliability and the capacity for change. Their companies—Stockholms Enskilda Bank, Handelsbanken and Volvo—were the most successful in their sectors in Sweden for many decades.

Wallander, in particular, created an organisation with stable structures based on the speed of decision-making and decentralised responsibility for coping with the changing demands financial institutions face. Both Wallenberg and Wallander were critical of corporate governance and control policies that business researchers and leaders at large companies in the United States supported. Gyllenhammar was highly critical of dysfunctional bureaucracies and the dehumanising work environment typical of mass production. It is also telling that all three business leaders emphasised the need for active followership.

It is well known that various actors exert great pressure on company leaders. In the 1970s, this pressure was especially evident when labour unions and employees began to demand more influence and better working conditions. However, by the late twentieth and early twenty-first centuries, the greatest pressure came from investors who wanted to streamline companies so as to maximise their returns. In any decade, it is essential that resilient company leaders respond appropriately to such pressure, some of which reflect legitimate issues, but without succumbing totally to that pressure. Resilient company leaders always prioritise the development of their companies' resources (Tengblad 2004). It may be necessary to resist demands by shareholders for dividends (see, e.g. the Circuit City story in Chap. 4) and by investors for profits. These demands, if too readily agreed to, may lead to employee dissatisfaction, declining returns and eventually company failure.

Resiliency in a company leader means being prepared not only for problems but also for opposition to proposed problem solutions. Successful company leaders take the time to re-examine and reflect on such solutions before their implementation. They must have the strength to resist opposition to their solutions as well as the ability to persuade others of their solutions. Often, this requires exerting authority by opposing other actors' self-interests.

It is a complex task and responsibility to be a resilient company leader that requires, among other things, a constant dialogue with many other actors. Only the most innovative, imaginative and daring leaders can effectively combine their resilience resources. Strong leaders need to have the courage demonstrated by the three business leaders described in this chapter. They are role models in this respect. The most resilient of leaders will also have the self-confidence and wisdom to

realise when it is time to turn over the reins to younger generations of leaders and managers.

This chapter also calls attention to the limitations of a technocratic leadership style focused narrowly on forecasting, planning and promoting policies. Although such structures are necessary for good company governance and control, care should be taken to avoid using them to extremes. Instead, leaders should support work relationships, be open to change and invent solutions to (unforeseen) problems. Resilience means managing and responding to challenges in ways that contribute to a company's survival. The responses may require new organisational concepts that shareholders, employees and customers are willing to support. Following trends and imitating others' successes are not policies necessarily appropriate for every company's situation. That is, perhaps, the most important leadership lesson that Wallenberg, Wallander and Gyllenhammar can teach us.

6.6 Discussion Questions

1. Which leader described in this chapter do you think history will most remember and respect? Explain your reasoning.
2. Do you think today's leaders would find the chapter's three leaders inspirational? Why or why not?
3. Discuss the advantages and disadvantages when business leaders "go against the stream". How can leaders achieve a balance between conforming to external expectations/trends and acting independently?
4. Discuss whether there might be a timeless recipe for how leaders can shape organisations that are resilient.

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Part III
Examining and Deepening the Resilience Factors

Chapter 7
Financial Resilience: The Role of Financial Balance, Profitability, and Ownership

Christian Jansson

Abstract This chapter focuses on financial resilience, which is an important aspect of the organizational resilience framework presented in Chap. 3. Financial resilience includes the balance between assets and debts and also resources like profitability, liquidity and ownership structure. The financial resilience of six of the largest Swedish companies is analyzed in the chapter. The selection includes companies with strong, average, and weak financial resilience, which enables us to contrast different companies to each other. The data is mainly collected from annual reports. The chapter concludes that it is necessary to have a profitable core operation to achieve strong financial resilience, but it is also important to have strong and long-term-oriented owners who retain a part of the profit in the companies as a buffer for more challenging times.

Keywords Financial resilience · Financial balance · Financial square model

Abbreviations and Definitions

AR	Annual Report
QR (1–4)	Quarterly Reports by quarter
SEK	Swedish crowns (As a rough estimate, in the years 2000–2015, the exchange rate has varied between 9.5 SEK and 6.5 SEK to the U.S. dollar, and between approximately 8 and 11 SEK to the Euro.)
BSEK	Billions of Swedish crowns

This chapter examines company financial balance, profitability, liquidity (financial resources), and company ownership (a social resource) and their importance for financial resilience. The chapter also deals with the critical role of companies' business models as another financial resource.

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7.1 The Model for Organizational Resilience: The Financial Resources

7.1.1 The Resource: Financial Balance

The resource model of organizational resilience presented in Chap. 3 is the starting point for this chapter. This model describes 15 resources for organizational resilience, including five financial resources. Each resource relates to a key organizational area. As a practical application of the model, this chapter analyses the financial resilience of the following Swedish companies: the Volvo Group, Ericsson, H&M, Scandinavian Airlines, Swedbank, and Nordea. Company data are primarily derived from annual reports, complemented by articles in various (primarily Swedish) financial journals and newspapers.

The aim of this chapter is to analyse some of the most internationally well-known Swedish companies from a financial resilience perspective, and thereby to show the importance of financial balance, profitability, and ownership.

The five financial resources in the organizational resilience model (see Chap. 3) relate to a company's financial balance, profitability, liquidity, business contracts, and intangible assets. When coordinated, these five financial resources can support a company's financial resilience.

Both in the short term and in the long term, companies have to be financially resilient. Financial balance is a measure of long-term resilience, while liquidity is a measure of short-term resilience. Profitability, which is a prerequisite for any company's long-term survival, provides a good opportunity for a company to create and maintain its financial balance and to have highly liquid assets. Business contracts and intangible assets, which are essential contributors to profitability, are ultimately important contributors to a company's financial balance and liquidity. In its examination of the six Swedish companies, the chapter focuses on three financial resources: financial balance, profitability, and liquidity. Moreover, the chapter focuses on one social resource in the organizational resilience model: the company's relationship with its owners (and financiers).

The resource, financial balance, can be created in two ways: from sustained profitability (from retention of earnings) or from owner contributions (from share purchases). Although owners may support short-term projects or plans, in the long run the only way to achieve and maintain strong financial balance is from continued and steady profitability.

Of course, when a company is profitable, a critical issue is whether the company will retain its earnings or distribute them as dividends. Ultimately, the owners decide this issue. Thus, while profitability and owner contributions are the major factors that provide a company with financial balance, other factors (e.g., a company's business model) should also be mentioned. However, at times, it is difficult to combine these other factors in a way that strengthens a company's financial balance.

7.2 The Financial Square Model and Some Key Ratios

As a complement to the organizational resilience model, the chapter presents the financial square model that can be used in company analysis. Polesie (1995) created this model that graphically depicts a company's financial position. The bases of the model are the income statement and the balance sheet. The income statement is presented horizontally, with annual turnover (sales) at the top, and costs and profit at the lower side. The balance sheet is presented vertically with assets at the left, and liabilities and equity at the right. In total, these six elements make up the model, which is quite useful for analyzing a company's financial position (see Fig. 7.1).

The model is innovative in that each of its four sides matches the numbers shown. Thus, the model's size and shape will vary depending on the company it depicts. For the typical industrial company, in which annual turnover is often equal to assets, the model is usually square. For a trading company, in which annual turnover is usually much larger than assets, the model is usually more rectangular.

7.2.1 Financial Balance Key Ratios

One of the most commonly used key ratios to calculate a company's financial balance is solidity. As a ratio, solidity is calculated as owners' equity/total assets. This key ratio indicates the extent to which the owners finance the company.

A second commonly used ratio in the analysis of financial balance is the leverage ratio (calculated as debt/owners' equity). This ratio indicates the relation between the debt and equity used to finance a company's assets.

A third measure of financial balance is net debt (calculated as interest-bearing debt less liquid assets). Net debt provides an indication of a company's ability to repay all its interest-bearing loans with its cash and cash equivalents, assuming

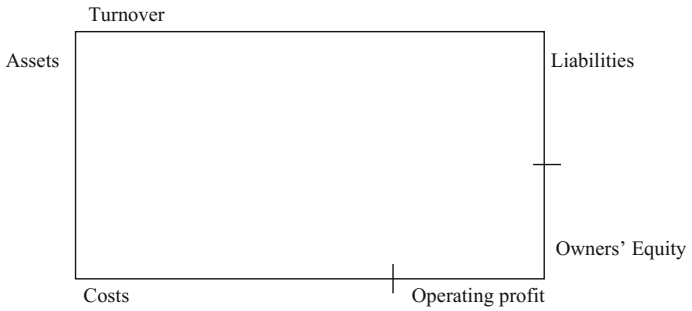

Fig. 7.1 The financial square model (Polesie 1995). This is an overview of the model. Each of the four sides may be described in greater detail

these loans came due at once. Net debt can also be compared to owner's equity to evaluate a company's financial balance.

In this chapter, solidity is used as a measure of financial balance. However, this key ratio may be a little rough because it does not reveal the proportion of company's interest-bearing debt to its non-interest-bearing debt. Thus, solidity does not capture all aspects of a company's financial balance; however, this limitation is true of all metrics used to calculate a company's financial balance. Inevitably, some relationships are not revealed. However, in this chapter, the intention is to focus on the six Swedish companies in general terms rather than on the fine details of their financial balance; therefore, this deficiency is not problematic.

In the chapter, as a complement to the solidity calculations, we also use the financial square model that uses absolute numbers for company analysis. The model presents the six companies' owners' equity in relation to their assets and liabilities. Solidity, on the other hand, is a relative number, which means it does not deal with the actual size of these items. Instead, solidity allows us to compare companies of different sizes. Thus, we use both analytical tools (the financial square model and solidity) to examine the financial balance of the six companies.

7.2.2 Profitability Key Ratios

An important key ratio used to analyse profitability is operating margin, which is calculated as operating profit divided by turnover (sales). This key ratio indicates the relationship between a company's operational activities and its annual turnover.

Return on assets, which is calculated as operating profit divided by average total assets, is also used to analyse profitability. This key ratio indicates how profitable a company is based on the amount of capital invested in total assets.

7.3 Volvo: A Company with Average Financial Resilience

7.3.1 The Volvo Group

The Volvo Group (Volvo) is Sweden's largest company in terms of annual turnover. It is also one of the world's largest manufacturers of heavy vehicles. Trucks, which are the company's principal business area, account for around 70% of its annual turnover. Volvo sells its trucks under several different brands—for example, its own name, the Renault name in Europe, and the Mack name in North America (Volvo AR 2015). It is important to note that, since 1998, Volvo Cars (the passenger car division) has not been part of the Volvo Group.

Volvo has enjoyed a relatively normal financial balance. Its solidity—owners' equity to total assets—was 23% (85 out of 375 BSEK) in 2015, as shown in

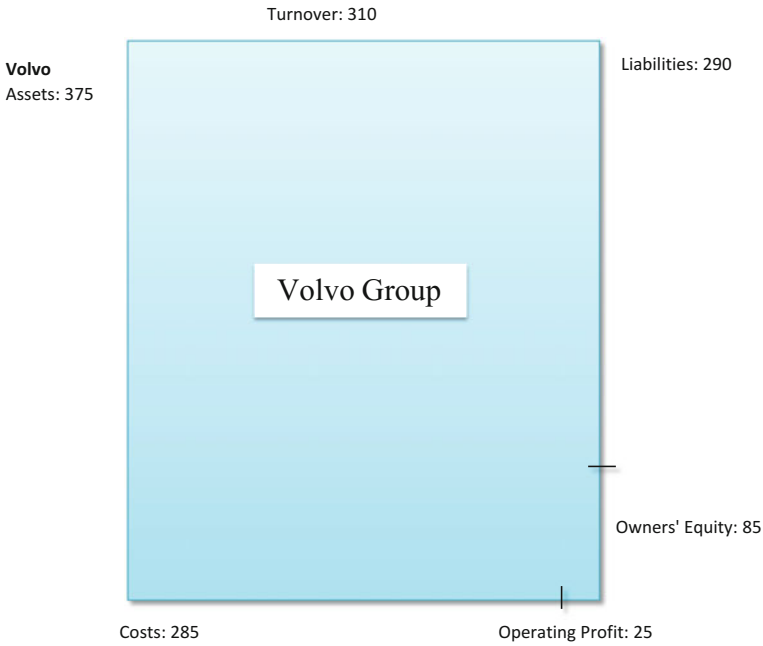

Fig. 7.2 The Volvo Group's financial square model. The model is presented in rounded numbers because its purpose is to present an overview of the company's financial position in absolute numbers. (Volvo AR 2015)

Figs. 7.2 and 7.3. This is a typical ratio for a large, Swedish industrial company. Until 2006, Volvo stated its solidity goal was 40% (Volvo ARs 2005 and 2006). This was a challenging goal because between 2001 and 2006 Volvo's solidity was just slightly over 30% (see Fig. 7.3).

In 2006, Volvo was a well-capitalized company with a strong owners' equity position (its solidity was 34%). However, some institutional owners, who thought this ratio was too strong, wanted the company to increase its borrowing, with a portion of the money raised to be distributed to the owners (*Affärsvärlden* 2007; Volvo ARs 2006 and 2007). Their motive was to increase their return on their Volvo shares with extraordinary dividends.

Several owners, calling themselves the "Volvo Friends," joined informally to pressure Volvo to increase its borrowing. This group included several of the Swedish AP-funds and large mutual fund managers. They were supported publicly in the media by the influential Swedish hedge fund manager and venture capitalist, Christer Gardell, who had recently taken large ownership positions in Volvo through the fund Cevian.

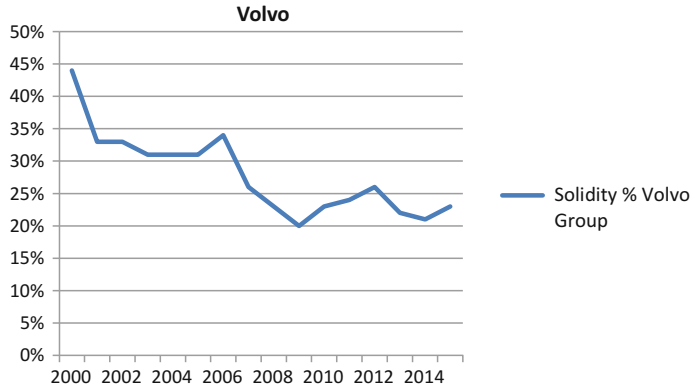

Fig. 7.3 Volvo's solidity in the early twenty-first century (Volvo ARs 2000–2015)

However, the Handelsbanken Sphere[1] (which by then controlled several large, Swedish listed companies)[2] was a new and large shareholder that thought the company should retain its profits instead of distributing them as dividends. The resulting pressure of these opposing forces for a change in Volvo's capital structure/dividend policy was very strong. Nevertheless, in the next two years, Volvo issued dividends of around 30 billion Swedish crowns (SEK) [hereafter, all Swedish monetary amounts are designated as SEK] (*Dagens industri* 2006; *Affärsvärlden* 2007; Volvo ARs 2007 and 2008).

In the financial crisis that began in 2007–2008, Volvo's turnover fell sharply (turnover decreased by almost a third between 2008 and 2009). In 2009, the company had an operating loss of almost 17 billion SEK (Volvo AR 2009). In combination with the large dividend distributions in previous years, the worldwide financial crisis caused Volvo's solidity to drop from 34% in 2006 to only 20% in 2009.

With solidity of 20%, a company still has a buffer in case a challenging situation worsens. In Volvo's case, the company was fortunate in that, as far as its operations, the fallout from the financial crisis was fairly short term. In the next year, Volvo had an operating profit of 18 billion SEK (Volvo AR 2010).

However, what if the effects on Volvo of the financial crisis had not been short term? What if Volvo's turnover had continued to fall, and operating losses had continued into 2010? And what would have been the outcome if this deteriorating situation had continued for several more years? Would Volvo have had sufficient capital to survive such a crisis, or would the company have been forced to ask their owners for a capital injection? Would these owners have agreed to put up more capital?

[1]An owner sphere is a group of companies or persons that exerts power/control over other companies due to large ownership stakes.

[2]"Handelsbanken Sphere was until 2016 a dominant owner of large Swedish manufacturing firms. In 2016 Handelsbanken decided to only focus on their core business, banking, and sold their shares in Industrivärden (the controlling investment firm of the sphere) to the investor Fredrik Lundberg.

Although these are unanswerable, hypothetical questions, they are of interest because they raise the issue of financial resilience when companies face severe crises with insufficient financial resources and reluctant owners. Moreover, the Volvo situation makes an interesting comparison with the Circuit City situation (see Chap. 4), which we will return to later in the chapter.

After the financial crisis, Volvo reduced its dividends for a couple of years, which had a positive effect on the solidity (Volvo ARs 2008–2015). Volvo's profitability has also improved (in 2012, operating profit was for example 18 billion SEK). As a result, the company was again able to pay dividends (from 2012 to 2015 Volvo has paid 6 billion SEK in dividends annually) (Volvo AR 2012–2015).

The case of Volvo is interesting from a financial resilience point of view. Until 2006, the company had satisfactory solidity. However, when the institutional owners took a more proactive position as far as company management during the recent financial crisis, the situation changed dramatically. In just three years, Volvo's solidity fell from a positive and reasonable percentage to a level below normal.

After the financial crisis eased, Volvo's solidity improved, probably in large part because of actions by the Handelsbanken Sphere. Prior to that time, Renault was the major Volvo owner (albeit a passive owner, according to *Svenska Dagbladet* 2012b). Thereafter, however, the Handelsbanken Sphere increased their control of Volvo (Volvo ARs 2005–2015). The opposition among the Volvo owners in the first decade of the twenty-first century may have influenced management decisions, and thereby the company's solidity. Perhaps these owners are, ultimately, the reason that Volvo's financial resilience position (as reflected in its fluctuating solidity) has varied so much over the years. The action by the Volvo Friends (stipulating large dividends) contributed to the decrease in Volvo's solidity and thereby to the weakening of its financial resilience. This was an action quite the opposite of what the group name indicates. We can conclude that Volvo's relationship to a core social resource—its owners and financiers—has been shaky, at best.

7.4 Ericsson and H&M: Companies with Strong Financial Resilience

7.4.1 Ericsson

Ericsson is also one of Sweden's largest companies (based on annual turnover) and one of the world's largest suppliers of communications technology and services. (At one time, Ericsson manufactured and sold mobile telephones in a joint venture with the Japanese company, Sony Corporation, under the name SonyEricsson). Ericsson's main competitor today is the Chinese company, Huawei, that has grown and taking large market shares in recent years.

At one time, Ericsson's main competitors were European and North American companies, but stiff competition forced several of these companies to merge. For example, Nokia (in Finland) and Siemens (in Germany) merged, and Alcatel

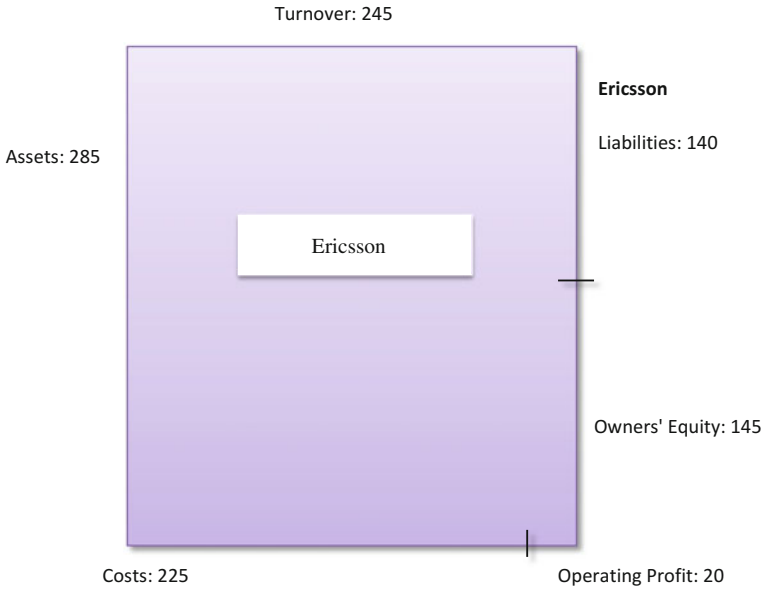

Fig. 7.4 Ericsson's financial square model (Ericsson AR 2015)

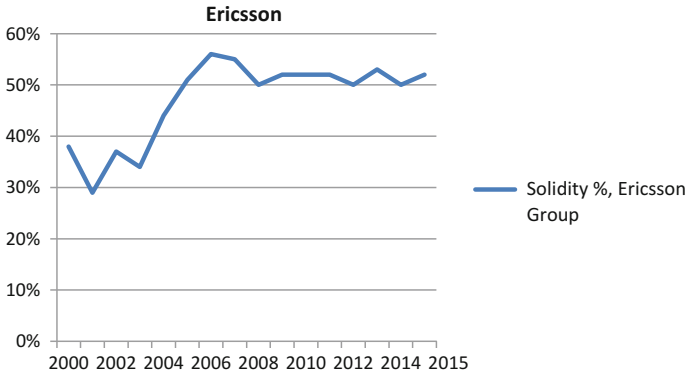

Fig. 7.5 Ericsson's solidity in the twenty-first century (Ericsson ARs 2000–2015)

(in France) and Lucent (in the USA) merged. Also, the Canadian competitor, Nortel, went bankrupt in 2009. In the summer of 2012, after Nokia acquired its jointly owned subsidiary from Siemens and sold its mobile handset business to Microsoft, Nokia once again became a main competitor to Ericsson and Huawei (Dagens Nyheter 2013; Dagens industri 2013b).

At present, Ericsson has a strong and stable financial balance. In recent years, Ericsson's solidity has been 50% or more (see Figs. 7.4 and 7.5). Normally,

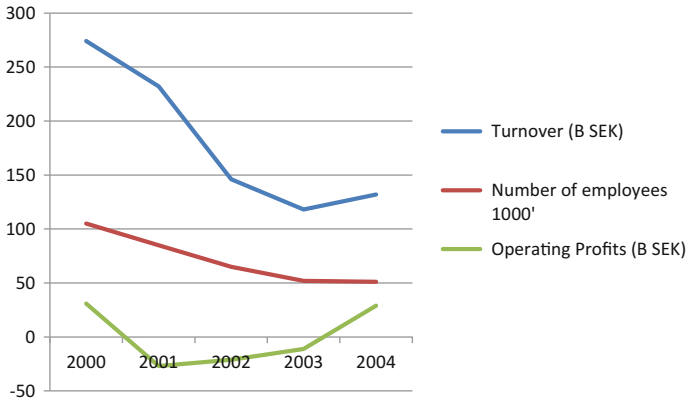

Fig. 7.6 The Ericsson crisis. In four years (2000–2003), both Ericsson's annual turnover and the number of its employees declined by around 50%. Total operating losses in the same period was around 60 billion SEK (Ericsson ARs 2000–2004)

companies think that it is too expensive to have a high proportion of owners' equity to total assets because the owners demand a risk premium in addition to the rate of interest that banks are paying.

The Ericsson owners seem satisfied with this high solidity. The Wallenberg Sphere (another large industrial, investment sphere in Sweden) and the Handelsbanken Sphere together controlled 40% of Ericsson's voting shares in 2015 (Ericsson AR 2015). One cannot know exactly why the principal owners of one of Sweden's largest companies are content with such a high solidity, but one reason may be Ericsson's experience in the early 2000s.

In the summer of 2002, despite Ericsson's relatively strong financial and liquidity positions, many people feared that Ericsson was on the verge of bankruptcy. At year-end 2001, Ericsson had approximately 70 billion SEK in equity—almost as much as its cash and cash equivalents (*Affärsvärlden* 2009; Ericsson AR 2001). However, concern arose because of Ericsson's failure with its mobile network equipment. The failure was largely attributable to the high prices Ericsson customers (the large European telecom operators) had paid for 3G licenses a few years earlier. Even with the rapid increase in mobile telephone activity, telecom operators now lacked the funds to make new investments (*Affärsvärlden* 2009).

Market problems had caused Ericsson's sales to decrease by nearly half in only three years (see Fig. 7.6).[3] To regain investor confidence and to strengthen its liquidity, in the summer of 2002 Ericsson sold new shares in the amount of 30 billion SEK. Following this action, Ericsson's solidity has never fallen below the

[3]An important explanation of the decline in Ericsson's turnover and the reduction in the number of its employees was the company's entry into a joint venture for mobile telephone manufacture with Sony. In 2000 and 2001, this activity was included in Ericsson's annual reports (although a subsidiary owned the activity). However, in 2002 and forward, the joint venture activity was only reported in the consolidated financial statements.

Table 7.1 Solidity of some companies controlled by the Wallenberg Sphere and the Handelsbanken Sphere. The solidity numbers are calculated from the company's Annual Reports, 2015

Wallenberg sphere	Solidity (%)	Handelsbanken sphere	Solidity (%)
ABB	35	Sandvik	34
Atlas Copco	45	SCA	50
Electrolux	19	Skanska	25
Saab	37	SSAB	52
SKF	33	Volvo	23

29% figure it had at year-end 2001 (Ericsson ARs 2001, 2003; Ericsson QRs, 1–4, 2002). Liquid assets remained above 45 billion SEK throughout the 2002 crisis year because of the new share issue (Ericsson QRs, 1–4, 2002).

The new stock issue was a costly investment for Ericsson's largest owners. The Wallenberg Sphere and the Handelsbanken Sphere (*Affärsvärlden* 2009) together invested nearly 10 billion SEK in Ericsson. While it is surely advantageous for a company to have powerful and wealthy owners who will make additional investments in times of financial crisis, such investments inevitably influence the company. In this case, the Wallenberg/Handelsbanken investments contributed to Ericsson's long-term viability and its present strong financial balance. Compared to the Volvo case, to a large extent the Ericsson owners have contributed to the company's resilience. From this perspective, their actions have had quite the opposite effect of the Volvo Friends' actions.

As Fig. 7.5 reveals, Ericsson's solidity has remained around 50% since 2005. Ericsson distributed no owner dividends in the first few years after its crisis in order to increase its owners' equity. However, since 2006, dividends have been paid as in the precrisis years. In recent years, Ericsson has paid high dividends (between 2006 and 2015, the company paid around 80 billion SEK in dividends) while still maintaining very strong financial balance because of good profitability (Ericsson ARs 2004–2015). At year-end 2015, Ericsson had almost 150 billion SEK in owners' equity and liquid assets of almost 65 billion SEK (Ericsson AR 2015). This cash position would be quite attractive to many short-term-oriented owners who might demand more dividends. However, the Wallenberg Sphere and the Handelsbanken Sphere have taken a more future-oriented perspective. For this reason, Ericsson seems a financial stable and resilient company at present.

The Wallenberg Sphere and the Handelsbanken Sphere (which have controlled many of Sweden's largest industrial companies for decades) traditionally leave a large portion of the controlled companies' profits within those companies.[4] Table 7.1 presents an overview of the solidity of some of the companies under the control of the Spheres.

[4]Wallenberg Sphere (% of voting shares): ABB (10%), Atlas Copco (22%), Electrolux (30%), Saab (41%), and SKF (29%).
Handelsbanken Sphere (% of voting shares): Sandvik (16%), SCA, (37%), Skanska (24%), SSAB (20%), and Volvo (28%).
Source: Annual reports from respective company 2015.

7.4.2 H&M

H&M is one of Sweden's largest companies (based on annual turnover), and also one of the two largest clothing companies in the world. Inditex that owns, for example, the Zara and Massimo Dutti stores, is the other very large clothing company (H&M AR 2015; Inditex AR 2015) (Fig. 7.7).

From a resilience perspective, H&M is somewhat unusual because its solidity in the twenty-first century has never been below 65%. A company with such a high solidity means that, in principle, the company uses debt leverage rather minimally. H&M has no long-term debt (other than liabilities for pensions and deferred taxes). Therefore, most of H&M's debt is interest-free debt such as accounts payable to suppliers (H&M AR 2015).

Figure 7.8 presents H&M's solidity in the first 16 years of the new century. It is important to observe that H&M leases rather than owns its stores. Without building mortgages on the liability side of the balance sheet, H&M's assets are largely financed by owners' equity.

Typically, a company must have a profitable core business if it is to maintain its financial balance. With an operating margin of 15% in 2015 (H&M AR 2015), H&M is one of the most profitable companies on the Stockholm Stock Exchange. Thus, if H&M sells a garment for 100 crowns, 15 crowns are available to cover nonoperating costs and to provide a return to the shareholders. Volvo, for example, had an operating margin of 7% in 2015, and Ericsson had an operating margin of 9% in 2015 (Volvo AR 2015; Ericsson AR 2015). The high profitability level has been stable; H&M's operating margin since 2002 has varied between 15 and 23% (H&M ARs 2002–2015).

In comparing H&M's solidity with those of Volvo and Ericsson, one must take into consideration H&M's much smaller balance sheet. For example, H&M's has total assets of around 90 billion SEK; Volvo's total assets are around 340 billion SEK; and Ericsson's total assets are around 285 billion SEK (the financial square models for the three companies make this comparison clear). Thus, H&M's solidity of almost 70%, with owners' equity of 60 billion SEK, can be compared to Ericsson's solidity of over 50%, with owners' equity of 150 billion SEK. The

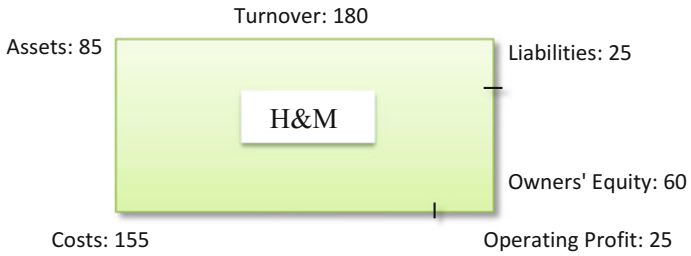

Fig. 7.7 H&M's financial square model (H&M AR 2015)

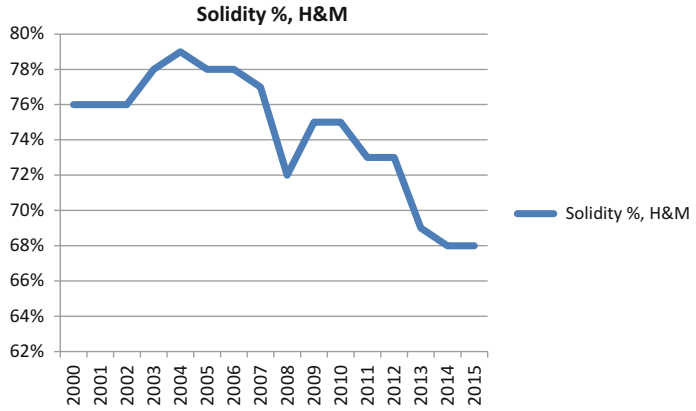

Fig. 7.8 H&M' s solidity in the twenty-first century (H&M ARs 2000–2015)

principal reasons for H&M's relatively small amount of assets, as noted above, is that H&M does not own its stores and has a relatively high frequency of inventory turnover.

The Persson family (a Swedish family) is the founder and main H&M shareholder. The family control around 70% of H&M's voting shares and around 40% of the capital (H&M AR 2015). Probably the most important explanation of the size of H&M's owners' equity and its high solidity is that the Persson family makes the important company decisions.

H&M's institutional owners (i.e., pension funds and other investors) reveal their self-interests when they try to influence H&M to distribute more dividends (as some Volvo owners did). Because their primary goal is to maximize the return on the investments they manage, the institutional owners take a purely financial point of view. They do not have the same long-term responsibilities or goals that the Persson family has. An institutional owner cannot have, and perhaps should not have, the same responsibilities and goals as family owners.

H&M has become a very strong company because of its long term and high profitability and because its majority owners require that the company retain some of its profits.

7.5 SAS, Swedbank, and Nordea: Companies with Weaker Financial Resilience

7.5.1 Scandinavian Airlines

Scandinavian Airlines (SAS) (previously known as Scandinavian Airline Systems) is a Scandinavian airline company founded in 1945 by the governments and private

investors in Sweden, Norway, and Denmark. Since its founding, SAS has played an important infrastructure role in Scandinavia (Vaabengaard 2004). Compared to the companies described previously in this chapter, SAS is relatively small. Its annual turnover is around 40 billion SEK, a sum that is one-fifth the size of H&M's annual turnover and one-eighth the size of Volvo's annual turnover (Fig. 7.9).

A couple of years ago, SAS experienced severe financial problems because of high personnel costs, new low-fare competitors, a relatively old fleet, and the high cost of jet fuel. The company was nearly bankrupt in the fall of 2012. In this section, we discuss some of the causes of these financial problems. In looking at SAS's financial square model, we can see the company had relatively strong solidity in 2012. Owners' equity was around 11 billion SEK, and total assets were around 37 billion SEK. Thus, the solidity was around 30% (11/37) in 2012, which should have provided the company with relatively strong, financial balance. Looking at SAS's solidity from a long-term perspective (see Fig. 7.10), the company appears quite stable, with the exception of the year 2008. After 2008, SAS's solidity has remained at or above 30%.

To understand the financial crisis at SAS, we have to analyse the changes in owners' equity in detail. In 2009 and 2010, SAS sold new shares for more than 10 billion SEK, a sum that was almost the size of its current owners' equity (SAS ARs 2008, 2010, and 2012). This explains the increase in the company's solidity after 2008. However, SAS's solidity declined in 2011, which indicated that problems still existed. To complement the picture described above, an analysis of SAS's profitability in recent years is needed.

Between 2008 and 2012, SAS sustained losses of almost 15 billion SEK (SAS ARs 2008–2012). Such large losses would create a very problematic situation for any company the size of SAS.

If we take SAS's recent losses into consideration in the analysis of how its solidity would have evolved without the new capital injections, we find a very different picture of the company's financial balance. Figure 7.11, a fictitious

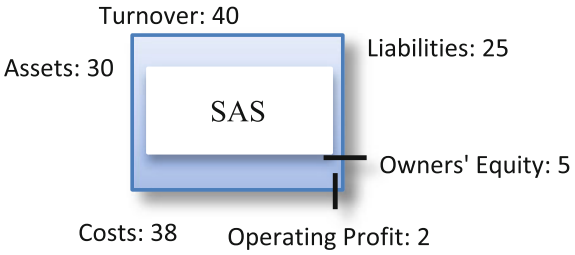

Fig. 7.9 SAS's financial square model. (SAS AR 2015). *T* = Turnover, *OP* = Operating profit, *A* = Assets, *L* = Liabilities, *C* = Costs, *OE* = Owners' equity

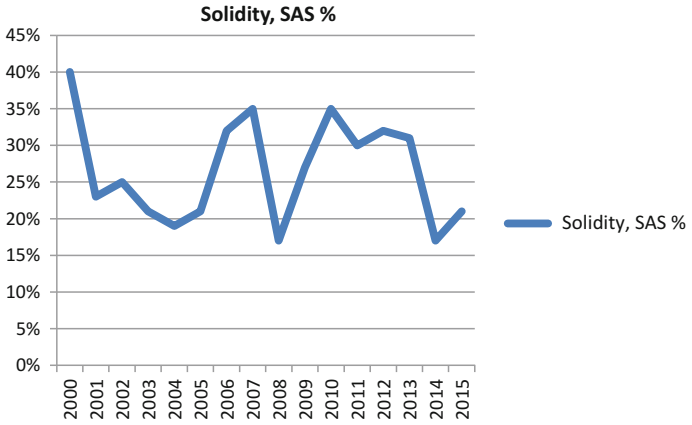

Fig. 7.10 SAS's solidity in the twenty-first century (SAS ARs 2000–2015)

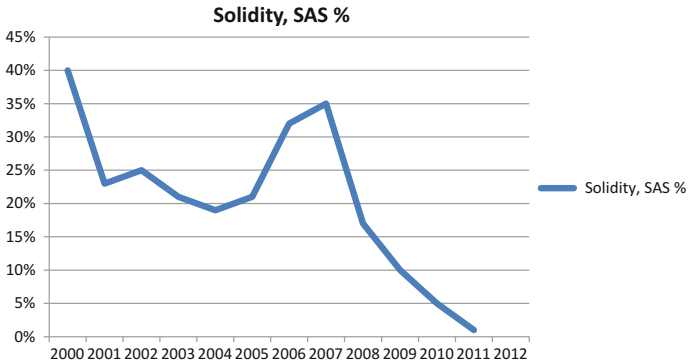

Fig. 7.11 Fictitious picture of SAS's solidity without the new shares (SAS ARs 2000–2012)

representation, shows that SAS's owners' equity would have been depleted in 2012 without the owners' purchase of new shares.

SAS has survived because of the capital supplied by the owners (i.e., the Swedish, Norwegian, and Danish governments). According to *Svenska Dagbladet* (2012a), the Swedish government alone contributed about 2.5 billion SEK to SAS. Yet, when SAS continued to sustain losses, the creditors began to lose confidence in the company's recovery. In 2012, SAS's bankers threatened they might not renew their SAS loans. Again, SAS was faced with the possibility of bankruptcy. The banks demanded that SAS reduce its employees' salaries so that the company could be more competitive (against low-cost carriers), and thus more profitable. After very tough negotiations, SAS and the unions finally agreed to new contracts for all flight personnel that reduced salaries (*Dagens Nyheter* 2012).

It is clear that SAS's survival is the result of support from the Swedish, Norwegian, and Danish governments. Without their willingness to supply additional capital, it is unlikely that SAS could have survived. The case thus reflects the importance of profitability and solidity—and the danger if both are low—and of the enormous value of owners willing to take responsibility for a company's survival in times of financial crisis. Of course, there were other contributory factors such as SAS's generally positive relationship with the unions and the loyalty of its employees (see Chaps. 9, 10, and 11 for comparisons).

Generally, long-term profitability problems cause weakness in a company's financial balance. Losses must be set off against owners' equity. If the losses are sustained, owners' equity erodes to the point where the company's survivability is doubtful.

7.5.2 Swedbank and Nordea

Sweden has four large banks: Nordea, SEB, Handelsbanken, and Swedbank. Swedbank is the smallest of the four banks according to the financial square model, with assets at year-end 2015 of about 2150 billion SEK and liabilities of around 2050 billion SEK. For comparison purposes, Sweden's national debt at the end of 2015 was around 1400 billion SEK (Swedbank AR 2015; Riksgälden 2015). It is indeed remarkable that the smallest of Sweden's large banks has liabilities of some 600 billion SEK more than the national debt.

The size of Swedbank's balance sheet is evident in its financial square model (see Fig. 7.12), which is shown on a scale of 1:12 in order to fit the numbers on the page. If the scale used for the other companies in this chapter had been used in Swedbank's financial square model, the model would have required almost two pages. Swedbank's financial square model is very different from the models of the companies previously described in this chapter. Swedbank's financial square model (see Fig. 7.12) has a very elongated shape because, compared to its annual turnover, the amounts of assets and liabilities are very large.

The advantage of the financial square model is that, with its use of absolute numbers, it can reveal imbalances more clearly than key ratios can. Something else that is of interest in the model is the small size of Swedbank's owners' equity compared to its liabilities: Swedbank's solidity is only slightly over 5%, which is a very low number for most business sectors except the banking sector.[5]

Nordea, Sweden's largest bank, has assets of nearly 6000 billion SEK, an almost unimaginable sum in the Swedish industrial context. For comparison, Sweden's GDP is around 4200 billion SEK (SCB 2015). Measured by these numbers, Nordea, as a single company, is almost 50% larger than the country of Sweden. In terms of asset

[5]In an international comparison 5% is a high solidity ratio for a bank. The large Swedish banks described in this chapter are mainly used to shed light on a more general problem in the industry. It is not a problem that is limited to the Swedish banking sector.

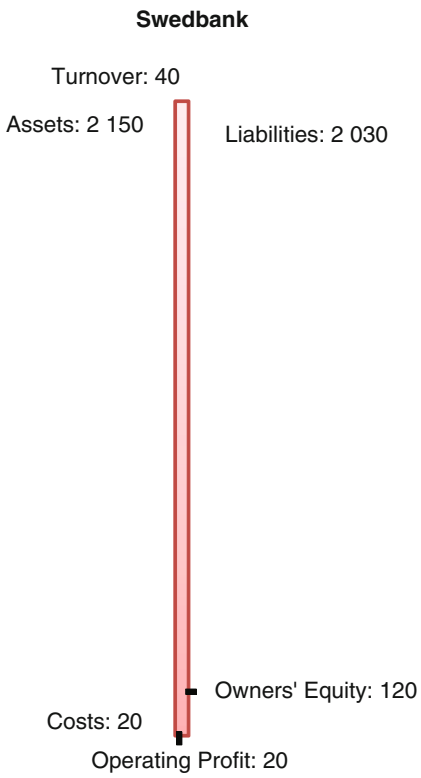

Fig. 7.12 Swedbank's financial square model on a scale of 1:12 (Swedbank AR 2015)

values, the four large Swedish banks are more than three times larger than the country of Sweden.

In another illustration (see Fig. 7.13), we can compare Nordea's financial square model with that of Volvo (one of the world's largest manufacturers of heavy trucks) and with that of H&M (one of the world's largest clothing companies). Figure 7.13 illustrates how large the banking sector is compared to the industrial sector of goods and services. At the same time, Nordea has liabilities of around 5600 billion SEK, with a modest amount of owners' equity of 300 billion SEK. Because Nordea's solidity is only 5%, the bank constitutes a very significant financial risk for the Kingdom of Sweden.

Another element that distinguishes large banks from "normal" companies is that, in principle, they are assumed "too big to fail." In other words, large banks are not at risk for bankruptcy because they are, in a sense, "insured" by national governments. Yet, when a bank is even larger than the State, how big is this problem? The simple answer: It is an enormous problem!

The clearest example of that problem occurred in Ireland during the financial crises when the Irish government took over several banks. As a result, when the Irish government assumed the banks' liabilities, Ireland found itself in serious

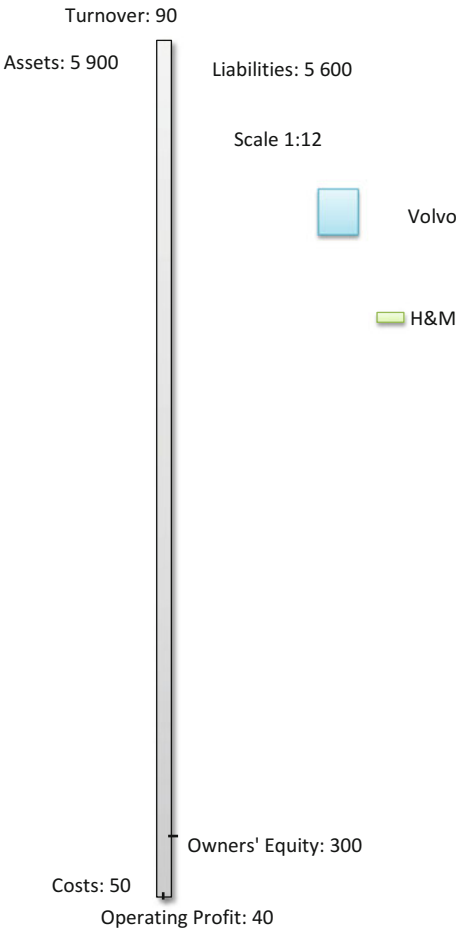

Fig. 7.13 Nordea's financial square model, Volvo's financial square model (in *dark grey*), and H&M's financial square model (in *light grey*) on a scale of 1:12 (Nordea, Volvo, and H&M ARs 2015)

trouble and had to be saved by the European Union (*Wall Street Journal* 2010; *Financial Times* 2011). In 2013, according to the World Factbook, the national debt in Ireland, which was very low before the recent financial crisis, was the seventh highest in the world in terms of GDP—an amount equal to 124% of Irish GDP.[6] If Sweden's major banks experienced a similar crisis, Sweden's situation could likely be the same as Ireland's.

Together, the assets of Swedbank and Nordea total about 8100 billion SEK. By comparison, the total assets of Volvo, Ericsson, H&M, and SAS together add to about 800 billion SEK (Volvo, Ericsson, H&M, and SAS, ARs 2015). What makes

[6]https://www.cia.gov/library/publications/the-world-factbook/geos/ei.html.

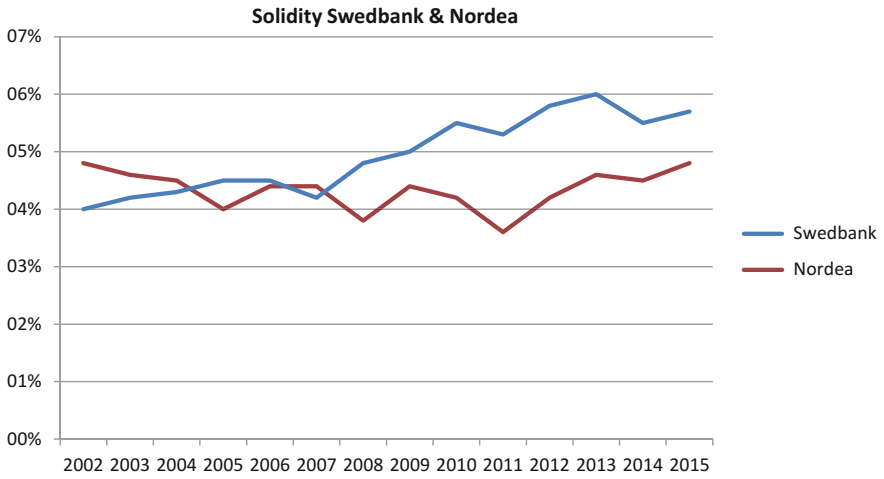

Fig. 7.14 Swedbank's and Nordea's solidity in the twenty-first century (Swedbank and Nordea ARs 2000–2015)

the size of Swedbank and Nordea even more problematic is that their total owners' equity is only around 400 billion SEK. This means that their total liabilities are around 7700 billion SEK (Swedbank, AR 2015; Nordea AR 2015).[7] Swedbank's and Nordea's solidity have varied between 3.5 and 6% in the years 2000–2015 (see Fig. 7.14). It also means that their liabilities in relation to total assets have varied between 94 and 96%. It is hard not to conclude that the financial balance of both banks is relatively weak.

The Ireland case illustrates how bad things can get when a country's banking sector develops severe, systemic problems. Nevertheless, Sweden's major banks continue to take huge risks. It is remarkable that this issue has not been more discussed in Sweden considering that when a bank has a solidity of only 5%, it would only take a small percentage of bad loans to create equally severe, systemic problems for the country. Many other countries also need to learn from the lessons of the Ireland case.

This chapter uses the key ratio of the solidity to evaluate Swedish banks' financial balance. However, this is a key ratio not commonly used in the banking sector. More often, other key ratios such as capital cover ratio or common equity tier 1 capital ratio are used. These key ratios assess the risk associated with various assets. Banks with less risky assets (e.g., home mortgages) can take greater risks. By avoiding emphasis on the solidity, however, banks may be downplaying their financial risk.

[7]In this context, it is also important to comment on Swedbank's and Nordea's growth in the early twenty-first century. In these years, Swedbank's assets increased by around 100% while Nordea's assets increased by around 230%. These increases mean that from a societal and economic perspective, banking risk in Sweden has greatly increased. (Swedbank ARs 2000–2012; Nordea ARs 2000–2012).

As far as Swedbank's and Nordea's financial resilience, both banks have weak solidity because of the proportion of enormous assets to minimal owners' equity. For example, with assets of nearly 6000 billion SEK, it is very costly for Nordea to finance those assets with a substantial amount of owners' equity. One may then ask: Is it difficult to reconcile these large banks' business models with financial resilience? A sign that this might be the case is the banks' low return on assets (i.e., operating profit in relation to total assets, most of which are loans). For Swedbank and Nordea, this return is less than 1% (Swedbank AR 2015; Nordea AR 2015). In any other business sector, such a low return on assets would be highly problematic.[8]

That this situation is not seen as problematic is interesting, since it indicates that the banks' main activity—lending money—is not particularly profitable. To increase their return on assets, the two banks probably need to earn greater returns on their loans. However, because they must follow the market, they are limited in how much they can raise their interest rates. Therefore, the two banks have reduced owners' equity in relation to total assets.

However, such an action increases the risk level for the individual banks and for the banking system as a whole. Still, this action might have been necessary in order for the banks to achieve their owners' return on equity target of 15% (Swedbank AR 2015; Nordea AR 2015). It is certainly debatable whether their business model—as well as that of many other banks—is one that promotes financial resilience.

7.6 Concluding Reflections

This chapter examines six important Swedish companies from the perspective of financial resilience. This chapter looks at several elements of the organizational resilience model presented in Chap. 3: the social resource of ownership; and the financial resources of solidity, liquidity, and profitability. The chapter also looks at company business models (a different kind of financial resource).

Ownership, as a social resource, is one of the most important elements for financial resilience (assuming the company is profitable). Ericsson and H&M are two companies with very strong financial resilience, not least because of their historically strong relations with responsible owners. The Wallenberg Sphere and the Handelsbanken Sphere have shared the control of Ericsson for decades, while the founders, the Persson family, still controls H&M. These owners, who have taken a long-term perspective, supported retention of earnings in the companies as buffers against hard economic times.

Volvo, on the other hand, despite its profitable core activities, has had highly irregular solidity. This has resulted in a weakened financial resilience. In part, the explanation has been the continuing struggle between the Handelsbanken Sphere

[8]Banking, however, is unique in many ways, which is why it is important to examine them from a comparative perspective. For example, one can say that, typically, a bank's main product is the interest on money lent. The loan is an interest-earning asset. Other businesses rarely have interest-earning assets in any significant amount.

(that wanted to maintain the company's capital) and the other group of institutional owners (who wanted to distribute capital to the owners). This has however been an unusual situation in Sweden since most large companies have been controlled either by the Wallenberg Sphere or by the Handelsbanken Sphere.[9]

Chapter 4 of this book examines Circuit City, a successful company that went into bankruptcy quite rapidly. After many profitable decades, Circuit City experienced increasing problems in the early 2000s, greatly exacerbated by the recent financial crisis. If Circuit City had had supportive owners with a long-term perspective (like Ericsson's owners in the early 2000s when the company survived a severe crisis) and had invested more capital in the company, it might have avoided bankruptcy. Thus, the Circuit City case points to the importance of the ownership as a social resource for financial resilience.

Profitability and *liquidity* are also crucial elements for financial resilience. To survive, a company must be profitable in the long term and have sufficient liquidity to meet its obligations. As an example, H&M, which is a highly profitable company, has been able to expand rapidly while still maintaining a strong financial balance. Thus, from this perspective, H&M fits the definition of a highly resilient company.

The chapter also looks at *business models* in the case of Swedbank and Nordea, two of Sweden's four largest banks. The focus is the relationship of their liabilities to their owners' equity. Because of this relationship (where liabilities are far larger than owners' equity), both banks have low solidity and weak financial balance. This situation creates a significant risk, not only for the banks but also for the Swedish national economy. A comparison with large companies such as Volvo and H&M—both of which are leaders in their sectors—makes this point even more forcefully. However, it is questionable whether these business models have long-term viability from a financial resilience point of view. This condition may make them dependent on governmental support when major financial disturbances occur. Such support can be very costly for the taxpaying community.

7.7 Discussion Questions

1 How much influence do owners have on a company's financial balance? Explain your answer.
2 How important are sustainable profitability and liquidity to a company's financial balance? Explain your answer.
3 In the banking sector, is weak financial balance a competitive necessity? If not, are there other options? Discuss your answers.

[9]In 2016 Handelsbanken decided to sell all its shares in the sphere's controlling investment company, Industrivärden. What challenges this will bring to the spheres' former companies only future can tell.

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Chapter 8
Resilience in the Product-Delivery Supply Chain

Roy Andersson

Abstract The main topic in this chapter is how companies should and need to work with external actors. The chapter builds on the data from literature review and case studies in seven companies over a 5-year period. Main results are that the focal companies and the companies in the supply chain need to have a combined Lean and Six Sigma philosophy, but this is not sufficient. They also need to understand how to avoid costly disruptions and working with the five supply chain factors that can create resilience, i.e. teamwork and integration management, design and innovation, risk management culture, spread and establish its vision, goals, values and processes as well as create agility. The key implications in this chapter give companies a strategy to work in order to maintain their resiliency.

Keywords Resilience · Lean Six Sigma · Collaboration · Supply chain

This chapter describes how companies, working with external actors, can become agile, dynamic, and resilient through the establishment and maintenance of robust and flexible product-delivery supply chains Companies that lack such chains risk their very survival.

8.1 Introduction

Companies that only focus on extreme cost-cutting measures in the effort to become as lean/mean as possible are often unprepared for unexpected disruptions of various kinds. Such unpreparedness can have disastrous consequences. For example, the lowest cost company may be unable to keep up with fast-moving companies that are able to adapt quickly to changing business markets and environments. To be organizationally resilient, companies must act dynamically downstream with their

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suppliers, and dynamically upstream with their customers… so to speak, from the beginning until the end. We call this circle of production and distribution, which companies must control in their entirety, "the product-delivery supply chain" (hereafter "the supply chain") (Ericsson 2003; George et al. 1999; Hoole 2005; Peck 2005).

The chapter explains why companies require robust and flexible processes in their supply chains if they are to be resilient, especially when rapid change is not possible or if good business intelligence is lacking. Companies must be able to make and steer process changes in the right direction. This requires a holistic view of the supply chain. The chapter describes five factors of the resilient supply chain.

The chapter concludes with a discussion of companies' need for a combined quality management philosophy. It is not enough for companies to adopt and implement Lean without Six Sigma. They also need to understand how to avoid costly disruptions. Following a combined quality management philosophy and working with the five supply chain factors, companies can become more resilient.

8.2 Disruptions and Unexpected Events

Today's business environment is extremely competitive. Companies are forced constantly to reduce costs and at the same time try to meet and even exceed customer expectations. With ever-increasing emphasis on efficiency and cost reduction, more and more production has been moved to countries where labour costs are low. As a result, as the supply chain lengthens and becomes more complex, companies have greater risk of disruptions from unexpected events. Companies are increasingly vulnerable (Ericsson 2003).

There are still more challenges for today's companies striving to compete in the globalised economy. Customers make more and more demands. Unfamiliar markets, with their new entrants and information channels, pose new challenges for adapting to and dealing with unforeseen problems (Christopher 2006). One phenomenon in particular has created new customer contact patterns: the Internet, which has radically changed how many companies do business (Ericsson 2003; Lummus and Vokurka 1999).

These are times of rapid change. Companies that try to reduce costs even as they improve their products and services seek a reasonable compromise between production costs and customer value creation. The failure of many companies is the result of their inability to adapt quickly to such changing market conditions and customer demands. For example, products and services often must be tailored to individual lifestyles—one size (or product variation) does not fit all (Christopher 2005; Ericsson 2006). Companies are pressured to cater to customers in terms of products or services, offered at prices the customers will accept. Customer loyalty depends on such adaptability.

In addition to the rather conventional and expected risk of economic fluctuations, companies today face an array of rather unconventional risks: extreme congestion

on motorways, in cities, and at ports, the increasing number of natural catastrophes, and even terrorist attacks. These events delay both production and distribution, especially when companies depend on a "Just-in-Time" strategy (Ericsson 2003; Svensson 2000).

In short, companies' supply chains in the twenty-first century must be flexible and robust enough to produce goods (and services), often individually customised, that are price-competitive with mass-produced alternatives. This is a production/sales philosophy far removed from the early twentieth century customer philosophy, so memorably captured in Henry Ford's response to customer demand for automobiles: "Any customer can have a car painted in any colour he wants so long as it is black".

Supply chains in a company must be viewed holistically. This means a company's supply chain is more important than its individual subsidiaries, departments, or units. Increasingly, business competition is between supply chains rather than between companies (Christopher 2006).

Companies that have resilient supply chains can prepare for disturbances and unexpected events in ways that allow them to take market shares from competitors who lack such supply chains. Resilient supply chains can withstand or recover quickly from unexpected shocks—a necessary capability in today's uncertain and turbulent business environment. Companies that strive to be fast-moving and agile require resilient supply chains (Cranfield School of Management 2003).

8.3 Robustness and Flexibility

Agility requires that companies have flexibility and robustness in their logistics processes, both at the main company and in their supply chains. Some processes may be robust but not necessarily flexible, and vice versa. A company that has flexible processes can adapt to unexpected events by varying its original objectives and changing direction. A company that has robust processes can reasonably only handle a moderate number of unexpected events (Mangan et al. 2008).

According to definitions in several dictionaries, robustness is associated with strength, stability, and good health. A robust process can be expected to produce reliable results with very little variation. However, a resilient supply chain must also be adaptable and move in the desired direction as quickly as possible when conditions change (Christopher and Rutherford 2004; Peck 2006).

Although robust processes are slightly sensitive to disturbances, by definition they are not adaptable. On the other hand, flexible processes are very adaptable in that they can easily be modified to suit changing conditions, even undesirable conditions. A robust and flexible process in the supply chain does not necessarily have to be resilient because it can manage reasonable variations in inflows at the same time it maintains control over variations in outflows. However, despite these advantages, this is insufficient in today's dynamic world. More is required: namely, resilience (Christopher and Peck 2004).

A company that has robust processes is better equipped to handle disturbances than companies whose processes lack such robustness. One reason is that robust processes give a company a time buffer, or lead time, for planning and implementing responses to unexpected events. Robust companies need not react immediately to each and every small change in the normal state. They have the luxury of being able to concentrate on how to improve processes (Gerwin 1993).

Another way to achieve robustness in processes is to build in reserve capacity in supply chains (in the right places). Reserve capacity can create extra layers that provide a time buffer for planning recoveries after disturbances. Maintaining reserve capacity, however, may often mean increased costs as well as the risk of being unprepared when a major problem arises. People may take the attitude that the presence of reserve capacity means there is a safety value; thus, problems may be perceived as less serious than they really are (Sheffi and Rice 2005).

Reserve capacity can also mean working with different suppliers of the same product, training staff members to perform others' duties, keeping extra equipment available, and so on. The downside of reserve capacity, however, is that it often conflicts with management strategy, mainly because of the additional costs (Sheffi 2007).

When major, unexpected changes in the supply chain occur, a company must have flexibility as well as robustness. An immediate response, perhaps requiring extra staff, may be required in such instances. Employment agencies have sprung up like mushrooms in recent years to fulfil this flexible need for temporary staff that companies require in boom times and do not require in recessionary times. However, flexibility in staffing means companies need standardised, robust training processes for temporary personnel that allow them to perform their duties satisfactorily.

There are still other ways companies can add flexibility to their supply chains. For example, companies can move production between different sites when needed and/or companies can use interchangeable and generic parts in many products (modular design).

Companies can also build flexibility and robustness by training staff, especially at the management level, in a culture that supports resilience. Organisational culture can contribute to resilience by providing staff with a set of principles, as well as hypothetical experiences, to fall back on when unexpected events occur. With this training, employees are better prepared to act quickly when necessary. Some of today's most successful companies deliberately create a culture in which employees are encouraged to identify with company values and goals. In this way, when the company succeeds, employees feel their personal needs are also fulfilled. They take pride in working for the company.

These are just a few examples of how companies can increase their flexibility and robustness in their supply chains and in company leaders' responses to unexpected events. The latter is an essential step in creating and maintaining a resilient supply chain (Sheffi 2007).

8.4 Lean and Six Sigma

Some researchers argue that Lean and Six Sigma promote prosperity (possibly unrealistically) in a consumer-driven environment in which products should have no defects, and delivery should be almost instant and at minimal cost (George 2002).

Six Sigma adds value to Lean, for example, by reducing variation in all processes. Lead times are more reliable, and inventories can be reduced to a safe level. After combining Six Sigma with Lean, companies learn how agile their process should be. By combining these quality management philosophies, companies can create more rapid, efficient, robust, and flexible processes with less risk and greater cost effectiveness (e.g. George 2002; George and Wilson 2004; George et al. 2004; Goldsby and Martichenko 2005).

Much can be gained if companies in the supply chain create and use a common "language". Such a language is based in shared values and rules that promote a commitment to a quality management philosophy. One way to promote such a language is to encourage staff at the main company and selected supply chain members take basic training in Six Sigma and Lean together.

All effective logistics processes must be robustly reliable. Reliability, therefore, must be a prime consideration in the creation or improvement of such processes. Undesirable variations are the main cause of unreliability. When Six Sigma, which mainly focuses on variations, is used, processes become more reliable. Because Six Sigma uses facts and advanced statistical tools, it can be used to specify the flexibility of processes. Various researchers promote the use of Six Sigma combined with Lean, which also aims to standardise and speed up processes, as a way to strengthen the reliability, robustness, and flexibility of processes (Andersson et al. 2006; Bicheno 2004; George 2002).

As noted above, establishing reliable supply chains that are robust and flexible is only the first step in creating a resilient company. The second step involves making rapid and productive changes in the company's processes. Both steps require that companies take a holistic view of the entire supply chain.

Six Sigma, which many see as an effective method for improvements (particularly strategy improvements), develops this idea. Six Sigma uses two improvement methods: one for existing processes and one for new processes. The first method consists of five phases: identify, measure, analyse, improve, and control. The second method consists of five similar phases, and is often used in the creation of a new process or product. It aims at customer satisfaction and often leads to significant innovation ("out of the box thinking"). The two methods, which have obvious similarities, can share a common platform for the development of products/services and processes or for improvements in an existing supply chain (i.e. by increasing its resilience).

Six Sigma is not just about the importance of making improvements. It also provides the methods that can make things better. When used in an efficient and effective manner, Six Sigma can stimulate innovation in products, services, the

supply chain, markets, and processes, as well as in a company's fundamental business model. Thus, Six Sigma can be used in any process in the supply chain (Magnusson et al. 2003).

Dell Inc., Svenska Kullagerfabriken AB (SKF), and AB Volvo are three companies that have implemented successful Six Sigma projects with their supply chain partners. The basic pillar of Lean and Six Sigma is to do everything that is done today a little better tomorrow. Or, as Albert Einstein said: "We cannot solve our problems with the same thinking we used when we created them".

Some successful companies, such as IKEA, state they do not follow a particular management philosophy or quality control method. They claim they examine and imitate the values and practices of successful companies. As a result, such companies may mimic the methods that TQM, Lean, and Six Sigma support.

A joint strategy of Lean and Six Sigma has been successful at the following companies: Dell Inc., Ericsson, Nexans S.A, Sandvik AB, Scania AB, and SKF. However, many companies have not adopted Lean and Six Sigma for their supply chains; others have done so, but their usage is sporadic (Christopher and Towill 2001; Mason-Jones et al. 2000).

8.5 Resilient Supply Chains

The research literature identifies the following five factors that contribute to the creation and maintenance of a company's resilient supply chain (Andersson 2009; Christopher and Peck 2004):

- Factor #1: The company must create a *risk management culture* that emphasises the importance of awareness and knowledge of risk management throughout the entire supply chain.
- Factor #2: As customers make more demands, the company must meet or even exceed these demands. All members of the supply chain should focus on *design and innovation*, not just for products/services but also for transportation and other flows. The company must continue to improve existing products/services even as new products/services are developed.
- Factor #3: *Teamwork and integration management* are essential. It is important to create a "win-win situation" and to take a systems perspective that views the supply chain as a whole. The company must always try to expand the boundaries of the system. This means that all members of the supply chain must work cooperatively, not only with each other but also with other stakeholders and the community outside the supply chain. None of the other factors is relevant if teamwork and integration are lacking.
- Factor #4: The company must *spread and establish its vision, goals, values, and processes.* Expansion should be undertaken at a moderate pace because it is difficult to control all processes simultaneously and to spread vision, goals, and values quickly among employees in a supply chain that is experiencing "growing

pains". Acting with moderation, which in an economic context refers to finding a reasonable balance between profit and turnover, is appropriate in this context.

- Factor #5: The company needs to create an atmosphere in which its processes have *agility*, which means, among other things, that they are flexible, robust, fast, elastic, and well-directed. At the same time, these processes must be cost effective, by no means a simple achievement.

Next we describe these five factors in more detail.

8.5.1 Risk Management Culture

Risk management is not just the responsibility of top management or of a few risk specialists. Instead, companies need to promote a culture of risk preparedness within the entire supply chain so that all employees are prepared to act, regardless of their positions. Thus, risk management systems require that people at all levels work cooperatively without fear of criticism. Many supply chains lack such a culture (Williams et al. 2006).

We begin with an example that explains what can happen if a risk management culture is not built into the supply chain.

In the early 2000s, the Swedish telecom company, Ericsson, experienced an unexpected (although relatively small) event that demonstrated how important it is to communicate a risk management culture throughout a company as well as to its suppliers. After a lightning strike, a small fire blazed at a factory owned by a member of Ericsson's supply chain that produced a particular component. This supplier sold the same component to Nokia, Ericsson's main competitor. Although the fire was quickly extinguished, electrical outages damaged the motors that powered the fans for the clean room, which contributed to the damage to the circuit boards. Production halted.

Because it relied solely on this supplier for the component, Ericsson lost many months of production because it had no alternative supplier. It took Ericsson almost six months to find another supplier for the component. Ericsson lost several hundred million euros as a result. Some people speculate this event may have triggered the subsequent Ericsson-Sony mobile telephone merger.

By contrast, Nokia had several suppliers for this essential component. In addition, Nokia immediately assigned employees to assess the consequences of the accident and the break in the supply chain. Even more important, Nokia contracted with other suppliers for the component. As the weeks passed, Ericsson gradually understood the gravity of the situation, but by then it was too late to contract with other suppliers. Nokia already had them under exclusive contract (Norrman and Jansson 2004; *The Wall Street Journal* 2001). For Ericsson, the event sparked the need for a risk management culture.

Many companies lack resiliency because they are too slow to respond to unexpected events or their component inventories are too small to survive

shortages. Therefore, any disruption, internal or external, can have a rapid and significant effect on the entire supply chain. In addition to fires, other such unexpected events are natural disasters, transportation breakdowns, political disorders, and suppliers' operational problems. Such events may be rare, but when they occur, they can cause enormous damage.

If it is difficult for a resilient company to cope with these events, how much more difficult it is for the non-resilient company, including those companies farther down the supply chain. Such was the case on 11 March 2011, when a tsunami struck the coast of Japan, disabling a nuclear power plant and devastating many costal cities and villages. This event was a disaster not only for residents in the immediate area but also for all of Japan and its many, large corporations with supply chains. Several Japanese and international companies had only one supplier for key, high-tech components and only a few days' inventory of these essential components.

In recent years, the world has experienced many such unexpected events that have had global significance. To list a few: the collapse of the Soviet Union and the liberation of Eastern Europe in the 1980s; the slow progression of a form of capitalism in Communist China in the twenty-first century; the Greek government's debt crisis in 2009 and forward; the recent financial crisis originating in the United States in 2007–2008; the aftermath of the terrorist attack on the World Trade Center in New York City in 2001; and the ash cloud that disrupted air travel after the volcanic eruption in Iceland in 2009. Even the 2011 floods in Bangkok, Thailand, caused a shortage in computer hard drives and a four-fold price increase. All these events affected not only companies but also the average person on the street.

To handle such unexpected events, companies must prepare for them, even if they do not know which events will occur, or when, or where. Prepared companies schedule reserve capacity in their processes, including extra equipment, backup inventory, and alternative suppliers.

Research in the area of quality can be helpful in the study of risk management and risk leadership. For example, some events that pose risks may be studied statistically because an element of chance exists in all predictions. Quality tools can be used to identify and evaluate variation sources and to distinguish between random variations and distinct variations. In this way, quality tools can promote and monitor improvements in processes; their use may mean fewer variations and fewer risks.

The most costly (and most frequent) risks are often process risks. Researchers in the area of quality have spent many years developing quality tools as well as methods and skills for the management of risk (Crosby 1984; Juran and Godfrey 1999; Oakland 1993). The goal of this research is to make processes more transparent, robust, flexible, and agile. At the same time, the research seeks to identify and measure critical points in processes (Andersson and Torstensson 2006).

Risks in a company's principal processes are often the result of poor management. The company itself has the ability to manage such risks because the staff can identify them relatively easily. Therefore, these risks should not pose any serious problems for competently managed companies. However, other, far less predictable, risks do pose a threat to companies. Such risks may occur at any place and at any time in the supply chain. It is essential that employees be aware that these risks may occur.

The area of quality research provides useful knowledge and experience for risk management. One core goal in this area is to create the conditions that lead to the involvement by all employees in promoting quality in the company's processes. Businesses can benefit from the quality research area in a way that encourages all company employees, including management, to be alert to risks and to be willing to provide help throughout the supply chain (Bergman and Klefsjö 2010).

8.5.2 Design and Innovation

To make a product or to provide a service of high quality, it is important to create suitable conditions in the design stage. Changes in product design are not as expensive in the early stages as they are later. In some cases, it can be more than a thousand times more expensive to change a product already on the market than to make a change in the design stage (Bergman and Klefsjö 2010).

Product and service design generally begins as a project. Even in this early stage, a problem may arise because not all the right people are involved. It is not just engineers and designers who are important members of the project (as is often the case at many companies). Other employees from different parts of the supply chain should also be involved in design. For example, although they are rarely or never part of the design project, suppliers, customers, and other stakeholders may have useful design recommendations or suggestions. The optimal design team includes people from the entire supply chain (Foster 2006; Juran and Godfrey 1999).

The first step in the design of products and services is to identify customer needs and expectations. The second step is to design products and services that meet these needs and expectations as closely as possible, given the various constraints and limitations all companies have. Several tools and techniques have been developed to help ensure products and services are reliable, environmentally friendly, and safe, as well as to satisfy or exceed these customer needs and expectations. Customer-Centered Planning and Quality Function Deployment (QFD) are two methods that coordinate processes, systematically identify customer requirements, and translate those requirements into product descriptions and manufacturing processes.

One fundamental principle in the area of quality is never to release a product or service to the market before it is completely ready. However, reducing "time to market" is today considered an important measure of a company's ability to compete; thus, ever-shortening the time between a product's conception (and design) until it is ready for sale is a logistics goal. Companies that have shorter times to market than their competitors are typically in an extremely strong position. The psychological effect a company creates among its customers when it does not meet their needs and expectations in a timely manner is difficult to overcome.

Yet, in some cases, the pressure to reduce the "time to market" is so extreme that unfinished products are sent to the market. This is a violation of the quality principle. Perhaps this situation can be avoided if companies use quality methods and

tools from the field of logistics that block the release of unfinished products and services (Bergman and Klefsjö 2010; Foster 2006).

Product design will improve with a more resilient supply chain in which collaborative key suppliers and customers are involved, and various logistical methods and tools are used. Such methods and tools can improve flexibility, increase internal and external reserve capacity (by avoiding redundancies), and better identify risks in the supply chain. For example, scenario planning can identify likely bottlenecks in production. Other tools are Supply Chain Event Management (SCEM), Merge-in-transit (a distribution model), time-based process mapping, and Activity-based Costing (ABC). These tools should be used in a company culture of shared visions, continuous improvement, innovation, and risk awareness. However, a single-minded focus on the costs of the supply chain when these tools are used can undermine their value (Harrison and van Hoek 2002).

Existing processes must also be design–and innovation-led. These processes must also be agile, robust, flexible, and adaptable to customer needs and expectations. It is a fundamental principle in quality work: all processes can be improved.

Companies that adopt new technology often surpass other companies that fail to keep pace with technological changes in the market. This has been the experience of a number of companies. Examples are Hasselblad AB, Polaroid Corporation, Answer Key Corporation, and Ericsson (with its mobile telephones). However, other companies have perceived this danger in time and have changed direction. One example is Nokia, which once made rubber boots. Another example is Toyota Motor Corporation (Toyota), which once made looms, and still does.

A good example of an innovative company is Apple Inc. (Apple), which has gained significant market share because of its new way of thinking with its many applications. However, such innovation is not enough. Although Apple, in its products and services, has often enjoyed a head start of a few months on its competitors, these products and services are soon copied. However, Apple's processes are less easy to copy. Apple has a well-thought-out and effective structure in which process thinking is widespread in the company. Furthermore, Apple and its supply chain emphasise the five resilience factors (see above). Apple even integrates customer thinking in the development of its new applications.

Any company can launch application software. What is needed for success is a completely new business model design that is adaptable to a very dynamic market and world (Abrahamsson and Karlöf 2011). Such a company that has achieved this is Samsung Electronics (Samsung). Samsung quickly adapted to the market and world with its smart phones and application software. In 2012, Samsung became the world's leading information technology company measured by revenues. In part, this success is owned to its solid relationships with the South Korean government and society. These relationships reflect the company's successful partnering with its community.

8.5.3 Teamwork and Integrated Management

It would be very difficult to create a risk management culture with design–and innovation-led processes in companies without the cooperation and integration of the supply chain. Thus, it is essential in the creation of a resilient supply chain that the main company works cooperatively with all its members through the use of "Just-In-Time" agreements, alliances, and partnerships. Because they rely on each other, supply chain members must also be willing to learn from each other (Christopher 2005).

By working together, for example, by using a common information system, response times in processes can be shortened. Time is crucial in today's fiercely competitive markets. Reducing the time for development, sourcing, manufacturing, and distribution increases a company's visibility, agility, and competitiveness. In short, the company becomes more resilient. This requires that all members in the supply chain integrate their administrative functions (e.g. strategies and communications), activities, and processes. According to Abrahamsson and Karlöf (2011), this means creating smooth, flow-oriented business models that extend beyond the main company's boundaries.

Today, many companies have not made much progress in integrating and coordinating activities and processes throughout their supply chains. This is true even though research shows that a high degree of integration in the supply chain often influences the costs and timeliness of both the main company and its supply chain companies. Research also shows that such integration also influences operational efficiency throughout the entire chain (Bagchi et al. 2005; Kaynak and Harley 2008; Lenny et al. 2006). Regrettably, many companies lack a comprehensive understanding of this influence.

Research in the area of quality has not addressed methods and strategies for creating trust and improving communications among companies. This is a research deficiency. A core principle in this area is the importance of building partnerships with suppliers, customers, and the general public. The logistics area, however, has developed many methods for improving communications and visualising information among companies.

Dell is a company that understands the importance of integrating the entire supply chain in order to create an effective and rapid flow. Information is transparent and readily available to subcontractors, which means to a large extent the subcontractors can install their components directly in Dell's factories. In some cases, suppliers do not send their components or accessories to the factory; instead they send these items directly to certain assembly points in Europe where the customer order originates.

8.5.4 Spreading and Establishing the Company Vision, Goals, Values, and Processes

For companies to survive and succeed, their employees must work toward the same goals and share the same vision and the same values. One of management's highest priorities is therefore to create a common vision and strategy, which consists of both long-term and short-term goals. Of course, staff must share these goals. In successful companies employees use tools and methods that increase customer satisfaction while still conserving resources to the extent compatible with company goals. Behind this vision is the conviction that a company's various processes can always improve so long as employees are committed to that vision. Moreover, a company's operational strategies must be grounded in values and methods that support that vision (Sheffi, 2007).

Companies require openness in their strategies that influence (and are influenced by) the world through their supply chains. However, the problem lies in the difficulty of getting all supply chain members to cooperate in this work.

The companies in the Inditex Group, including Zara (the clothing and accessories retailer) carefully control their rapid growth. When the decision is to enter a country, the Inditex companies open one store in an attractive location in that country's capital city. They do not open other stores in the country until they have understood the market and have trained all employees in their corporate values.

In recent years, Toyota has experienced growing pains as evidenced by the fact that the company has had to recall several million cars because of design and production problems. Many observers have wondered why Toyota experienced such problems given that Toyota, among the automotive companies, is known for manufacturing cars with the fewest defects. Moreover, some observers have placed Toyota among the best-managed companies (including the management of its suppliers) in the world. The recent problems have been attributed to Toyota's failure to spread its values and vision throughout the supply chain; Toyota's growth has simply been too rapid.

IKEA, primarily known as the designer and seller of ready-to-assemble furniture, is a company driven by the personal values of its founder, Ingvar Kamprad. These values are communicated to employees as nine theses that guide them in how to act in various situations. The company goal is that the IKEA brand should be so strong that the company will always retain the loyalty of both employees and customers, regardless of economic times. This is the same (and sometimes fanatical) goal that professional sports teams try to instil in their fans, even in losing seasons.

Saab Automobile, once a Swedish premium car manufacturer, has experienced a difficult time in recent years following the failure of its planned sale to a Chinese company and its petition for bankruptcy. The company's main problem may have been its somewhat ineffective marketing strategy, its lack of business intelligence, and its focus on a narrow niche market. Saab, generally speaking, has not been a particularly resilient company; rather the company seems to have had some weak resilience factors.

Some companies increase their capital in boom times when they are profitable. This build-up of capital allows them to survive economic downturns. Such companies are not dependent on exceptionally resilient supply chains because, even in recessions, they continue to be profitable and to take market shares from other, less resilient companies that lack internal resources and good stakeholder relationships.

8.5.5 Agility

In theory, a company must satisfy Factors 1–4 of the resilient supply chain before it can satisfy Factor 5 (Agility). A process/value chain that is agile is almost perfectly designed for its purpose. Agility enables companies to handle different kinds of change in its processes. A company with an agile supply chain can deal with disturbances without damage and can make changes quickly and for the better (Christopher and Towill 2001).

Achieving and maintaining agility are continual processes, almost without end. Processes within and outside the supply chain will always change, new markets will always arise, and customer demands and expectations will always change. In order to create supply chains that are agile, processes must be flexible, robust, reliable, and able to change quickly, depending on the circumstances.

Companies in the supply chain must also focus on the agility of the entire supply chain (George et al. 1999). It is not enough that one or a few companies create agile processes: all companies must be agile. Agility is not just about managing change. It is about identifying change that affects competitive positions, about creating strategies that control the supply chain, and about taking advantage of resources and processes when unexpected events occur.

Creating agility in the supply chain requires the use of tools, concepts, and methods, supported by values. This is the focus of the quality research area. Specifically, this means continual improvement, a process and system approach, cross-functional effort, an emphasis on the learning organisation, collaboration, preparation for expected and unexpected events, and the elimination of barriers between functions. It also means evaluation of suppliers, not only in terms of price, but also in terms of customer demands and expectations. To achieve this, much is required of the main company as it manages its supply chain.

The use of tested and proven quality methods can contribute to the creation of agility in the supply chain.

8.6 Conclusion: How to Achieve Supply Chain Resilience

A number of quality tools and techniques developed in recent years have been introduced in company environments. Among these quality methods are Total Quality Management (TQM), Lean, and Six Sigma. TQM focuses on creating a climate of

continuous improvement in high-quality products and services. Lean tries to eliminate waste in all processes and focuses on speed. Six Sigma focuses on a design that eliminates errors and reduces unwanted variation, all at lower cost with less risk.

Some companies have effectively combined these methods as they work to meet and exceed customer needs and expectations in dynamic, global, and vulnerable environments. Despite others' successes, some companies have not had positive experiences with these methods. There is no easy explanation. It may be that the methods were not implemented correctly, were introduced too quickly, or were unsuitable for the particular contexts. The companies that have had success with integrating Lean and Six Sigma are called "Lean Six Sigma" companies.

Combining a quality management philosophy with the goal of introducing the methods and values of Lean and Six Sigma (Lean and Six Sigma are viewed as developments of TQM) can be a very desirable and major step towards creating a resilient supply chain. However, this alone is insufficient. To create a resilient supply chain, a company must consider the five factors described in this chapter as well as strategies from the field of logistics.

Some of the savings from dedicated Six Sigma improvement projects may be used to achieve the five factors of the resilient supply chain. The most difficult operational issue for companies is how to improve the quality of products and services for the customer while reducing costs at the same time. We need to ask ourselves how costs can be reduced and risks minimised while trying to increase customer value. This requires cooperation across company borders and a focus on creating win–win situations for all supply chain members. No chain, including the supply chain, is stronger than its weakest link.

8.7 Discussion Questions

1. How can a balance be achieved between risk minimisation and cost minimisation in a supply chain?
2. Describe a hypothetical company: its risks for disturbances and suggestions for how these risks can be managed. Explain how the company's supply chain can be less sensitive to disturbances.

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Chapter 9
Followership: An Important Social Resource for Organizational Resilience

Thomas Andersson

Abstract This chapter concerns the importance of social resources in general and constructive followership in particular as prerequisites for organizational resilience. Based on a longitudinal case study of a subcontractor in the automotive industry, the chapter describes how organizational resilience can be created based on the engagement by workers resulting from distributed leadership and the development of followership. The spirit of the company supported community and constructive relationships within the organizations and toward other actors. The key contribution is that social resources are important for creating organizational resilience, which is of particular importance in industries with an emphasis on "hard" competitive advantages as products and technology.

Keywords Organizational resilience · Followership · Medarbetarskap · Distributed leadership · Community · Spirit · Automotive industry · Subcontractor

How much influence do social resources have on a factory in the creation of efficient production processes that result in an organizationally resilient and profitable business? This chapter explains how a relatively ordinary subcontractor successfully survived in difficult economic times. The chapter emphasizes the value of engagement by workers resulting from distributed leadership and the development of followership where a strong company and community spirit existed that created organizational resilience.

9.1 Hard and Soft in Manufacturing

We have seen much drama recently at companies and other workplaces in the Western world as the result of steadily increasing competition from low-cost countries and the development of highly innovative business technologies (Rees

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and Smith 2014). The recent financial crisis, which hit the automotive industry particularly hard, revealed the exposed positions of the automotive subcontractors and factories.

Independent subcontractors are under great pressure from the "outside" (i.e. the market). Moreover, a customer-owned subcontractor is also under pressure from the group management. As in the case described in this chapter, the subcontractor experienced a great deal of pressure for profitability. Adding to this pressure was the subcontractor's grave concern that its activities could be outsourced, or even that the factory itself might be closed or sold.

In the manufacturing industry, the focus is on achieving "hard" competitive advantages in products, production, and technology. "Soft" competitive advantages, such as committed and responsible managers and workers, however, can be just as important and can even lead to "hard" competitive advantages. The hope is that this chapter can inspire other suppliers and subcontractors by its illustration of how, even in the very difficult competitive environment of the automotive industry, it is possible to build up resources that can make a company viable and robust—what is referred to in this book as "organizational resilience".

9.2 Workers' Commitment to Results—Followership and Culture

Chapter 3 describes the three-part model of resources used to achieve organizational resilience: financial, technical, and social. In this chapter, I use this structure to describe how organizational resilience was created and recreated in a wholly owned subcontractor in the automotive industry. The Factory,[1] located in a rural Swedish town of about 1500 inhabitants, is the town's main employer. The chapter illustrates that the resources in the resilience model are not static—something an organization has or does not have. Rather, these resources are best understood as on-going, dynamic, and interrelated processes. Thus, they influence and interact with each other. They must also be maintained and adapted to achieve robustness. To illustrate this, I will not rely on snapshots of the Factory at points in time; rather, I describe its development over time.

In this chapter I emphasize the "soft" issues of competitive advantage that involve worker commitment and responsibility—issues that are often neglected in technically oriented organizations. These social resources can create organizational resilience and can also support the development of technical and financial resources such that organizational resilience is further strengthened. Social resources can, in many ways, be more durable than technical resources (e.g. superior production technology) and financial resources (e.g. good earnings capacity), both of which

[1]The name of the subcontractor is not used in the chapter. I refer to the subcontractor as the Factory.

may depend on favourable economic conditions or temporary competitive advantages.

I do not use motivation theories to explain the engagement of individual workers because of their strong psychological connotation. Instead, I describe motivation at the group and organizational levels. Managers' actions and approaches affect work motivation; so do workplace relationships and organizational cultures. In this chapter, I describe leader–follower organizational relationships as well as companies' organizational relationships with external parties, such as the community, the unions, the customers, and the owners.

Swedish work life is characterized by a high degree of decentralization and informality (Tengblad and Andersson 2014). This makes the development of organizational relationships much more important than in a centralized and formal labour market. In Sweden, *medarbetarskap* is a commonly used word to describe this decentralized, informal relationship between leaders and followers. The term is used both in Swedish work life and in research. At work, the word is used to describe both a policy and a basis for development (Kilhammar 2011).

Although no exact equivalent word in English exists for medarbetarskap (Tengblad and Andersson 2014), in this chapter I use "followership" because recent development and use of the term (e.g. Uhl-Bien et al. 2014) bring it closer to the meaning of medarbetarskap.[2] For followership to develop, with the realization of worker potential, it must be matched with a highly decentralized management structure and distributed leadership. If leadership and followership are grounded in a commonality of values and approaches they become essential elements in the organization's culture. Both management structure and organizational culture influence how the workers approach and conduct their everyday work (Andersson et al. 2013).

In the best-selling management book, *Good to Great*, Jim Collins (2001) claims we tend to focus too much on companies' unique business ideas or their unique products/services (see Chap. 4, which is a critique of the book's success stories). Instead, Collins believes it is crucial to employ the right people: people who are committed, competent, and loyal. One of the book's messages is that with such people, a company can succeed. Yet the book is somewhat vague on just how companies create this attitude among their employees. When and how does developing followership become a strategy for organizational development? What are the effects on its financial and technical resources? These are relevant questions we need to address in order to understand how followership as a social resource creates organizational resilience.

[2]The nearest English translation of medarbetarskap is followership or empowerment although the translation lacks a certain nuance with reference to the cooperative relationships between managers and workers.

9.3 Conditions for the Development of Medarbetarskap/Followership

The concepts of medarbetarskap and followership were created in reaction to the excessive, leader-centred perspective that is so prominent in leadership/management research. Moreover, medarbetarskap is a concept that describes the phenomenon in Scandinavian workers life where medarbetare in many organizations take responsibility and initiative almost as if they were managers. This is a development not contemplated in traditional leadership research.

While I use the word followership as an analytical tool, I use it in the context of Swedish research on followership (i.e. medarbetarskap). It seems meaningless to discuss leadership without also discussing followership. Leadership cannot exist without followership because they are interdependent. Nevertheless, as a concept, it has been difficult for followership to gain attention. The reason is mainly because the word may suggest passive and weak victims who must follow their leaders' whims and obey their demands (Kelley 2008). This negative connotation is, however, linked to the dominant, leader-centred approach of leadership (Hoption et al. 2012) that elevates leaders and subordinates followers (Uhl-Bien and Pillai 2007).

However, if we remove followership from the leadership equation because we reject its negative connotations, then we are no longer studying leadership but rather some other social phenomenon (Shamir 2012). In order to avoid the passivity associated with followership that highlights the active–passive view of the leader–follower relationship rather than the active–active relationship, which is the ambition of the concept, it is important not to reduce the concept to the follower as an individual or a role. Rather, it is important to deal with followership as a decisive process in the construction of leadership (Uhl-Bien et al. 2014). The act of following deals with recognizing and granting legitimacy to someone's influence or status (DeRue and Ashford 2010).

Leadership and followership are created in a mutual claiming and granting process. For followership to develop, it must be paired with leadership that is highly distributed. Research on followership emphasizes primarily the competencies required to develop followership (e.g. Kelley 2008), but less so if other conditions exist. Therefore, in this chapter, I complement the followership research with the normative description of the conditions necessary for the development of followership. I use a developed model of the followership (medarbetarskap) wheel depicted by Hällsten and Tengblad (2006) and Andersson and Tengblad (2015) for this purpose. The model describes four pairs of concepts that are important preconditions for constructive followership: trust and transparency; community spirit and cooperation; commitment and purpose; and responsibility and initiative (see Fig. 9.1).

Trust and *openness*—Trust is the key to all well-functioning relationships. Work relationships are no exception. Openness is manifested primarily by open dialogue between all parties, whether managers and workers, workers and workers, or workers and employers in general.

Fig. 9.1 Followership (co-workership) wheel. Development of figure used in Hällstén and Tengblad 2006, p. 15

Community spirit and *cooperation*—It is important to have positive community spirit and cooperation at work. Such behaviour patterns take time to develop; these patterns may even be development issues for an organization. A particular challenge is to achieve effective cooperation across internal borders, regardless of whether the borders are created by organizational structures (e.g. departments, groups, etc.), professional roles, functions, or other barriers.
Engagement and *meaningfulness*—Professionals in skilled occupations that require advanced education and experience are typically very engaged in their work because their work tasks are often very interesting and challenging. However, in many organizations, for example, in the manufacturing sector where there is a mix of challenging and monotonous jobs—some workers may not be engaged in or committed to their jobs. Beyond the engagement in and commitment to the work, constructive followership also requires commitment to the organization itself. With such commitment, work becomes much more meaningful. This may be the result regardless of the nature of the job (Andersson et al. 2011).
Responsibility and *initiative*—Responsibility and action are closely linked, since those who feel responsible in a situation tend to be active and take initiatives. Workers who aspire to responsibility should be encouraged to take responsibility. The responsible individual also needs to have some measure of authority. Empowered individuals are more likely to take initiatives.

The followership wheel describes the conditions necessary for constructive followership. When these conditions exist, they can support a self-reinforcing development process in which followership becomes a philosophy for organizational development. Increased openness and open dialogue strengthen the sense of community, promote cooperation, create greater engagement in work, and make work more meaningful—all of which, in turn, strengthen followers' sense of responsibility and willingness to take initiatives. However, the wheel is not self-propelling; for the wheel to turn, the majority of the followers in an organization must get behind the wheel and make it spin.

If such approaches are shared in an organization, followership inevitably will have a central position in its culture. Thereby, followership becomes an important part of the "invisible" organizational governance (Andersson 2013). The culture constitutes an interpretation pattern that helps workers understand situations in similar ways, prioritize situations in a similar fashion, and ultimately handle like situations in like manner.

9.4 Organizational Resilience at a Factory in the Automotive Industry

Volvo Car Corporation (Volvo) has had a components factory (the Factory) in the small, rural community of Floby in western Sweden for decades. The Factory employs about 500 people in a community with only 1500 inhabitants. It mainly manufactures connecting rods and brake discs for passenger cars, and nav modules and disc brakes for trucks. The Factory has no unique technology and no separate marketing department. Despite various downturns in the industry and a number of different owners (the Volvo Group, Ford Motor Company, and the Chinese car manufacturer, Geely), the Factory has continued to grow and remain profitable. People speak of the "Floby Spirit" that is evident in the Factory's well-developed teamwork and proud initiative that contribute to its efficient production. Moreover, most employees are proud of their factory and what they have accomplished together.

The empirical data for this chapter come from interviews and various documents. This research was conducted in 2007–2008 (see Andersson and Jönsson 2011). The researchers interviewed 16 people: 7 managers (production managers to first line managers) and 9 workers working in various capacities. It is of particular interest that the Factory was the focus of a research project on how decentralized/local control could be used in improvement work and as a basis for targeted work groups (see Jönsson 1996). Therefore, conditions at the Factory have been well documented over time.

Next I use the various resources for organizational resilience (financial, technical, and social) as the structure for the description and analysis of the empirical material derived from these interviews and document analysis.

9.4.1 The Brand as a Threatened Financial Resource

A strong brand is an important resource for a subcontractor or supplier because it creates credibility as far as solvency and creditworthiness. As a wholly owned Volvo subcontractor, the Factory benefited from the Volvo name and brand, which was a financial resource. Therefore, in the late 1990s when Volvo announced the Factory was "for sale" there was considerable worry. Most of the Factory's workers opposed the sale, primarily because they feared they would no longer be part of the

"Volvo family" with its globally recognized brand and its strong ownership structure. At the time, they described this period as "an acid test".

However, a resilient organization (here, a resilient factory) can turn a crisis into a competitive strength. In this case, the Factory prepared to become an independent actor. The realization was that the Factory had to take responsibility for its entire business, not just its production capacity. The Factory saw it had to become a complete functional entity with a full range of business areas and business competencies.

Ultimately, Volvo did not sell the Factory. However, as the result of this period of uncertainty and worry, there was a change in approach and attitude at the Factory that remains to this day. The threat of losing a financial resource—the Volvo brand—created a social resource that laid the groundwork for a new financial resource that was unusual for a production unit: the ability to do business. This ability produced good results because Volvo, as the owner, also allowed the former production unit to take customer orders from outside the corporate structure. Although the "for sale" period was a painful time, the Factory learned—the hard way—how to transition from a production unit to a business unit. This change proved invaluable under the new conditions after Ford Motor Co. Ford acquired Volvo Cars because the new corporate structure included several possible new customers. However, this transition was also important in relation to existing customers because it made the Factory view internal customers as "real" customers who had the right to make claims and demands. It is a well-known problem in corporate structures that production units tend to see internal customers merely as receivers of their products who are in no position to make claims and demands.

The threat of being sold also meant a more long-term perspective was taken at the Factory as far as its development activities. Previously there were no discussions about the future at the components level—"someone else" could handle that. Now, however, the Factory took the initiative in the development of the components, and not just in response to customers' claims.

One could list all the new activities the Factory engaged in and the new competencies it developed, but that detail is probably not the most important lesson we can draw from this story. What seems more important is the Factory's new approach to work. Instead of just producing something to order, the Factory began making its own decisions, developing its own activities, and conducting its own business affairs. The threat against the financial resource (the risk of losing the Volvo brand) resulted in the development of a social resource (a new approach to work and business).

The threat of being sold prepared the Factory to act as an independent actor. It demonstrated an impressive ability to take advantage of opportunities with the new ownership without abandoning its relationships with its former owners/customers. Relationships with customers that were previously a financial resource (through the Volvo Group affiliation) successively developed as a social resource as these relationships now were based on trust instead of ownership.

9.4.2 The Risk with Technical Resources at an Engineering Company

Many production and/or technologically intensive organizations think of their technical resources as identical to competitive advantages and survival strategies. However, the risk with this thinking is that organizations may fall into the trap of over-valuing the benefit of their technical resources and of under-valuing the benefit of their social resources.

At first glance, the Factory's organizational resilience seems mainly explained by its technical resources. The Factory produces quality products using modern and highly innovative production processes that have allowed it to compete against low-cost countries. Because of its success in testing new production technologies, several articles in Swedish newspapers in the 1990s referred to the Factory as "Sweden's Japanese factory" (Andersson and Jönsson 2011).

Of course, technical excellence was not established overnight at the Factory. This has been a gradual process that took place in the 1970s, 1980s, and 1990s (see, e.g. Andersson and Jönsson 2011; Jönsson 1996; Tengblad 2003, 2011). The most interesting point in this evolution is that the Factory's social resources were a major contributor to the emergence of its technical resources. From a theoretical perspective, this development is significant because it illustrates the importance of the interconnection of the various resources as far as creating organizational resilience. The Floby Spirit was reflected in a work culture that empowered work groups to take responsibility. The result was a factory that is today a world-class player in its manufacturing sector.

9.4.3 The Floby Spirit: Culture as a Social Resource

Organizational resilience at the Factory has mainly been built by the use of its exceptional social resources. A culture of cooperative and trusting relationships exists, whether the relationships are between managers–workers, company–unions, company–community, company–customers, or company–suppliers. The core of the Floby Spirit is the well-developed followership that is the most obvious evidence of cooperative and trusting relationships. This spirit promotes a problem-solving attitude and a developmental approach to work.

The Factory has also exhibited a strong will to survive. The community has a symbiotic relationship with the Factory that has been especially evident in their joint fight to save jobs. This culture and these relationships (i.e. the social resources) are well summarized as the Floby Spirit. Many interviewees at the Factory repeatedly referred to the Floby Spirit despite some variations in what the term actually means. Some interviewees talk about survival, development, adaptation, growth, or, most often, shared responsibility. Other interviewees claimed the Floby spirit was dead. However, I interpreted their observations as "things are not as they

were". I actually observed a special way of approaching and solving problems at the Factory that indicates the Floby Spirit is alive and well.

What is the origin of and basis for the Floby Spirit? Is it the result of the worrisome "for sale" period that the Factory successfully survived? Yet, even before this period, there was a Floby Spirit (e.g. Jönsson 1996), although it may have modified somewhat as the result of the threat of the sale. Such a powerful culture as reflected in the Floby Spirit is an evolutionary phenomenon, which means it grows, develops, and adapts as its various internal and external influences change.

From its founding, the Factory was a member of the Volvo Group. Of course, this means the Volvo Group culture, with its focus on safety, quality, and training, influences the Factory's culture. Being a part of the Volvo Group has influenced the Floby Spirit.

Yet the Factory has also developed its own culture. The interviewees talk about "our factory" rather than "Volvo's factory". Because of its rural, somewhat isolated agricultural location, many managers and workers at the Factory are involved in, or have been involved in, farming, either directly or through friends and relatives. Farmers, of necessity, are hardworking, independent problem-solvers. This agricultural spirit is reflected in the work ethic at the Factory. One interviewee commented:

Previously I worked with cows. Cows must always be fed and milked, regardless of how I feel. If something does not work, I have to fix it myself—who else would do it? I see the same thing here with most jobs. You just solve the problem. Working here is better than farming because I work with others. On the farm, I always worked alone. It is a huge difference. My colleagues are the best part of my job. (Worker in operations support)

The connection to agriculture, with the agricultural way of solving problems and taking responsibility, seems to have influenced the Factory in a way that is somewhat at variance with Volvo's ways of working.

These agricultural-inspired work values are similar to the new work attitudes among managers that various researchers have studied. Vielba (1995), for example, describes the change in managers' descriptions of their work—from "I work XX hours a week" to "I work as much as is needed". The implication is that managers look at work as tasks and results rather than as the daily grind. At the Factory, this is true not only for managers but also for workers.

9.4.4 Followership at the Core of Social Resources at the Factory

A spirit or culture is primarily about values and attitudes that are shared by a group of people. Nothing, however, guarantees that a shared spirit or culture is positive for the organization. The shared culture or spirit may drive the organization in the "wrong" direction by supporting values and attitudes that do not contribute to the

organization's survival. However, the well-developed followership at the Factory may have ensured that the organizational culture supported the Factory's survival. Followership is mainly about individual or relational values; when these values are shared, as at the Factory, followership is a central feature of the culture.

The Volvo Group is known for its socio-technical, work life experiments conducted in the 1970s and 1980s in which group organization and participation were key elements. After the Swedish factories in Kalmar and Uddevalla (where the experiments were tested) closed in the early 1990s, the spirit behind these experiments still survived, although on a smaller scale in the concept of medarbetarskap (Tengblad and Andersson 2014). When Volvo was part of the Ford Group, the American employees spoke of "the M word" because they had no English word equivalent for medarbetarskap and also because they had difficulty pronouncing and understanding the Swedish word.

As noted above, in this chapter I mainly use "followership" because the concept has developed considerably in recent years in research in a way that reflects the teamwork idea in medarbetarskap.

There is a framed medarbetarskap policy posted in the Factory's conference room where the interviews for this research were conducted. Although the interviewees did not use the word "medarbetarskap", this does not mean the policy is just for show, as is often the case at some companies where policy seems more a statement for public consumption than a description of work reality. At the Factory, there is a clear sense of constructive followership. The workers and managers may not refer to medarbetarskap *per se*, but they live the experience.

To understand why followership is so developed at the Factory, I refer to the concept pairs in the followership (medarbetarskap) wheel presented in Fig. 9.1 (Hällsten and Tengblad 2006). Here I develop those concepts in the context of the Factory.

Responsibility and initiative: Responsibility relates to actions and initiatives, not just to the requirements of the "law". It is a social construct. When someone takes responsibility, that means the individual has constructed his or her interpretation of responsibility and what it means in regard to relationships, actions, and initiatives.

The machine operators at the Factory take "broad" responsibility for their machines and their work. This means a future-oriented, long-term responsibility that is intended to support development and ensure the survival of the Factory. Even the trade unions support this attitude among the Factory's workers; this is not the norm in the manufacturing industry where typically the trade unions focus on labour rights and worker protection.

Preparing to take responsibility may require "training". At the Factory, management takes a supportive role in empowering and teaching workers to take responsibility. This becomes training in taking responsibility and making workers familiar with new requirements. Distributed leadership creates the conditions as well as the expectations for the assumption of responsibility among followers. At the Factory, managers follow the principle of never punishing initiative because they value a "take-charge", problem-solving attitude in the workers. Even when

initiatives are unsuccessful, the managers accept such failure as the acceptable price of a problem-solving culture.

Leadership in an organization often has more a symbolic character than a purely rational character. The symbolic aspect of leadership may be revealed more in leaders' demonstration of their values and their expectations of followers than in their specific actions. Distributed leadership is a kind of indirect leadership in which leaders try to influence followers' values and work attitudes while, in reality, the followers control the actual work (cf. Watson 2006). At the Factory, management demonstrated its confidence in the workers by giving them responsibility and encouraging their initiative. This is an attitude that prioritizes initiative (and thereby the risk of failure) over self-protective risk-avoidance.

Trust and openness: As this discussion shows, responsibility and trust are closely integrated. Assigning responsibility and encouraging initiative are symbolic ways of showing confidence in people. Trustful relationships are built when managers manifest their trust in workers in such actions, so long as this trust is not abused.

Open and regular dialogue is needed if trust is to be created and supported, especially between managers and workers. At the Factory, managers make daily tours of the factory floor where they talk to the workers in open and friendly communication. This regularity in communication builds the manager–worker relationship and strengthens mutual trust.

Community spirit and cooperation: Several workers compared the Factory to other places where they had worked. Many of them emphasized the democratic equality of managers and workers at the Factory:

There are no people here who think they are exceptionally important. Everyone wear the same-style blue Volvo jacket-machine operators as well as managers. (Machine operator)

The blue jacket at the Factory has become a symbol of the "we" that crosses the manager–worker border and reduces the power distance between them. At work, there is always a risk of the "we" versus "them" mentality, that is, the workers versus the managers. This mentality distances managers from workers, and makes it more difficult for them to influence organizational activities. This mentality can also lead to the creation of the active–passive relationships in which workers expect their managers to solve all problems. By contrast, a spirit of cooperation can create an active–active relationship in which both sides work together to solve problems.

Engagement and meaningfulness: Worker engagement is very apparent at the Factory. As mentioned above, the workers refer to "our factory". They also recognize and approve the symbiotic relationship between the Factory and the community. Thus, their work engagement and commitment are not simply to individual tasks but rather to the Factory itself. Many manufacturers experience difficulties in trying to instill such commitment in their workers, especially if work tasks are repetitive and boring. To some extent, a strong sense of community can give work greater meaningfulness, even when the tasks are routine and dull. At the Factory, the community spirit, which is very strong, helps support worker engagement,

responsibility, and initiative. These are values that are rather independent of the performance of daily work tasks.

The people in Human Resources (HR) at the Factory also encourage worker engagement by their active support of new learning and training. The Factory's HR people, who are thus closely integrated with operations, act almost as internal headhunters who recruit workers for training who want to develop their competences. At many manufacturing companies, HR people maintain considerable distance from daily operations on the factory floor. The HR people at the Factory, by contrast, view their role as one of cooperation. Thus, the HR function at the Factory has acquired credibility by its understanding of operations rather than by its claim to a special expertise in personnel issues.

9.5 Can Organizational Resilience Be Sustained?

An important point related to organizational resilience is that, although this book's model describes the different resources essential for creating resilience, there is no guarantee that these resources, in their original form, will maintain their resilience. It is therefore necessary to ensure that an organization's resources can adapt as conditions change. Although the Factory was highly resilient in the period when this research was conducted, its future organizational resilience is not a given.

Several threats to organizational resilience exist at the Factory, in particular threats from within. One example is the introduction (at the time of this study) of a more centralized management style. An important aspect of the Factory's organizational resilience was always the sense of its wholeness created by decentralization, distributed leadership, and developed followership. Thus, the Factory was not just a production unit; rather, it was a business unit supported by functions closely integrated with operations.

Another threat to organizational resilience at the Factory comes from the outside: the constant risk of being shut down or sold. Because the Factory has always maintained it can operate regardless of who owns it, it has not paid a great deal of attention to ownership change. The workers at the Factory claim that their profitability, which ensures their independence, allows them to influence their operations and shape their future. In this way, the Factory has created a financial resource within Volvo that gives it a relatively independent status.

Ford's acquisition of Volvo Cars in 1999, however, had a powerful effect on the Factory. It is commonly agreed that the subsequent increase in managerial centralization and formalization was an effect of Ford's management. This increased formalization, along with repeated cost cuts, reduced the scope for the Floby Spirit that was characterized by greater informality. In the new Ford culture, there was less room for independence and initiative. At the Factory, the Floby Spirit had always implied the "we" attitude in the sense that "together we can solve problems."

A more streamlined, formal organization limits people's ability to take the initiative that falls "outside" their normal range. Consequently, workers have fewer opportunities to take responsibility and initiative—the very essence of the Floby Spirit. Furthermore, worker confidence is undermined when highly formalized work procedures suggest management mistrusts people's ability to do their work well. Followership between managers and workers is at serious risk of damage.

In the Ford Era of Volvo ownership, the management philosophy was that problems could be solved with more regulations, more responsibility structures, and more formalization of roles. Formalization became the way to "capture" those who lacked the "right" cultural values. Thus, the power distance between managers and the workers increased. Followership became much more passive, as one Factory worker explained:

It was different when I began work here 20 years ago. If you did not do your job then, some old geezer yelled at you. That would happen only once because after that you did the job right. The managers never needed to say anything. Now people do not control each other in that way. Instead, they expect that supervisory managers and team leaders should handle such problems. (Worker in operations support)

This statement points to the fact that responsibility levels decreased among workers at the Factory. Another way to say this is that social control decreased as managers were expected to take more responsibility. To a certain extent, even the Factory's success and rapid growth created a problem as far as the Floby Spirit. When a company grows rapidly and new workers are employed, it is necessary to inculcate these workers with the company's organizational culture. At the Factory, this socialization process with workers may not be as strong as it was previously because of the Factory's rapid growth and the decline in the agricultural spirit. Fewer employees had worked as farmers or had been associated with the agricultural sector.

Because this increase in standardization has reduced the space for worker initiative, there is a risk that the core values of the Floby Spirit may weaken. However, a better understanding of the social resources that support the Factory's organizational resilience could lead to a reduction in the pressure for standardization. Outsiders do not know if Geely and Volvo Cars reached an understanding about the Factory's organizational resilience. However, it is apparent that Geely is less interested in action control of the car manufacturing activities than Ford was when it owned Volvo Cars.

A general conclusion, which certainly applies to the Factory, is that inadequate awareness of the basis of one's own organizational resilience is a very serious matter. Without such awareness, there is a risk that the organization will fail to protect the resources that best prepare it to meet future problems.

9.6 Concluding Reflections

Organizational resilience deals with the various resources that can sustain an organization's viability and support its survival. A resilient organization evolves gradually over a long time as it acquires and maintains its resources even as conditions change. This is the procedural, evolutionary characteristic of resilience that all organizations need to understand.

The chapter argues that even in the manufacturing industry, social resources, such as the commitment and responsibility of workers, are essential for organizational resilience. Distributed leadership promotes such commitment and responsibility, and, above all, the development of followership. Developed followership that is based on shared values is especially strong because it is the cornerstone of the organizational culture. Cooperative relationships between managers–workers, company–unions, company–community, company–customers, and company–suppliers facilitate the mobilization of resources, especially in times of crisis. These social relationships are crucial for organizational resilience.

This chapter also shows that companies in small towns that lack access to a large pool of workers with varied skills and different educational backgrounds (such as are found in larger cities) may still have a competitive advantage because of the commitment and loyalty (e.g. the Floby Spirit) of their workers that is reflected in the followership at companies. Followership is potentially an important social resource that generates organizational resilience. Therefore, any organization involved in innovation, risk management, and complex knowledge systems are well advised to develop the spirit of strong followership (see Vogus and Welbourne 2003). It is necessary, however, to recognize, at the same time, that developed followership is based in distributed leadership, which more traditionally managed companies may find challenging, even threatening.

In many ways, the Factory case describes the constructive and well-developed followership benefits that can be achieved through distributed leadership. This managerial system delegates responsibility to the workers to the extent that they attempt to think as managers (see Jönsson 1995). Decentralized organizations and distributed leadership are prerequisites for the development of followership; nevertheless, decentralization also depends on the realization of such followership. The Factory case illustrates that the road to organizational resilience via decentralized management and distributed leadership is not through autonomous groups but rather through the cooperation of groups. Without cooperative relationships between managers and workers, such as in developed followership, there is a risk that the decentralized organization will simply become a group of autonomous entities pulling separately in every possible direction.

The chapter also illustrates the ETTO principle (Hollnagel 2009) that concludes it is impossible to maximize both efficiency and thoroughness simultaneously (see also Chap. 2 on the need to balance efficiency, reliability, and renewal capacity). A production unit, like the Factory, must compete against low-cost manufacturers, which means its activities are under constant pressure. Among the technical

resources at the Factory, probably its ability to manufacture large volumes of products at low cost and of high quality is its most important ability. This requires both extensive technical know-how and worker commitment that, among other things, allow them to exercise their initiative and solve problems that risk disturbing established production plans.

Despite the importance of cost efficiency, management cannot focus exclusively on cost reductions. Cost efficiency, reliability, and renewal capacity must be balanced over time. The ability to produce and deliver competitively priced products of high quality contributes to the creation of customer loyalty. In this way, a technical resource becomes a social resource (i.e. cooperative and trusting relationships) and ultimately a financial resource.

The Factory of this chapter, with its Floby Spirit, shows how an organization, using its worker commitment and responsibility, can create a brand from the inside. A brand is not mainly the marketing department's special creation; a brand is also the organizational image created by the workers whose products reflect their values.

Worker commitment to their companies, which manifests itself in well-developed followership, is a special phenomenon worthy of reflection in today's globalized business environment. Production is always local in some sense, and the stability of production depends on the ability to maintain it on a continual basis. These are the characteristics of the Factory that dares to introduce new technology and that strives for high quality and more efficient production—the very foundations of small-scale manufacturing. Stability results from continuous improvement! At its core, developed followership is essential in any organizational culture that focuses on survival. These social resources produce technical resources that lead to financial resources.

An update: The Factory was sold to a global subcontractor in the automotive industry in the summer of 2015. This subcontractor took over the Factory at year-end 2015/2016. The Factory's managers were satisfied with the new owner that they thought has the capability of strengthening the Factory's place in its very competitive market. The employees, however, had mixed emotions about the new ownership. On the one hand they regret the end of a 60-year history. On the other hand, they are confident that the Factory can operate successfully regardless of the ownership arrangements. However, due to the new owner's financial problems during 2017, the Factory was returned to its previous owners, but it is still for sale.

9.7 Discussion Questions

(1) Discuss why social resources are sometimes neglected in a technologically oriented company.
(2) From your own experience, describe and discuss how the four concept pairs from the followership wheel have contributed to the development of

followership in your organization. Discuss whether the absence of any of these pairs has influenced the development of followership.

(3) Based on the followership wheel described in this chapter, discuss the roles of managers, on the one hand, and workers, on the other hand, in creating the conditions needed for effective followership.

(4) Describe and discuss the possible problems involved with strengthening organizational resilience at a factory/entity that is only one part of a company.

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Chapter 10
Followership for Organizational Resilience in Health care

Nomie Eriksson

Abstract The resilient organization has the important capability of creating high reliability. In health care, professionals deal with major challenges in terms of new working methods. The chapter describes the introduction of a standardized working method in hospitals, utilizing Lean-oriented work processes. That is different from nurses' and physicians' traditional and flexible way of working. These differences in approaches are the subject of the study. The question is: How can followership create and maintain high reliability and resilience in health care? A comparative case study was performed using interviews and steering documents. To maintain and create high reliability, social resources such as followership are important. Followers' ability to improve, cooperate, and learn turned out to be important characteristics. Organizational resilience depends on these professionals' ability to manage change.

Keywords Healthcare · High Reliability Organization (HRO) · Followership · Nurses · Physicians

The resilient organization has the important capability of creating high reliability. An organization with high reliability over time produces products and/or provides services whose quality is trusted. This chapter mainly describes the importance of the social resource, followership, in creating high reliability and resilience in healthcare organizations.

10.1 Working with Standardized Processes and Flexible Procedures

Employees in health care have to deal with many challenges, including challenges from political pressure, economic constraints, and various other situations related to the responsibilities and traditions of the healthcare occupations. For healthcare

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professionals, such as nurses and physicians, new work methods and requirements are huge challenges. Increasingly scarce resources require that healthcare professionals use cost-effective and standardized processes for diagnoses, treatment and care instead of the traditional and flexible, often individual and situation-specific, procedures that have long been used. This difference in the approaches to healthcare management is the subject of this chapter.

Various researchers have examined responses to change models in health care (e.g. Bragato and Jacobs 2003; McNulty and Ferlie 2004). They have found that both standardized processes and flexible work procedures have advantages and disadvantages. Even followership, when used to solve problems and adapt to situations, is controversial. Nurses' and physicians' identities derive from their professional expertise and autonomy and not from their organizations. The question is: How can followership create and maintain high reliability and resilience in health care? The setting for this chapter is Swedish health care, but the discussion has relevance for health care in other Western countries.

Recent developments in Swedish health care largely relate to new methods intended to improve the cooperation among professional groups and the quality of care they provide (Bergman and Klefsjö 2010; Magnusson et al. 2003). These developments have relevance for health care in other countries as well (e.g. Molyneux 2001; Peltokorpi 2011; Wang et al. 2013). Despite large investments in organization and process models aimed at standardizing health care, the results have not been entirely successful. Although such models, including Lean Management (Lean), are viewed as having significant potential to create patient-centred, quality health care, their implementation has had little influence on practice (Berwick 2003; Eriksson 2007; Hobbs 2009; Mead and Bower 2000). That health care in general continues to take a non-standardized approach shows that powerful institutional patterns are not easy to overcome.

Given the public sector's high regard for private sector, market-oriented management practices, various countries, including Sweden, have introduced some management models in government that originated in industry. One frequent feature of such models is standardized processes, which are intended to create fast and smooth workflows. This feature comes from, among others, the Toyota Motor Corporation, and is therefore often called The Toyota Way (Liker 2004). The commentary on The Toyota Way has been so positive that even publicly funded health care has tried standardizing its procedures for diagnosis, treatment and care.

Many hospitals in Sweden have introduced a form of this model, which is normally referred to as process-oriented or Lean[1] (Hellström et al. 2010). Healthcare professionals who treat patients or patient groups with a specific diagnosed illness can use the model to coordinate patient care in a chain (Lindberg and Czarniawska 2006). In this way, standardized work processes are introduced

[1]Lean focuses on process-orientation, the customer, value-adding activities and efficiency. The Lean concept uses a number of tools and methods intended to produce both major and minor improvements.

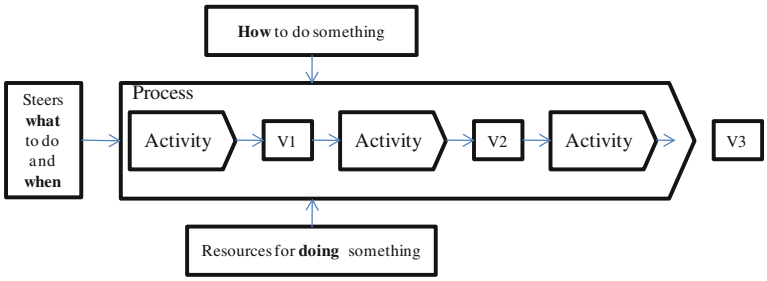

Fig. 10.1 The concept of a process-oriented way of working (Eriksson 2005)

(Söderström et al. 2009). One finds such standardization that crosses organizational boundaries in hospitals as a whole and in hospital departments and clinics. The rationale behind healthcare standardization is that quality, efficiency and productivity improve at the same time that repetition of procedures is reduced or eliminated (cf. with New Public Management; see, e.g. Almqvist 2006; Hood 1991). Every medical procedure, which should be performed only once, should increase patient well-being.

Figure 10.1 is a schematic of how process activities in patient-centred health care are coordinated (cf. Hobbs 2009; Mead and Bower 2000). In addition to adoption of the Lean-oriented work processes, written guidelines are required for how the work is to be performed, regardless of which healthcare employee has responsibility for the work. The goal of this standardization of activities is to reduce some of the complexity in providing health care. Key words associated with reductions in complexity, such as "efficiency" and "speed", are not inconsistent with how healthcare organizations should work. Macrae (2013, p. 117) states that "standardisation can reduce the trivial uncertainties and variation in the processes that healthcare workers depend upon, freeing up their intellectual resources" and time so that they can focus on more important matters. However, standardization of healthcare activities may create a problem because it often challenges professionals' expertise and autonomy.

Traditionally, patients are cared for in a flexible manner in which various physicians and nurses make diagnostic decisions and take ultimate responsibility for treatment and care. While similar activities may be performed several times for a patient, they are likely performed in different ways. The intention of such flexibility is to assure the treating physicians that every patient is receiving the best possible care. Even when there are no significant differences in how physicians and nurses conduct these activities, the patient benefits from their individual expertise and autonomy. However, there are critics of such flexibility. A chief criticism is that the same activities are unnecessarily repeated. Such repetition takes time and uses scarce resources.

In reviewing the research literature on the various attempts to introduce new ways of working in health care, one can conclude there has been no change or, at most, very little change. Nurses and physicians generally continue to work in the

same flexible manner as they have always done. Their considerable autonomy allows them to take relatively independent decisions in patient care. Given this situation, one could infer that flexible medical practice is quite resilient because it seems to promote individualized, patient-centred health care. Yet, flexible health care is not per se synonymous with resilient health care.

Resilient health care adapts to changing environments and demands. In this complex system, in which nurses' and physicians' actions cannot easily be predicted, environmental disturbances may spread among the organization's different levels (Braithwaite et al. 2013, p. 58). However, it is no simple task to achieve resilience in health care. More is required than simply harmonizing a new management model with a current model; it is a complex task that requires balancing different ways of providing patient care.

On the one hand, taking the group patient (societal) perspective, the intent of the standardization of healthcare processes is that medical professionals will treat patients equally and at less cost. On the other hand, taking the perspective of the individual patient who requires specialized care, a high degree of flexibility in procedures seems warranted. Despite difficulties in dividing health care into activities and sub-activities, patients may benefit when individual medical professionals take responsibility for specific procedures. Standardized care may not provide this individualized care. However, as observed above, given their advantages and disadvantages, finding the proper balance between standardization and flexibility in health care is a complex and controversial task.

10.2 Followership

In this chapter, health care is described in terms of "followership": the roles held by nurses and physicians—i.e. healthcare's social resources—who are involved in diagnosis, treatment and care in an organizational setting where there is always the risk of error and failure.

Followership is an abstraction that refers to the situation in which employees, working together, find their work important and stimulating. Ideally, in followership a reciprocal and productive relationship exists between leaders and their followers. Both groups co-produce supervisory control and workplace conditions. Leaders in followership, however, still have certain managerial responsibilities such as delegating tasks, giving feedback and providing support.

In followership situations, leaders and their followers develop their work competences, influence their work environments and assume work responsibilities. Their ability to work as teams in dealing with and learning from stressful conditions helps them satisfy customers' needs (patients, in health care), manage information and even take responsibility for their own health (see Kilhammar 2011; Tengblad 2009; Tengblad et al. 2007). Kelly's (2004) word "Star Followers" is an apt term for skilled professionals in health care. He describes these professionals as positive, active and independent. Star Followers can perform their work successfully even in

the absence of managers. According to Collinson (2006), these followers are empowered knowledge workers who share the leadership role and who will not accept managers' decisions without complete evaluation. For more on followership (Swedish: *medarbetarskap*), see Chap. 9.

The difficulty with achieving organizational resilience in health care from a followership perspective is that nurses and physicians, who have more expertise, autonomy and responsibility than most other healthcare staff members, are professionals as well as employees. As professionals, with deep knowledge of their fields and the conviction that this knowledge gives them the right and the obligation to make unilateral decisions, they are often reluctant to accept changes in healthcare management and to take direction from others. Abbott (1988) has described the reluctance of professionals to make changes that do not advance or support their own interests. Yet healthcare organizations may exhibit resilience—even when the professions exert a powerful influence over their activities—if the professions have a strong sense of followership, regardless of whether standardized or flexible procedures are used (cf. Hällsten and Tengblad 2006). Thus, the way in which followership can create and maintain high reliability and resilience in health care is discussed mainly from its perspective as a social resource. However, process-orientation can be viewed as a technical resource.

10.2.1 Organizational Resilience and Followership

Resilient organizations can prevent or at least manage problems and risks before they spread throughout the system where they may cause very serious consequences (Sutcliffe 2011). In this section, we present three different perspectives on organizational resilience based in the concept of followership. The first perspective views organization members as contributors to the resilient organization as the organization continually develops. This perspective is featured in Hodgson and Knudsen's (2006) article that describes how organizations manage both resistance to change and the pressure for change, depending on the dominant institutional structure.

The second perspective (see Weick and Sutcliffe 2007) views the organization as the so-called high reliability organization (HRO) that gives its members the opportunity to create and maintain organizational resilience by solving problems together. Using structured learning procedures, they can create a shared understanding of how to manage events. When they respond speedily and reliably at early stages, potentially very damaging problems can be controlled.

The third perspective (see Weber and Glynn 2006) views organizational resilience as a combination of the first and second perspectives. The organization's institutional structure gives its members a common understanding of how activities should be performed. Thus, a close link is established between institutional structures and HRO characteristics.

10.3 Resilience in an Organization with High Reliability

Based on the two healthcare management models—standardization versus flexibility—this section presents an overview of previous studies on HROs and their members. In the complex healthcare environment, internal activities primarily distinguish functioning HROs (Pronovost et al. 2006). In a discussion of the various responses to unexpected events, Buchanan (2011) suggests that while a HRO is usually capable of avoiding extreme events, the HRO can also influence such events when they do occur. Resilience in healthcare organizations refers to their ability to contain, adapt, correct and respond to disruptions before activities are disabled, resulting in serious breakdowns (Macrae 2013). Weick et al. (2008) found that HRO members, among other abilities, develop sensitivity to changes in activities and will take the required steps to make them work well.

According to Weick and Sutcliffe (2007, pp. 10–17), HROs have the following five unique characteristics (paraphrased below) that allow them to act differently than other organizations.

- *Preoccupation with failure*—A sense that certain signals indicate something may be wrong with the whole system. Even small events may have large consequences. Managing the unexpected means making strong responses to weak signals rather than weak responses to weak signals.
- *Reluctance to simplify*—An attitude that encourages deeper investigation into events so that a complete image of the whole, spanning several borders, can be acquired.
- *Sensitivity to operations*—A systems approach that focuses on the frontline where the real work is done. A focus on anomalies permits investigation of problems while they are still tractable and can be isolated.
- *Commitment to resilience*—The capacity to identify and control adverse events by preserving functions, maintaining a recovery mode and learning and growing from earlier events. With this capacity, the organization can limit errors and improvise workarounds.
- *Deference to expertise*—A willingness to recognize the expertise of professionals and thus to profit from earlier events. With this capability, the organization can limit the severity of errors and can improvise workarounds as needed.

In addition to these characteristics, HROs are committed to increasing the quality of their work (Roberts and Bea 2001). HROs actively search for new knowledge that they can communicate throughout the organization so that all members are kept up to date and involved. Sutcliffe and Weick (2013, p. 146) assume that "resilience is something a system does, not something a system has".

Hollnagel (2013), in his study of safety management, uses the terms Safety-I and Safety-II. The Safety-I perspective refers to the reduction of adverse outcomes as far as possible. Errors in technical systems and human behaviour are seen as the causes of accidents and mishaps. This perspective stems from the idea that the processes that cause things to go wrong are different from the processes that cause

things to go right. The Safety-II perspective refers to the ability to succeed and to the idea that as much as possible can go right. In the Safety-II mode, people adjust their behaviour to the situation and thereby provide an adequate and flexible response. Things that go wrong are not predictable in time and place; therefore, followers in HROs should proactively explore what goes right. Sutcliffe and Weick (2013), show that reactive Safety-I and proactive Safety-II merge and bridge in on-going, active safety measures. This bridging occurs when leaders and followers in an organization pay close attention to shaping the social and relational infrastructure of the organization (Weick 2011).

There are different ways to become an HRO. Wilson et al. (2005), for example, describe how teams with different functions can increase the reliability and safety of organizational results. In health care, it is not certain that teamwork alone can assure high organizational reliability. Teams, as elements in the organizational structure, must have the same characteristics that Weick and Sutcliffe (2007) attribute to the HRO (see above). If teams have these characteristics, there is more chance that the entire organization will achieve the HRO status.

Carroll and Rudolph (2006) claim that frontline employees can design a HRO in health care. They describe the formal and informal structures, combined with practices, which contribute to high reliability. For example, employee cultures and communications are critical factors in creating organizational reliability (see also Pronovost et al. 2006). When these informal and formal structures promote deeper self-understanding among employees, the organization's reliability increases. However, no single structure is "best"; the employees must design the organization's work procedures.

10.4 Two Case Studies: Standardization Versus Flexibility

In addition to descriptions of the two management models and studies on HROs, this chapter also presents two case studies of research conducted at two Swedish hospitals. The data for these cases studies are from a multi-year research project. The setting for the first case study is a hospital's cardiology department in which patient procedures are standardized. The setting for the second case study is another hospital's urology department in which patient procedures are flexible (Eriksson 2005, 2007). These cases were selected for the research into how hospital employees, including the nurses and physicians, can provide high quality, reliable and resilient health care.

In the cardiology department, all procedures related to the patient are standardized—from the patient's initial ambulance transport to the hospital to the patient's follow-up visits after hospital discharge. The main emphasis is acute care procedures. According to the hospital personnel, who were interviewed on several occasions, in some tasks they follow guidelines, regardless of whether or not standardization influences the department's reliability. They said standardization means there must be assigned positions, such as process owner, process manager and process teams/groups. These positions must be well documented in business plans and annual reports.

Prior to this research, the urology department had undertaken several quality improvement projects related to diagnosis, treatment and care. The main emphasis is, and was, the treatment procedures. The various procedures have not been standardized because the employees do not think standardization provides any additional patient benefit. They follow flexible healthcare procedures in which they work with primary care representatives to provide individualized patient care.

The two case studies reveal that both hospital departments are HROs (hence, high reliability organizations) even though their management models differ. The cardiology department provides standardized care; the urology department provides flexible care. Using Weick and Sutcliffe's (2007) five characteristics of an HRO, we next describe these two departments.

10.4.1 Preoccupation with Failure

Standardized care: The cardiology employees said they have to be aware of problems that may occur when different medical professionals provide care. A significant problem arises because of the continual changes in cardiac diagnosis. All employees in the care chain must be informed when a change is made. Such information is conveyed at weekly meetings. If there is a break in the chain, there may be a failure in the care provided. A nurse said:

> We can never be complacent with our work—we must always develop the process to have it up to date. It is a never-ending story.

Flexible care: Every medical professional in the urology department is responsible for staying current on medical research and developments. The importance of reflection on care is emphasized in group meetings. Some employees said the junior professionals follow the senior professionals. A physician said a hiring requirement for new employees (especially physicians) is the ability to establish and maintain good rapport with patients. This physician said:

> We have worked so much with our patient groups and have developed quality care. We work continuously with patient care. We do not want to make any mistakes.

The patient satisfaction index, which is measured yearly, is high (more than 90%). Most of the employees stress that they don't want to lower these good evaluations.

10.4.2 Reluctance to Simplify

Standardized care: Patients in the cardiology department receive the same high quality of care regardless of who is in charge. Adaptation of the process is required, however, so that everyone agrees on how care should be provided at all stages:

patient reception, clinics and various departments. Unified care should be provided and coordinated as fully as possible.

Employees in each hospital department identified measurable goals used in evaluations of the quality of care. Based on data about areas needing improvement, they have made improvement action plans that specify responsibilities and timeframes. They said this structured management model is needed, not to simplify the procedure but rather to identify the individuals who have responsibility. A nurse said:

> When we decide to change something in a process, we use a whiteboard in our conference room where everyone can read who is responsible for the improvement and when the presentation deadline is.

Although the standardized approach is considered good practice, the employees said much cardiology health care is still provided in a flexible manner. The employees who support standardized care give lectures on such care and also invite other personnel to visit and observe standardized care in practice. Each year a process is given the quality award, which is very prestigious. Both the hospital and the national government have recognized the cardiology department for the quality of care it provides.

Flexible care: The employees in the urology department said the flexible care provided is of very high quality. Despite the shortage of physicians in primary care and other staff in the hospital, the department has not had to lower its quality standards. The department continues to provide the same level of flexible care. The employees said they have seen no evidence that standardization provides so much better care as to be worthwhile. One urologist said:

> No one has proven to us that the care we provide is sub-standard. If anyone had explained why standardized care is less expensive, creates faster throughput, or anything else that is really positive, we would naturally have ceased our activities for a week or whatever time was necessary to implement the new model. We would have transferred our patients to our two neighbouring hospitals and then begun to implement standardized care. Without such evidence or explanation, we have no reason or motivation to change.

According to the urology department employees, what is most important is that all patients receive the flexible, individualized care they need.

10.4.3 Sensitivity to Operations

Standardized care: Health care is always changing. Rapid medical advances require continual updating of procedures in order to deliver high quality care. Standardized process documents must be kept current, and information officers must disseminate new information to all staff at clinics and departments. With this information, the employees can develop new procedures for patient care and treatment. A cardiologist said:

> There is a huge need for information, especially when many people are involved in the work and must agree to the changes in the process.

As knowledge on how the various processes should be performed increases, the employees say they gain a better understanding of how the entire care process works. They think this understanding reduces errors and minimizes other problems in patient care.

Flexible care: The head physician in the urology department said standardized care is more appropriate in smaller hospitals that lack emergency units. In larger hospitals, emergency patients are admitted night and day; every patient's problem is urgent and every patient's diagnosis and treatment is unique. He admits that, in flexible care, diagnosing and treating patients is like evaluating works of art—everyone has an opinion. However, a patient satisfaction of almost 90% suggests the urology department need have no concerns. He also stresses that the one-on-one meetings between the physician and the patient are very important for avoiding mistakes. This urologist said:

> There is an old tradition about how doctors cure patients that overcomes all new ideas such as, for example, how to work with processes. The meeting between the doctor and the patient supports this tradition. If the meeting fails, doctors become irritated and less effective. Then the patient does not receive the best care.

Employees in the urology department worry that too many standardized care activities create uncertainty about what proper care is, as well as suspicions that such changes are unjustified. Changes should be made only if they improve care. Employees think that procedural standardization requires that clinic physicians feel confident there is continuity among the primary care physicians over time (despite the actual reality). Moreover, the employees think ill patients need to see a physician immediately so that treatment can begin at once. Standardization of procedures delays this treatment. They think a better solution is to offer the community more consultation hours on certain days. In short, there is little interest in standardized care in the urology department.

10.4.4 Commitment to Resilience

Standardized care: When the hospital's management approved the plan to implement standardized care, the hospital's medical director was informed, and so-called method supporters were appointed to assist in the implementation. Many hospital staff members attended the initial meeting where the plan was introduced. It was an exceptional turnout for a meeting. The expectation with the implementation of standardized care (including in the cardiology department) was that everyone would be involved in, and committed to, the new plan; all departments and units, both administrative and medical, would be affected. Everyone would have to learn the new procedures. A nurse said:

> We need a lot of new or improved knowledge about how to provide care that we have never provided before—especially if we are to perform each activity only once.

When information on the new procedures is available, employees in the cardiology department can adapt their particular activities consistent with the overarching goals of the plan. They can also communicate their concerns to others if they think changes are needed. This willingness to made adaptations and to suggest changes is evidence of their resilience.

Flexible care: The urology department demonstrated its resilience in its new arrangement of patient reception. After receiving appropriate training, the reception nurses take responsibility for the assignment of medical tasks. In this arrangement, the nurses manage the simpler patient cases and also check that patient records are in order before patients meet with physicians. These nurses also handle telephone and letter contacts with patients, which gives physicians more time with patients. The effect of this redistribution of tasks is that diagnosis and treatment begin at once. Often, patients do not have to make several additional appointments. One urologist said:

> Not everyone has the ability to do everything. We make sure that the individuals who make diagnoses or provide some treatment or care also have the current knowledge and the competence to do so.

The employees do not understand the alleged benefits of standardized care. They said there are so many practical changes every day; for example, surgery and examinations are frequently rescheduled. Under standardized care, such changes have to be documented meticulously. This takes time that could be used more beneficially in other tasks. Under flexible care, it is a much simpler matter to make such changes.

10.4.5 Deference to Expertise

Standardized care: Employees in the cardiology department have developed routines that determine which procedures should be performed, how they should be performed and who should perform them. These routines require everyone's approval and participation, especially that of the head physician and the nurses who provide the legitimacy for such arrangements. Without the approval and participation of such key people, standardized care would fail because other employees must be reassured that standardization improves patient care. A nurse said her supervising physician, who was also the process manager, motivated them to begin the new work methods.

The employees said the process manager's enthusiasm for standardized care inspires them. They describe this individual, who holds a respected position at the hospital and has worked nationally with standardized care, as a real "Fiery Spirit". Additionally, the process manager and two nurses are very experienced in measuring the results of standardized care, which further confirms their status as respected experts.

Flexible care: All employees in the urology department use their own particular skills and knowledge in patient diagnosis, treatment and care. Senior physicians

have a special role, however, in that they mentor new, less experienced staff members. Such senior physicians can be sounding boards if new employees have concerns or problems. In this way, knowledge and experience is spread in the department. One urologist said:

> We know it is unusual to give the nurses such comprehensive assignments. But we know each other well. Therefore, I take responsibility for their work. We have a lot of discussions in our collaboration before we introduce tasks.

All these procedures, including the use of experienced reception nurses who handle simpler cases and meet patients at post-surgery appointments, aim at the same goal: patients should receive the highest quality of care. Ultimately, senior physicians in the urology department have the most responsibility; other employees defer to this hierarchy of responsibility.

10.5 Analysis: Followership and Organizational Resilience

With these two case studies as background, in which standardized care is compared with flexible care, we next address the issue of how followership can contribute to high reliability and resilience in health care. The interviewed respondents in both cases claim their management model for diagnosis, treatment and care results in high reliability and resilience in health care.

Both case studies reveal a commitment to followership that supports the organizational resilience of the two departments. Regardless of their work methods, nurses, physicians and other employees demonstrate the following characteristics: the ability to improve through sensitivity to various procedures; the ability to develop as professionals through respecting and following healthcare experts; the ability to cooperate and not to simplify procedures and communications; and the ability to learn from each other through a commitment to resilience. They demonstrate these characteristics despite the evidence of organizational barriers.

The cardiology department case study shows that standardization in emergency situations shortens the time between different procedures. Such timesaving measures can increase the reliability of the organization. Procedures are discussed in advance of treatment and care rather than during treatment and care. The resilience of the system is shown by the fact that when procedural changes are made, the system allows for good communication and promotes adaptation to such changes. Change processes are performed in the same way for all patients.

The urology department case study reveals more discussion among physicians, nurses and patients, as well as among the staff themselves. In addition, with more recognition of the medical professionals' expertise and autonomy, procedures are reviewed and are differentiated, depending on the patient. When flexible ways of working provide more individualized treatment, the resilience of the organization increases. Reliance on professional expertise and autonomy means that rules that are not in the patient's best interest can be ignored.

Therefore, both departments' ways of managing approved work methods reveal a close connection to Sutcliffe and Vogus's (2003) conception of organizational resilience as well as to Weick and Sutcliffe's (2007) characteristics of high reliability organizations.

10.5.1 Followers' Ability to Improve

If approved changes are required, employees in resilient organizations have to decide if they should make these changes. Sutcliffe and Vogus (2003) argue that members of the resilient organization must be sensitive to change events of various kinds as well as committed to dealing with them (see also Weick and Sutcliffe 2007). However, if healthcare professionals ignore these decisions, nothing will happen. The reluctance to change is typically more evident among professionals in organizations because of their claim to expertise and autonomy as well as the responsibility they must assume. If professionals resist change, it is difficult if not impossible for their organizations to change.

In healthcare environments, there is always room for improvement. In both case studies, the employees who are preoccupied with failure are sensitive to operations that provide highly reliable and resilient care. However, employees in both case studies claim they maintain their autonomy when new procedures for improvement in care are introduced. In the cardiology department, the professionals' desire to implement the new work method is the main reason for the use of standardized processes. In the urology department, the support of the senior physician and his team for flexibility in care is the main reason for the use of flexible procedures.

When people trust how an expert chooses, and dares, to work, they will follow that way of working. They exhibit deference to expert knowledge. Resilience in health care depends on the presence of experts who inspire their followers to choose and dare to work for high reliability in care. In the two case studies, professional support for the care procedures legitimized the work methods. This, in turn, made followers feel more confident about their work and more willing to take responsibility for it. Enthusiastic leaders who take on this task are needed for the development of any practice. They set the example that can motivate followers and show how the organization can develop as a HRO.

10.5.2 Followers' Ability to Cooperate

The concept of the resilient organization also deals with its members' ability to cooperate as they receive and use new knowledge. Many illnesses and diseases are extremely complex: knowledge and experience are required for their diagnosis, treatment and care. In both case studies, the employees are reluctant to simplify such tasks. They recognize the importance of teamwork that uses different skills and expertise in cooperating around patients.

In both case studies, cooperation was evident in how everyone participated in knowledge development. As the employees talked and listened to each other, together they gained a deeper understanding of their work. This cooperative learning process may be compared to the cognitive learning process that Weick and Sutcliffe (2007) describe as a characteristic of HROs. This cooperation leads to an understanding of how patient care should be developed so that all patients receive proper care (cf. Carroll and Rudolph 2006). The communication among the employees dealt with requirements for delivering continual and controlled information flows to everyone. This cooperation determined which activities were candidates for standardization and which activities were better handled flexibly. Such cooperation gives healthcare employees the confidence to use their knowledge, which in turn strengthens the organization's resilience.

10.5.3 Followers' Ability to Learn

Organizational members who are committed to a resilient activity contribute to successful, continual and sustainable development. This commitment is reflected in their ability to learn from each other. Argyris (1999) points to the importance of transparent organizational learning processes; such processes give people the chance to correct mistakes. According to Argyris, transparency creates an overall picture of what needs to be done without simplifying the situation. Without transparency, mistakes are hidden, and, ultimately, not corrected.

However, standardization—which may diminish professional autonomy—can undermine professionals' commitment. As a type of quality assurance, standardization can only succeed if the professionals support its implementation and take responsibility for it. In such circumstances, standardization may be regarded as somewhat rather multiform although in reality it is rather uniform (Eriksson 2007). With standardized processes, professionals usually rely on their specific knowledge areas and perform their specialized activities. However, with flexible procedures, specific activities may shift between professionals. An example is the physicians' delegation of certain tasks to nurses. Such delegation can be a learning process.

However, as Toft and Reynolds (2005) claim, the learning perspective alone is insufficient; a complementary change in management perspective is also required. Thus, healthcare leaders, based on this comparison of the two hospital departments, should give medical professionals the responsibility for the development of high reliability and resilience in health care. Resilience in health care can be achieved if the professionals have the freedom to design the practice aspects of care that recognize the professionals' autonomy and commitment. Learning from ordinary, everyday activities, which is about the focus on what goes right (Safety-II), is key for healthcare resilience (Hollnagel et al. 2013). In this way, the healthcare organization can become highly reliable and resilient as it provides high quality patient care.

10.6 Conclusions: Followership and Organizational Resilience

This chapter emphasizes the importance of followership in creating and maintaining high reliability and resilience in health care when the goals are to develop and provide treatment and care in a learning environment (Weick and Sutcliffe 2007). With committed followership, responses to unusual situations are reliably dealt with and normal functions work as expected (Sutcliffe 2011). Followership requires sensitivity to how things work, commitment to the work, and reliance on expertise. The goal of followership in health care is not to simplify but rather to improve patient care.

The requirements of healthcare organizations in their internal and external contexts must therefore determine how control is exercised. The evaluation of standardization and flexibility in health care requires contextualising. This is a conclusion consistent with comments by Pettigrew et al. (2001) who discuss, based on a general perspective on change, the need for "contextualist inquiry". Sometimes it may be advantageous to standardize care if equal patient treatment is provided that leads to high reliability. Yet there are disadvantages associated with such standardized care. For example, standardization involves constant updating of procedures, many internal communications and discussions, and acceptance that some decisions must be based on others' examinations. Furthermore, standardization of care assumes each patient, regardless of symptoms and situation, has a "standard" condition. The goal with standardized healthcare processes is not per se to achieve HRO status but rather to achieve equal care.

With some patients, it may be more beneficial to provide flexible care that recognizes the individuality of the patient. In such flexible care, every patient receives individualized care intended to minimize mistakes and omissions. Flexible care does not focus on conserving resources. Instead, flexible care focuses on providing high quality and reliable care. The criticism is that such care can be needlessly repetitive, and therefore too resource intensive.

A frequent discussion in health care concerns whether one management model is better than another. The discussion, however, does not lend itself to an "either/or" decision. One conclusion, however, is clear: any management model or organizational work method that results in patient care that is not reliable and not resilient should be used in very limited circumstances, if at all.

Nevertheless, healthcare professionals, with their skills, abilities and experience, have the responsibility for deciding which of the two care procedures is better in their particular contexts. However, market and industry forces have tempted policy-makers (who are not necessarily medical experts) in publicly funded health care to adopt management models from the private sector. Caution is always advised when the temptation is to imitate trendy management models, especially in the context of public sector organizations. Some models may contribute to developing and maintaining highly reliable and resilient health care; others may not.

To become a HRO, the organization over time has to maintain what Hollnagel (2009) describes as the balance between the requirements for efficiency and the

demands for thoroughness. In health care, thoroughness is emphasized. It is essential to work thoroughly with diagnostics, treatment and care so that failures and mistakes are avoided, or at least reduced. If a mistake occurs, in addition to the damage to patient well-being, the professionals may lose legitimacy, and the patients may lose trust in the professionals. Moreover, healthcare efficiency can decrease and costs may increase due to the need for extra treatments. As followers in healthcare organizations, ultimately professionals must insist on thoroughness; if they do not, the chance of patient harm increases when professionals worry, feel inadequate and experience stress.

In this chapter, the discussion of high reliability and resilience in health care concerns the variation in the different work methods that followers select among as they try to deliver the best possible health care. This chapter also examines how work methods are retained over time—as resilient health care.

Perhaps the greatest difficulty in choosing and implementing a management model in health care relates to the role of healthcare professionals (i.e. nurses and physicians). The identity of medical professionals, as noted above, is typically more closely linked to their profession than to their organizations. Professional logic, which is based in expertise and ethical codes, differs from management logic, which is based in efficiency and cost/time reductions. Professionals as well as medical administrators face a dilemma when they find themselves in a situation where these two logics conflict (Wikström and Dellve 2009).

This chapter argues, however, it is possible to reconcile followership with the two logics. An important feature of followership is its concern with how activities are performed; in this respect, followership bridges the gap between professional logic and management logic. In health care, professionals, through exercise of their professional expertise and autonomy, manage activities in ways that support the development and maintenance of these activities. The result is an authoritative followership in which the professionals derive managerial responsibility from their professionalism (cf. Tengblad 2003).

10.6.1 Practical Implications

There is no one best approach in healthcare management. Certain procedures that improve the flow process should be standardized while other procedures should be handled in a more flexible and contextually adaptive manner. In professional organizations, such as in health care, organizational resilience depends on the employees' ability to manage the inevitable pressure for change in the various activities. Healthcare managers who expect professionals to automatically follow requests and instructions for change risk losing the support of their followers. If they grant these professionals greater freedom to develop various procedures, they may see that overall care improves. Therefore, it is essential that hospital management support its professionals. Hospital management cannot simply order Fiery Spirits to change their work processes. Such changes must originate with the

committed professionals who have a great deal of expertise as well as the motivation, responsibility and enthusiasm to improve care. Such people can be nearly tireless ambassadors for improvement changes. However, they are unlikely to respond positively to conventional, autocratic control measures.

While the development of knowledge in the learning process takes time, this is not time wasted if the goal is to achieve the resilient healthcare organization. A dialogue-oriented management style can encourage individual initiative that results in both better quality and greater efficiency. Resources are conserved at the same time patients are better cared for.

10.7 Discussion Questions

1. How is followership defined in the chapter? What dilemmas are created by this definition when compared to how professionals such as nurses and physicians usually work?
2. What are the characteristics associated with members of the highly reliable organization (HRO)? How do these characteristics support organizational resilience?
3. Why are many healthcare activities not highly resilient?
4. What suggestions do you have for a healthcare organization that wants to become a HRO?

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Chapter 11
Organizational Resilience and Stagnation at a Fashion Company

Margareta Oudhuis

Abstract This chapter deals with the issue of stagnation in companies and how to halt such a spiral of stagnation. What does it take to turn such a company around to once again prosper and flourish? In addressing the topic of stagnation and resilience, the chapter describes how a fashion design company, under new ownership, after a long period of stagnation, turned near failure into vitality and renewal capacity. The analysis shows that economic, technical and social resources were used and combined in ways to ensure trust as a mediating factor. Lessons learned are that such a turnaround is likely to involve many of the following changes: debt restructuring, a long-term view of profitability, a remix of product lines, brand renewal, and revised strategies with customers and suppliers. Additionally, an investment in a more innovative organizational structure in which employees have more responsibility and where stating and sharing one's ideas and opinions is not only a requirement but also a necessity.

Keywords Stagnation · Turnaround · Trust · Organizational resilience

How can a stagnating company regain its vitality and regenerative ability sufficient to halt its downward stagnation spiral? This chapter, which addresses the two-part issue of stagnation and resilience, describes how, under new ownership, a fashion design company, following a long period of stagnation, turned near-failure into renewal and growth.

11.1 Organizational Stagnation and Renewal

It is not uncommon that a company stagnates—that is, its activities "stall" such that development and growth cease. Then, work is mostly following routines. While both managers and employees may find this situation safe and comfortable,

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this attitude is unlikely to produce any renewal activities at the company or any needed changes, large or small. In fact, managers and employees may perceive such actions as threats to the status quo rather than as actions that can halt the stagnation. Such threats may be based in a fear of failure or in a lack of confidence in the possibilities of innovation and forward thinking.

The ability to innovate is an important characteristic of resilient companies and regional clusters of companies. This chapter, as well as several other chapters in this book, develops this idea. An example of such innovation can be found in the Borås region, in western Sweden, where a rather rare regional business development occurred (see Chaps. 12 and 13). As Brorström et al. (2012) explain, both the partial re-orientation of existing activities and the rise of new and successful spin-off companies were the result of the region's appreciation and support of entrepreneurship, customer orientation and financial independence.

Ardagh Glass Limmared AB (Ardagh) is a glass-packaging company in the Borås region that has shown exceptional innovative and renewal capacity. In the early 1980s, the company found itself in a vicious circle of low profitability, inefficiency and stagnation. Faced with the threat of closure in the 1990s, the company developed new, efficient production processes that have been very successful. These processes combine several distinct sub-processes, some of which had been used previously in French and English glassworks for Ardagh's use. Using these mechanized, so-called in-line processes—from glass manufacture to engraving—Ardagh acquired a near monopoly on the production and design of the glass bottles for Absolut Vodka. Today, 97–98% of Ardagh's glass packaging is for Absolut Vodka, a premium vodka brand, owned by Pernod Ricard.

Ardagh has developed a very close relationship with Absolut Vodka that is best described as a partnership for the production and design of the Absolut Vodka bottles. Employee creativity and ingenuity at Ardagh, combined with the skills needed to build and maintain a partnership, explain this success. By using various technical and social resilience resources in a profitable renewal of the company, Ardagh halted its downward stagnation spiral.[1]

According to Normann (1993), for bureaucratic, entrenched organizations to act entrepreneurially, they must satisfy the individual aspirations and personal development needs of their employees. It is especially important that satisfying those aspirations and needs is consistent with the current business climate. Today, this climate highlights renewal and innovation. Normann also argues that organizational structure largely determines the kind of learning possible in a company (i.e. the creation of knowledge) that in turn strongly influences a company's strategic development. Organizational structure, which often is based in a previous strategy, therefore may complicate both the unlearning of the old strategy and the learning of

[1]See *Forskningsprogrammet om företagande, traditioner och förnyelse i Sjuhäradsbygden [The research programme for entrepreneurship, traditions and renewal in the Borås region/Sjuhärad area]*.

the new strategy. Thus, it is necessary to examine a company's history to gain an understanding of its former strategies that may pose limitations on its future actions.

Normann (1977, 1993) uses the term "growth idea" to describe the knowledge development that creates the incentives required to support the various growth elements. Such elements include an efficient organizational structure, a visionary yet realistic plan and the ability to cope with inevitable tensions. A company's managers must also support the growth idea. These managers are the small group of actors who usually, although not always, hold the most important company positions. Normann identifies this group as the company's core group.

Another term Normann (1993) uses is "role constellation" (from Hodgson et al. 1965). This term refers to the idea that people in a core group tend to create roles for themselves and for each other by their organizational interactions and work. The creation of roles leads gradually to a pattern of role differentiation and role supplementation. According to Normann, the failures and successes of the many companies he has studied can be explained by an analysis of their developmental stages. A good deal of a company's ability or inability to grow and learn can thus be understood by analysing the core group. That is the perspective of the case study in this chapter.

What does a company need to halt its spiral of downward stagnation? Is a crisis required before a company discovers its hidden assets and its innovation potential? Edström et al. (1989) claim that it was just such a crisis at Scandinavian Airlines (SAS) in the decades before 1980 that called for corporate renewal. Jan Carlzon, who became the CEO for SAS in 1981, realized that large changes were indeed needed. He formulated a company vision that everyone at the company could embrace. His vision was to develop SAS from an airline company to a travel company, including making SAS a "Businessman's Airline".

Carlzon convinced the SAS employees, the SAS Board of Directors and the world of the power of the new vision. He enthusiastically used symbols, metaphors and dramatic action to persuade people it was fun and exciting to work at SAS. In this way, he changed the company organization and its leadership. In short, Carlzon's vision was the most important management tool of the entire change process at SAS.

Carlzon also held conferences and initiated new projects related to the new vision. By avoiding the creation of organizational structures and the designation of specific lines of responsibility, Carlzon stimulated productive commentary and suggestions from the SAS employees. According to Edström et al. (1989), such organizational uncertainty can be used to create and promote a vision. This combination of crisis and new management, plus Carlzon's charismatic and future-oriented leadership style, was the foundation for change and renewal at SAS (even though, ultimately the renewal was not entirely successful). Using a combination of resilience resources, SAS reversed its stagnation trend; the crisis led to renewal and some success.[2]

[2]In 2012, SAS nearly entered bankruptcy. However, that is another story that is unrelated to the events of the Carlzon era. Carlzon left SAS in 1993.

Another way to look at resilience in relation to organizational change is to begin with the (internal) organizational identity (Albert and Whetten 1985). This identity, which includes organizational structure and culture, defines "Who we are as an organization". Thus, organizational identity is the sum of an organization's essential characteristics that distinguish it from other organizations. Taken-for-granted key elements in organizational identity reflect the difference between expected and unexpected behaviour and acceptable and non-acceptable behaviour (Ravasi and Schultz 2006). To the extent that individuals identify with their organization, they reflect the organizational identity in how they see themselves; organizational membership and identity are thereby associated with employees' self-esteem (Glynn 2000; van Knippenberg 2000).

Organizational change, which can take very different forms, may lead to success or failure depending on whether the change agrees or conflicts (even in part) with the organizational identity or poses a fundamental challenge to the organizational identity (van Knippenberg et al. 2002). Thus, those who manage change must act not only as agents of change but also as agents of continuity. This is a balancing act that requires great sensitivity and a clear understanding of the organizational identity, which is a major concern to all stakeholders, internal and external (van Knippenberg et al. 2008). When people within and outside the company think the organizational identity has been damaged, they worry that their expectations about the company will not be fulfilled. In this way, an organization can lose legitimacy among key people. Therefore, when a stagnating organization is in the process of change, it is crucial that the balance between renewal and continuity be carefully managed.

These ideas about stagnation and resilience are exemplified next in a case study of a company in the fashion industry. The main question the case study addresses is the following: After the takeover of the company, how did the new company owners and management halt the company's stagnation?

11.2 The Fashion Company—From Stagnation to Renewal and Growth

The company described in this chapter, anonymously, is an older and very venerable company in the fashion and textile industry. It was founded in the early 1900s.[3] Until the early 1990s, all its manufacturing was in Sweden. Thereafter, the company gradually relocated its manufacturing to neighbouring countries. By 2000, companies in the Baltic countries did all the manufacturing. The only activities in Sweden were purchasing and product design/development. The number of employees decreased from 400 at the end of the 1980s to approximately 60 people

[3]The empirical interview data for this chapter derives in part from Edström et al. (2010).

Table 11.1 Financial data of the fashion company: 2008–2016 (Millions of Swedish crowns)

	2008	2013	2014	2015	2016
Turnover	131	181	194	234	259
Profit/Loss	−14	−16	6	12	22

in 2016. The company has partially owned stores in Sweden and in a few other countries where they sell to retailers.

The family that originally founded the company operated it until the early 1970s when Sweteko, a government-owned company, took over. After a few years, another family acquired the company in the early 1980s, and in 2008 a private equity firm, based in Stockholm, purchased it. Despite its stagnation and complex history, the private equity firm saw great potential in the company.

In this chapter we describe the strategies the new owners (the private equity firm) used to halt the stagnation spiral that it found when it acquired the company. This firm used technical, financial and social resources from our resilience model to restore the company's vitality. We also use this model to explain the factors that the new management thought responsible for the company stagnation.

As the numbers in Table 11.1 above show, after the 2008 acquisition there has been a promising turnaround. However, it took some time to get the company on the winning track due to the economic crises in 2010, but also because of the time-consuming implementation of organizational changes and to re-position the brand. As is evident the company's turnover is increasing steadily the last years and so is the profit.

This analysis is based on long, semi-structured interviews with the company's chief financial officer (CFO) and its Human Resources officer (HRO). The data are presented here as a story (Edström et al. 2010). The principal interviews were conducted in the spring of 2010. A series of additional discussions have there after been made in 2015–16 with the production manager/senior advisor before he left the company in 2016.[4] The story, which takes a leadership perspective, offers insights into the core group's strategic thinking (cf. Normann 1993).

The first renewal action by the new owner was to recruit experienced and successful managers from another company in the fashion industry, thus directly taking advantage of the technical know-how resource in the organizational resilience model. The newly recruited management team and the core group consisted of four people: the CEO, the Production Manager, the CFO and the Design Manager. Turning around the company was their sole responsibility. They began their work at the end of 2008 and the beginning of 2009.

These people decided on a number of different but related strategies. The principal strategy, and, according to the CFO, the most crucial strategy, was to strengthen the brand that had always meant high quality. The decision was to re-position the brand in a way that would attract younger customers. Thus, they used an intangible asset, which is a financial resource.

[4]The production manager/senior was participating in a writing project with Oudhuis as one of the editors (Oudhuis & Riestola (ed) (2016).

A related strategy was to sell only to exclusive retailers. The CFO describes the brand strategy as follows:

> If you have a brand that is relatively stronger than other brands, you will profit as the market expands. If you have a strong brand, you can set your prices a little higher. And if you have a strong brand, with increasing sales volume, you can also negotiate lower purchase prices for raw materials. Fundamentally, everything depends on the brand. To strengthen the brand, you must have a new collection, you must replace some stores with better stores, and you must have a certain basic marketing plan with good communications. Everything must work together.

To implement these strategies, the company's new management began to strengthen and develop certain specific resources more than others. According to the interviewees, it was absolutely necessary to undertake a complete re-organization of the company's activities and personnel. Moreover, it was essential to develop the company's financial resources in the short term and, at the same time, take measures to increase profitability in the long term.

First, we describe the strategic renewal related to the leadership and the personnel. Thereafter, we describe the various organizational changes at the company. The importance of organizational resilience to the company's renewal and vitality is described separately.

11.2.1 Leadership and Followership

According to the HRO, who has been at the company since the 1980s, leadership and followership at the company have undergone very significant changes since the new owners took over. He emphasizes that the former company leadership was "fuzzier", which made the management of different areas difficult. Now the company has a much more professional leadership that is clearer, more concise and more goal-oriented, with a greater focus on results. This, in turn, means that control has increased, including performance measurements. The HRO states: "There are numbers for how much to invest, how much to manufacture, how much to sell, etc". This focus means, for example, that employees now negotiate purchases prices—a practice that has gone very well because the employees have convinced suppliers that the company has good future prospects. Some people have asked: "Why didn't we do this before?"

The new leadership engages more in dialogue with the employees and trusts their competences more. Employees also have greater work responsibility and independence. The managers listen to the employees and appreciate their ideas and suggestions. The previous owner-employee relationship was typical of a family-owned company—"the special way of a family company". A problem with family ownership is that family members may regard the company as theirs to such a degree that they think the employees "should not contribute ideas". According to the HRO, the employees now are "much more on their toes because they feel involved in activities and decisions in a completely new way". The CFO, one of the

architects of the new leadership, is positive about the new openness, straight talk, clear communications and the delegation of responsibility. He states:

> My role isn't to tell people to do A, then to do B, then to do C, and then to do D. If I give those instructions, I might as well do the work myself. Instead, my role is to say, we are at A, we shall reach D, and we can't go outside those two lines. If there are problems, people can contact me. I see myself more as a sounding board.

Under the new ownership, some employees, however, have found the increased freedom and the new leadership philosophy a challenge. They were used to the authoritarian leadership style under the former management. The transition to the new practices will likely take some time. The CFO concludes:

> … but the investment is worth it when you are working with a group in which all members pull together and start making their own decisions.

According to the CFO, the company's emphasis on followership means the employees are given the opportunity to grow at work; it also means their work should be satisfying. To feel comfortable about their actions, both managers and employees must spend considerable time learning where the limitations are and what each of them is capable of. Motivated and engaged employees who "own their reality and know how they can influence it" are important in times of crisis when the fight is for survival. When things are going well, such employees are also important in helping the company grow as rapidly as possible.

The stronger and more trustworthy the employees are, the more they will engage in improving their reality. Nothing is predetermined. It is what one does.

The CFO also emphasizes the importance of protecting the right of "dissenters to voice their opinions … even opinions that some may find uncomfortable". A company benefits from a culture where dissent is not only protected but is also seen as necessary to the well-functioning of the company.

11.2.2 Organization

A second important strategy for improving a company's resilience is re-organization. Previously, the case study company consisted of four separate subsidiaries with different operations, different reporting structures and different cost accounting systems. Because each subsidiary had its own administrators, even the various financial people, sitting side-by-side, did not share knowledge or solutions to problems. Under the new leadership, people work together, share knowledge and learn from each other.

Under the re-organization, the employees had to change their way of thinking about the work. The new thinking, as the CFO said, can be expressed as follows: "We understand we work together, for the same goals … this is *one* company". The re-organization has not been entirely painless, however, which is not so remarkable considering the previous situation. The CFO adds: "It almost felt as if I were entering a church when I came to work. It was very quiet. People were

working silently in their offices". This new uniformity of behaviour also means that you must create unified policies and routines that apply to the whole company:

> Basically, we are in a process where we set formalised routines for the financial matters. […] This meant the creation of a financial manual. This is our job.

Moreover, the re-organization meant creating routines and guidelines for everything so that management is confident it knows how employees will act. These routines and guidelines also minimize mistakes as well as various risks. For example, currency exchange risk is one of those risks. However, the company has decreased its overall risk vulnerability, such as when employees leave the company or are absent because of illness.

According to the CFO, if the company is to grow, it must become more formalized, find new structures and clarify processes. Previously, the company lacked "the kind of structural memory that large companies have, especially when they issue new shares or prepare for a stock market listing". In the CFO's opinion, the company must be more professionally managed. Knowledge must be formalized in documented structures and processes—not in people's heads, as it was previously. With such a new structural memory, the company can attract and retain clever people. The CFO states: "The structure should support their strength. That is what I mean by structural memory".

The re-organization also means the company has gradually adapted in different ways in order to grow. The company has hired new people and changed some job responsibilities. For example, the HRO has an entirely new function, and the marketing manager position has been restored. The former CEO, despite constraints on his availability, had assumed the role of the marketing manager when the former marketing manager left the company. The company has also hired a very clever product developer whose responsibility is to see that the company's new strategies revitalize and strengthen the company brand. This is one of the most important positions in the company.

The company has also changed how employees are hired. Now the company hires the most qualified individual, even when that individual demands a very high salary. This is a completely new approach for this venerable company. According to the HRO, the company will never achieve its goals if "we lack the right people and resources" (as had previously been the case). In commenting on the situation before the takeover, he states: "We more or less just stood still in one place". Previously, educated employees were seen as "arrogant folk" who demanded high salaries. The former company owners and managers did not value higher education. Instead, their highest priority was a strong focus on cost savings. This was the same attitude demonstrated when the former CEO took over the marketing manager's responsibilities, even when he already had too much to do.

In summary, we see how the use of technical resources linked with social resources allowed a stagnating company to renew its brand (a financial resource), its production methods, its product lines, its hiring policies, its work procedures and strategies, and, in short, its general attitude towards operating a company in a highly competitive market. As mentioned earlier, the whole process of organizational

change and to re-position the brand did, however, take longer than postulated by the venture capital owner.

11.2.3 Trustful Relationships as a Social Resilience Resource

An important aspect of resilience from a social resource perspective is a company's ability to inspire trust. In many instances, trust in a company is a decisive factor in its fight for survival (Siemienluch et al. 2015). Trust, as a multi-faceted concept, may refer to personal trust, system trust (Mayer et al. 1995), or organizational trust. In this chapter, trust features in the context of a fashion company's ability to create internal and external trust—that is, trust both within and outside the company. According to Runebjörk (2006), trust in individuals derives from people's perceptions of expertise and of reputations. Similar personal characteristics and values, openness to ideas and opinions and personal attractiveness are important trust-building factors. Even such personal traits as humility and sensitivity play a large role in the creation of trusting relationships (Ibid.).

In addition to the perception that a company's actions are credible and reliable, a company's communications can strengthen its trust reputation. According to Tengblad and Ohlsson (2006), good communicators explain and justify their current actions as well as their future actions. In this way, trust can create space for manoeuvrability when circumstances so require. Therefore, trust is always conditional on the particular situation.

In a trustful relationship, there is a higher level of tolerance, including tolerance for uncertainty and complexity (Rombach and Solli 2006). According to Huemer (2001), risk is also a central element of trust even though the primary aim in creating trust is not to reduce risk and costs but rather to offer possibilities. Of course, for trust to be of strategic interest to a company, it must be demonstrated that trust has a positive influence on its competitive position. When there is trust in new ideas and alternative solutions, people will risk experimenting and innovating. Risk then becomes the twin of trust because both support a company's relationship with learning and expertise (Huemer 2001).

Before examining the role of external and internal trust in our case study company, we distinguish between these two kinds of trust. External trust refers to the relationship of a company with its customers, suppliers, bankers and investors. Thus, external trust, in lender and investor relationships, can mean the difference between survival and bankruptcy in times of crisis (cf. Tengblad and Ohlsson 2006). On the other hand, internal trust refers to the relationships between owners and managers, between managers and employees, and among the employees themselves. Well-developed internal trust creates a positive climate of cooperation in which employees are committed and innovative and are willing to take risks. Management can create such a climate when it dares to consider ideas and opinions from outside the core group (Rolandsson and Oudhuis 2009; Tengblad 2003).

From the outset, the new owners trusted the four top managers with the management of the company. This trust was based in their previous, very successful turnaround of a company in crisis in which their merger and renewal experience were important factors. This trust allowed the managers considerable freedom in making decisions on how to achieve the desired goals—that is how to reverse the company's stagnation. The managers were instructed to formulate overall company strategies. With the strong support of the owners, the managers could then implement these new strategies. According to the CFO, for the managers this was "an exciting and challenging opportunity at a company with such owners". The only difference between this privately owned company and a publicly listed company is that the new owners clearly communicated a time perspective in which they expected the company to return to profitability. There is no difference as far as endurance since trust, not ownership, as the CFO stated, is the base of endurance. Even so, there were some strain in the relationship between owners and the four top managers due to inability to keep the desired time frame. Eventually the CFO had to leave the company. As the Production manager points out patience and recognizing the presence of unexpected events and difficulties is a main contributor to success. A lesson learned by the owners in this case.

Besides, according to the HRO, the employees had some concern about ownership by a private equity firm even if many of them looked forward to the changes. This concern was alleviated somewhat by re-labelling the equity firm as a holding company; whether this name change reassured the employees is unclear. In any case, top managers and owners are aware of the employees' concern. The employees' trust in management is perhaps conditional because of their uncertainty that anything might happen at any time.

As far as the trust between management and the employees, management uses a dialogue-oriented strategy linked at the same time with a specific, results-focused leadership style and a decentralized, goal-oriented structure with greater delegation of power and responsibility. According to the CFO, this transition from the previous detail- and control-oriented management system to the current one required the trust of the employees. The CFO explains his style as follows: "From day one, I have acted as if I had the employees' trust and then acted in a way that preserves that trust". The HRO also thinks the owners and the managers are effective in that they exhibit much-needed and powerful leadership with participation and influence as essential components (cf. Rolandsson and Oudhuis 2009; Tengblad 2003).

Trust in the HRO was strengthened by the unusual situation that, as the chairman of the salaried employees' union, the HRO could choose between two positions in salary negotiations: union/employee representative or management representative. According to the CFO, "the right person can sit on two stools". Because a prerequisite for company success is a trustful relationship with its unions (cf. Oudhuis 2008), however, it seems likely that a strong conflict of interests exists when one person represents both employer and employees, even if the interviewees at the case study company did not agree at that specific time. It is unclear how the employees as union members view this situation.

Under the previous owners, the employees were almost completely uninterested in establishing relationships with each other. The attitude was that everyone "drives along a separate track". The new management sought to overcome this lack of intra-group communication and to promote trust among the employees. Thus, trust is systemic as well as personal; good communication is the decisive link.

According to the interviewees, external trust has strengthened greatly between management and the stores once the stores were allowed to return unsold garments. The sense of security this policy created should not be underestimated. As the CFO explained, clarity and predictability are essential for creating external trust. For example, when customers cannot meet their payment obligations, the company turns to a collection agency after a specified time period. Moreover, because of its long-term, established relationships with many of its stores and suppliers, the company has confidence in their performance.

Company management, however, has had to spend quite a bit of time on the relationships with the retail stores that the company does not own and with the new, more exclusive stores it wishes to deal with. This is time well-spent from the perspective of establishing long-term trust in the re-positioning of the company brand. The company had formerly built up some level of trust through its previous activities and its established social relationships. Thus, people-linked trust "spilled over" to the company under the new management. Similarly, it is important that the new collections reflect the re-positioned brand, season after season.

Such a long-term strategy necessarily takes time to have an effect. Trust created today will be rewarded in the future. Management should not be overly concerned with short-term profits; instead, management should focus on creating value that is in the company's best interests (cf. Tengblad and Ohlsson 2006). Managers, therefore, must be skilled communicators who can maintain their personal integrity as they pursue the chosen strategic direction. This is true even when company owners and others are critical of these strategies (Ibid.).

It is evident that the case company has maintained good relationships with its suppliers, despite the on-going price negotiations. That the employees were successful in negotiating prices for future purchases was probably also a result of the respected reputations that the top managers had previously acquired in the fashion industry. The suppliers trusted both the managers and the company.

The case study company's relationship with its bank was based on its reputation for reliability. The CFO states: "The bank knows we will deliver what we say we will deliver". Reliability, not people's social skills or "personal liking", creates trust; reliability means people know that actions will follow promises. It is more likely banks will provide financial support when needed if they trust companies who act reliably. Thus, a reputation for reliability is a powerful advantage in crisis situations. As Tengblad and Ohlsson (2006) observe, the value of trust is at its greatest when the worst crises are imminent.

If investors and banks do not trust a company, the company risks bankruptcy in a financial crisis (see Chap. 4 on Circuit City). The company as well as the managers must be seen as reliable and capable of meeting the inevitable challenges (Tengblad and Ohlsson 2006). The claim in this chapter is that managers must have

self-awareness—that is, the capability of evaluating their own skills and performance, including the capability of communicating this evaluation. Such awareness is the basis of trust. The manager (and the company) who over-estimates this capability is at risk. Trust that has taken so much time and effort to create can be destroyed in an instant. Restoring lost trust is a long-term process with no guarantee of success. As is evident from this case study, trustful relationships, as components of social resilience resources, are essential when the goal is to restore a stagnating company to its former vitality.

11.3 From Stagnation to Viability

What can we learn from this case study of a stagnating company that was able to renew itself and return to profitability? What combination of resilience resources lay behind the company's positive turnaround when it regained its competitive position? In this section, we answer these questions as we also examine the factors that led to the company's previous stagnation.

As noted above, since the takeover, the company has taken relatively large, forward steps that are reflected in its financial results. Yearly turnover increased from 131 million Swedish crowns in 2008 to around 259 million Swedish crowns in 2016. To strengthen its financial position, the company took various cost-saving measures, such as engaging in price negotiations and tracking of the accounts and outstanding claims. The company also increased sales of its products through its policy of allowing stores to return excess inventory. By repositioning its brand—an intangible asset—the company strengthened its competitive position and thereby its own value. To succeed with these actions, the company hired new employees who were highly educated (and highly paid) and experienced in the fashion industry. The result was an increase in production and sales volumes, lower purchase prices for raw materials and greater profit.

To accomplish this renewal, the stagnating company needed a new organizational structure with new leadership. Thus, the re-organized company focused on its social as well as its technical and financial resilience resources to create a documented structural memory based on rules, guidelines and policies. The case study also shows the importance of the interaction of these three resilience resources for a company moving from stagnation to viability.

A principal and decisive explanation of the company's stagnation in its earlier years was its organizational structure of four separate subsidiaries, each with its own accounting system, reporting system and cost system. Because this was a contra-productive organizational structure, after the takeover the company re-organized so that the subsidiaries could work more closely with each other.

Using its social resilience resources, the subsidiaries' employees began to cooperate as they shared experience and knowledge in a way that was impossible under the previous structure. Moreover, the new structure created a powerful competitive climate (cf. Miller and Friesen 1984).

These changes created *one* company with an increase in its centralization of operations *and* in its delegation of managerial responsibility. By the latter change, the employees could exercise their own initiative—a prerequisite for creating a sustainable, change-oriented organization. A number of researchers have found that encouraging initiative, sharing responsibility and delegating authority are fundamental factors in creating employee commitment (cf. Johansson 2001; Lysgaard 2001; Nayak 2005; Rolandsson and Oudhuis 2009; Tengblad 2003).

It is also worth noting that the company's confidence-building measures directed toward the employees had great importance as far as its organizational resilience. The company converted its social and technical resources to financial resources. Senior management, working with the core group, successfully used strategy and forward thinking to establish credibility and trust, within and outside the company. In particular, with its use of expertise, the company presented itself as an attractive partner (cf. Runebjörk 2006).

Moreover, the company's new way of thinking was effective both in terms of the new structural organization and its management policy (cf. Huemer 2001). The subsequent changes contributed to an increase in self-confidence, particularly that of the employees who dared to offer new ideas and take risks that led to organizational learning and development (Ibid). This development is consistent with the introduction of the right to dissent, something that Kayes (2015) argues is an important aspect of resilience (contrasted with the previous owner and management attitude that employees "should not contribute ideas" and should simply do what they are told). Thus, all these changes—finely balanced as they were—made the company not only an agent of change but also an agent of continuity. The company has succeeded in developing and maintaining its new organizational identity with its re-positioned and trusted brand that represents exclusivity and high quality (van Knippenberg et al. 2008).

Moreover and most importantly, the company took advantage of its many strong although dormant resources by developing company followership, changing product return policy and renewing the brand as well as strengthening its customer relationships. These actions sharply contrasted with the former owner's narrow focus on keeping costs low and employing less skilled and poorly paid people. The new management revived these dormant resources with its change in focus that included hiring skilled and knowledgeable experts. In summary, the company's development and integration of its resilience resources, with trust as the linking element, created new ways to use and upgrade its resources. What the future holds is of course not possible to tell in the face of all inevitable challenges the company will meet. However, what we can say, is that the company has proven itself to be much better equipped to face them today.

11.4 Conclusions

The issue this chapter addresses is how a stagnating company can regain its vitality and its renewal capacity. As the chapter explains, a successful turnaround requires a balanced and integrated mobilization of resources that takes advantage of the three resources in the organizational resilience model (financial, technical and social).

As the chapter also demonstrates, making the necessary changes to turnaround a company is a complex task. There are many possible pitfalls, including achieving the delicate balance between change and continuity so that the company, its employees and other stakeholders still recognize themselves after the re-organization (Albert and Whetten 1985). This balancing act requires skill and sensitivity (van Knippenberg et al. 2008). We note, however, in the case study of this chapter, the turnaround was facilitated by the fact of new ownership. Turning a company around when there is continuity of ownership poses other, even more complex, challenges.

Such a turnaround is likely to involve many of the following changes: debt restructuring, a long-term view of profitability, a re-mix of product lines, brand renewal and revised strategies with customers and suppliers. Additionally, an investment in a more innovative organizational structure in which employees have more responsibility and where stating and sharing one's ideas and opinions is not only a requirement but also a necessity. Such actions can create positive perceptions of the company's future within and outside the company. As in the SAS case (see the chapter's introduction), creating a company vision can create enthusiasm and harmony around the renewed venture among employees, board members and managers (Edström et al. 1989). In summary, such actions may mean the difference between stagnation and vitality.

A clear theme in these various actions, as illustrated by this case study, is the need for renewed confidence whereby a stagnating company will regain its vitality, its stability and its profitability. Investing in a stagnating company can be worthwhile if there is trust that management will use its various resilience resources productively to strengthen the followership and to commit to innovative development. The basis for such trust is the company's clarity about its intentions and the reliability of its actions. Outside stakeholders must trust the company will act as it promises. In this way, they perceive the company as a reliable partner in which risks are, if not eliminated, at least minimized. Clarity and reliability are also important elements in dealings between employees and management. The creation of trusting relationships is the essential link among the three resilience resources that may revitalize and save a stagnating challenges.

11.5 Discussion Questions

1. How can stagnating companies halt their downward stagnation spiral and regain their strength and renewal capacity? Think about some of the different aspects the chapter explores. Which do you think are the most important factors?
2. Think about how social resilience resources can interact with the technical and financial resources in making changes. Describe and link these ideas to your own experiences.
3. Trust as a social resilience resource was of fundamental importance for the company in the case study as it dealt with financial losses and stagnation. What role did trust play within and outside the company? How do we explain the importance of trust in business? Describe and link these ideas to your own experiences.

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Chapter 12
Business Clusters and Organizational Resilience

Anders Edström

Abstract The chapter explains how a business cluster can achieve success over time even if cluster members face challenging crises. An analysis of single cases and the historic development of a specific industry sector underpin the results. The geographic proximity of companies in the same industry sector stimulates competition and development, the spread of ideas, the emergence of spin-off companies. In addition, organization of cooperative relationships within a business cluster and beyond will create added sustainability. The study shows the importance of institutionalizing cooperative relationships for common goals between cluster members and outside interest groups and that this process needs to develop gradually over time. The resulting network resembles a Triple Helix, a fruitful collaboration between industry, academic institutions and public authorities.

Keywords Business clusters · Entrepreneurship · Spin-off companies · Triple Helix

A business cluster is a collection of businesses in the same industry, located in the same geographic region (for example, the Swiss watch industry). This chapter explains how a business cluster can achieve success over time even when many cluster members face challenging crises.

12.1 Organizational Challenges

Companies in dynamic business environments constantly deal with challenges—some small, some large. These challenges include the following: customer preference changes, rapid technology advances, new public policies (e.g. new deregulation or taxation laws), natural disasters, employee strikes and increased

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competition. Companies that have been successful for a number of years have proven capable of swiftly reacting, adapting and innovating when unexpected events occur or unusual situations develop. Often, these companies continue to outperform their competitors in terms of sales, market share and profit. Two Swedish companies in this group are IKEA and H&M. Over the long term, they have experienced greater growth and been more profitable than most of their competitors.

Unexpected events and unusual situations have many different causes and take many different forms. They may be relatively short-lived, such as raw materials shortages after a supplier's fire. Or they may be so serious and long lasting that they threaten the company's existence. Some events are even rather subtle although they may have severe consequences. It is difficult knowing how to prepare for or deal with such events. An example is a shift in the competitive environment in the global economy. However, in some way, all such events/situations disrupt normal operations and are likely to challenge company strategies and tactics.

We use the term organizational resilience to describe a company's ability to deal with these challenges, especially the ability to manage and limit the potential or actual damage that follows. Organizationally resilient companies soon return to positive growth and maintain their competitive advantage.

The claim in this chapter is that business clusters may provide cluster members more resilience than they could develop on their own. The cluster can produce a greater variety of products, access more resources, use more interrelated technologies and be more innovative than members/companies acting individually outside the cluster. A cluster of companies with similar activities may also stimulate the founding of new businesses that are better adapted to new conditions and that can replace activities and jobs lost through competition. However, history shows that not all business clusters have such resilience. For example, some steel manufacturing clusters (e.g. Wallonia in Belgium) and shipbuilding clusters (e.g. in Northern England and Scotland) were unable to survive in newly competitive, global landscapes.

When basic business conditions are threatened, a company has to mobilize its set of resources (see Chap. 3) in a way that reconstructs its entire resource base. This reconstruction, which may involve changes to business models and changes in deeply held values, may take considerable time. It is then that the organizational resilience in the cluster may prove advantageous.

To illustrate organizational resilience, this chapter describes how a number of companies in the textile/clothing industry in the Borås region in Western Sweden (see Chaps. 1 and 13) responded to the increased competition in a changing global environment—some more successfully than others.[1] The chapter also focuses on the past, present and future role of the textile/clothing business cluster in this region. The chapter explains how, even when an individual company in the cluster closes, the cluster may still survive.

[1]See Brorström et al. (2012).

12.2 Business Clusters

A great deal has been written about business clusters: their formation, their advantages and disadvantages, their linkages, their shared strategies, etc. Many researchers have analyzed individual business clusters; others have studied the effect of business clusters on government policies and on regional/national economies. The Italian industrial districts (the so-called Marshallian Industrial Districts) are among the most famous examples of business clusters. In a number of articles (e.g., his 1986 article), the Italian researcher, Giacomo Becattini, referring to communities of firms in northern–central–eastern Italy, presented the industrial district thesis of small firms that are closely linked to the community. In a book on the future of manufacturing and production, Piore and Sabel (1984) described industrial districts as collections of companies with similar and related activities. Porter (1990) used industrial districts as examples in his emphasis on the importance of competition and the diffusion of ideas among companies with similar operations and in close proximity to each other. Sölvell et al. (1991), who replicated Porter's study under Swedish conditions, listed Swedish business clusters with successful companies.

Several business clusters in Sweden are notable. One economically important cluster is the automotive cluster in Western Sweden. This cluster consists of manufacturers of cars, trucks and construction vehicles as well as suppliers of welding and machine tools and industrial robots. Until recently, this cluster was extremely harmonious and successful. The Borås textile cluster and the paper manufacturing industry are other Swedish business clusters.

Sölvell (2008) emphasized that business clusters should be the result of natural and evolutionary development rather than the result of artificial construction and design. His argument is that gradually acquired knowledge, practices, and values provide the solid foundations for the emergence of clusters. Moreover, many economists challenge the idea of creating clusters through planned change (Söderström 2001). The growth of the Swedish textile/clothing cluster and the Swedish automotive cluster support this opinion. The existence of an organically grown cluster, however, is no guarantee of its sustained success. Sölvell describes the decline of cluster life cycles by likening once-important economic clusters to industrial museums. The Swedish shipbuilding industry is an example of a business cluster that, despite massive government support in the 1970s and 1980s, has almost entirely disappeared.

12.2.1 The Ability to Discover and Manage Threats to Business Activities

A company cannot succeed if it continues to do the same thing in the same way for the same customers over a long period of time. There is a good example of the

failure to adapt to a changing market in the history of drainage. A Swedish company, which manufactured brick drain pipes, failed to see that the market wanted plastic drain pipes as they became available. Despite its position in the Swedish market for quality and service, the company went out of business when it could not master the new technology.

Another example is the Swedish company, Facit AB, which manufactured mechanical calculators (Hedberg and Ericsson 1978). When Japanese electronic calculators entered the market, mechanical calculators quickly became obsolete. Facit AB, which was unable or unwilling, to recognize the superiority of the new technology, soon went out of business.

These two examples show that companies, stubbornly trapped by their own skills and traditions, are candidates for failure. When they finally become aware of changes in the market, it is often too late. As turnover declines and financial resources dwindle, their scope for action is very limited. Hedberg and Ericsson (1978) label this inability to recognize change as *insight inertia*.

Researchers have often used metaphors to help us visualize the importance, as well as the associated risks, of learning, adaptation and change in business. For example, Hedberg et al. (1976) use the vivid metaphor of "camping on seesaws" to describe how companies have to balance the complex interaction among processes, just as the wooden seesaw balances on its fulcrum. Another metaphor is "riding the waves", which is often used to describe how the successful company must master the ups and downs of its market and industry.

As these metaphors suggest, it is no easy task to adapt to changing competitive environments (see Utterback 1994). Adaptability takes two forms. One form is the adaptation to new, external conditions, such as changes in customer taste, new markets and fierce competition. The second form is the coordinated adaptation of internal operations, such as product development, production, marketing, purchasing and inventory management. Normann (2001) observed that companies must make themselves known as the "prime movers" that innovate and develop products or processes. For example, when IKEA, the Swedish furniture designer/retailer, introduced the "flat pack" for the sale and distribution of furniture, it changed the furniture industry.

Thus, by better coordination of internal functions and activities, companies can increase their productivity, become more cost effective, and sustain their commercial success. In addition to rational decision-making, imaginative and daring re-thinking is required when business adaptations are necessary.

A company's ability to discover and manage threats to its business activities has to be analyzed in the context of its particular operations and markets. The resilience resources described in Chaps. 1 and 3 are not interchangeable, flexible resources that can be used in just any way, at just any time. Such resources are long-term investments that, in some degree, are specific for particular activities. While technical resources have certain general characteristics, their effectiveness depends on their adaptation to precise uses. This is also true of social resources in which know-how is adapted for very specific purposes.

The leisure boat industry highlights a problem when social and technical resources are not adapted. Some sales personnel are generally better at selling motorboats than sailboats although it seems there is a fair amount of overlap in the boats' features. The problem arises from different attitudes. Sales personnel prefer either navigating a sailboat or piloting a motorboat. As a consequence, they know more about the preferred activity and are more motivated to sell one kind of boat.

Using their knowledge of how to sell boats, sales personnel should be able to sell sailboats as well as motorboats. This is an activity where it appears various mutually supportive resources could be integrated. However, in reality, the experience and know-how of the boat sales personnel are not easily transferrable among different sales activities.

12.2.2 Company Domain, Main Focus and Internal Order[2]

Every company defines a business area in which it specializes. Thompson (1967, p. 26) refers to this area as the company's domain. Within this domain, a company lays claim to the right to sell its products and services to certain customers. If a company's customers, suppliers, financiers and other stakeholders in that domain accept the claim, the company has legitimized its domain. The company has created a position for itself. Although large companies often sell many different products and services to a wide assortment of customers, usually they have a main business focus. Initially, this is the company's original product or service. However, as the company grows, it usually expands both its domain and its main focus.

Galbraith (1983; see also Galbraith and Kazanjian 1986) described the change in main focus when a company moves along the value-added chain. An example is the acquisition of Mölnlycke AB, which manufactures hygiene products, by Svenska Cellulosa Aktiebolaget (SCA), which produces paper products. SCA's reason for the acquisition was to establish itself in a later stage of the value-added chain and thus to move closer to the retail consumer (more on Mölnlycke AB below). In the textile sector, major Swedish retail chains—H&M, Lindex, KappAhl and Gina Tricot—are very close to the customer and dominate the Swedish fashion industry. By contrast, major companies in the oil industry have sold many of their chain petrol stations. Rather than maintain close contact with the consumer, they prefer to concentrate on extraction and refining.

When a company shifts its main focus, management and employees need to refresh their skills and renew their outlooks. It may be some time before the shift is accomplished because of *manoeuvrability inertia* (Hedberg and Ericsson 1978). A computer company whose engineers design, manufacture and sell computers to engineers in other companies cannot shift its customer base to sales people, human

[2]Based on Edström et al. (1989).

resources administrators, or accountants. These people are, generally speaking, laymen as far as data technology systems are concerned.

Therefore, when a company successfully gains a particular position in the value-added chain, it is clear that its managers and employees have learned to deal with the issues and problems associated with that position. They have acquired new experiences and skills that are relevant and essential as the company grows in the new direction.

Companies do not act randomly. They are controlled by values, traditions, norms, and rules that have developed over long periods. These controls are typically reflected in their sometimes quasi-automatic responses, fixed mind-sets, rigid organizational structures, established information systems, familiar slogans and logos, well-known products and services and even in their buildings. In sum, it is possible to read a company's "text" by understanding these governing controls. The order these controls create at companies is often so natural that employees, almost without thinking, take them for granted.

Although these controls give a company a sense of stability, continuity and security, when changes in the order and focus appear, adjustment difficulties may arise. It is not easy to examine, discuss, and challenge long-established controls. In many cases, the company's business model itself must be reconstructed. When business conditions change, a company must use all its financial, technical and social resources to redefine its relationship with its environment and customers so that it can capture new opportunities and avoid stagnation.

12.3 Resilience in Individual Companies

The next sections deal with various companies in the textile/clothing business cluster in and around the Borås region in Sweden. Since the beginning of the twentieth century, the manufacture of textile and clothing was the core businesses in the cluster. Today, the cluster has shifted to design and the wholesale and retail trade. Production is now located in low cost countries in Asia and elsewhere. This change illustrates the generative ability in the cluster, which is analyzed in more detail below.

Porter (1990) observed that the lack of natural resources might be the impetus behind an entrepreneurship movement. Such is the case in the Borås region where the land, which is rocky and poor, is not well suited to agriculture. Forced to find some occupation other than farming, the population, in the pre-industrial era and even into the twentieth century, was engaged in the cottage industries of sewing, knitting, and weaving. The region has since continued to evolve as a Swedish business cluster for the manufacture of textiles and clothing with new forms of production and new methods of commerce. To some degree, the so-called house-to-house peddling of goods was behind this evolution.

After the crisis of the 1960s and 1970s, when many textile jobs in Sweden disappeared and Borås's position as Sweden's "textile city" was threatened (see Chap. 13), small and medium size companies in the Borås region developed new technologies and formed a business cluster. The textile/clothing companies in this cluster are today involved in a wide variety of activities related to practically every aspect of the textile/clothing value-added chain. In addition to the manufacture and sale of products, they offer label and garment design, import–export agents, logistics and IT assistance, advertising and marketing, and photography studios.

Although several definitions of business cluster emphasize the importance of cooperation among companies, the community, researchers, and bankers, the Borås business community has been slow to develop these relationships. The prevailing attitude among the companies seems to be "you make your own luck". In recent years, some have challenged the wisdom of such an attitude. And, as described in the Analysis of this chapter, there is evidence that a more progressive attitude is developing in the region.

12.3.1 Algots

Algots in Borås was the best known of the older clothing companies in Sweden. "Say Algots! That's enough", the company's familiar slogan, reflected the company's proud confidence. At its peak, Algots had 5000 employees, was the largest clothing manufacturer in Scandinavia, and contributed significantly to the expansion of the Swedish textile industry.

Algot Johansson was originally an itinerant peddler who went door to door selling his wares, first as an assistant and then on his own (Olsson 2005; Ros 2008). In 1905, after he and his family moved to Borås, he became a wholesaler with a speciality in work clothes. While visiting the United States in the beginning of the 1960s, he saw the popularity of American leisurewear, especially jeans. When Algots began to manufacture leisurewear, the company was even more successful. After the Second World War, the company, which was protected by Swedish tariff duties, expanded still further.

The business strategy at Algots centred on speed of production, large volume production, standardization of products and low labour costs. Because skilled dressmakers and tailors were more and more difficult to find, the company hired young people and foreign workers even though they lacked relevant experience. The company used workforce rationalization to control labour costs. With its assembly line manufacturing, the company could produce standardized products in large quantities. At one point, Algots had 14 different assembly lines: a trousers line, a shirt line, etc.

In the mid-1960s, Algots set up manufacturing operations in Portugal and Finland. Overseas expansion was intended to solve the problems of employee recruitment and rising manufacturing costs in Sweden.

In 1973, Algots, in partnership with the Swedish government, began manufacturing in northern Sweden under the name Algots Nord. Despite government subsidies, Algots Nord failed. The productivity in Algots Nord was substantially lower than in the Borås region, and its social and technical know-how was no longer adequate when the company employed inexperienced labour. That failure, and other developments in the 1970s, revealed the enormous challenge in Sweden, with its high labour costs, of manufacturing with labour-intensive methods. Algots was also severely damaged by the European Free Trade Association (EFTA) agreement that reduced tariffs on imported clothing from Finland and Portugal. In addition, conflicts arose between Johansson's sons and other company owners and between the company and its bankers over company strategy and direction. Eventually, after becoming a part of the government-owned Eiser Group, the company closed in 1977.

In addition to the company's labour cost problems, Algots was also harmed by the increasing popularity of imported fashionable leisurewear (e.g. Lewis Jeans). Algots, which used mass production, was not well suited to respond quickly to changing fashions. Its business model had not kept pace with the times. The company's reduction of labour costs and relocation of factories were ineffective. Production in its various manufacturing units was increasingly complex; management of the subsidiaries in several countries was equally complex. Thus, the Algots case illustrates the importance of focusing on the customer, and not on production requirements. In sum, the closing of Algots, after nearly 70 years of commercial success, was the result of both insight inertia and manoeuvrability inertia.

Although Algots was dismantled, former employees still had their valuable knowledge of and experience with textiles and with clothing manufacture. They were the company's social resources who could work elsewhere. For example, in 1976, Algot Johansson's grandson, Göte David Johansson, founded a new company in Borås called Göte David Teko AB. This company, which has operated successfully for nearly 40 years, is involved with clothing design, purchasing, production, and logistics for large retail chains. In 2015, the company employed 29 people with a turnover of about 100 million Swedish crowns.

Another former employee of Algots, the legendary salesman, Per-Axel Gröndahl, with the assistance of Göte David Johansson, founded a company called Rappson AB, (now Rappson-Lapidus Förvaltning AB) near Borås in 1985. This company—a wholesaler for men's clothing stores—sells trousers, shirts, etc., under the trade names Rappson, Lapidus, and Jacksonville. After lowering sales the last couple of years the company filed for bankruptcy in 2016.

However, the intent of this history of Algots is not to present a full account of its former employees who used their experience and knowledge to start over with new companies. Rather, the intent is to highlight the fact that even a bankrupt company may leave a legacy of social and technical resources that can be used productively and profitably elsewhere. This is especially the case when a business cluster, such as the textile/clothing cluster in the Borås region, supports new companies.

12.3.2 Mölnlycke AB

Other large textile companies in Borås, such as Saxylle-Kilsund, Borås Wäfveri, and Förenade Trikåfabriken, also went bankrupt. Like Algots, they tried to meet the new competition with increased economies of scale and more modern production equipment. They even made investments outside the textile industry and diversified their activities. However, this diversification was ultimately only a short-term solution.

Mölnlycke AB (Mölnlycke), situated in an adjacent region, is an exception. The company sold its home textiles units, retaining only AB Melka, which manufactured leisurewear, and Mölnlycke Sytråd AB, which manufactured sewing thread. Mölnlycke also changed its focus to hygiene products made from cellulose fibres instead of cotton fibres. Mölnlycke now manufactures sheets, incontinence pads and other healthcare products. In 1997, the company merged with SCA Hygiene Paper to form SCA Hygiene Products AB. The two subsidiaries, AB Melka and Mölnlycke Sytråd AB, were sold. Mölnlycke Health Care continued. After a number of ownership changes, Investor AB (a Swedish investment company controlled by the Wallenberg family) acquired the company in 2010.

Thus, by shifting from the textile sector, with its cotton fibres, to the healthcare sector, with its cellulose fibres and nonwoven fabrics, Mölnlycke moved in a new direction that saved it from the fate of many Borås textile companies. Mölnlycke's successful transition is mainly attributable to its understanding of a changing market and to its energetic management team that dared to experiment with new materials.

The crisis in the Swedish textile industry (in the 1960s and 1970s) lasted for nearly fifteen years. For most textile/clothing companies in Borås, it was a very difficult time. The number of people directly employed in the cluster declined from around 20,000 to fewer than 1000 (see also Chap. 13). Subcontractors were also affected. Survival of the industry depended on the founding of spin-off companies and the support of entrepreneurship.

12.3.3 JC Jeans Company

JC Jeans Company (JC), as the company is called today, was founded in 1962 as Junior Center with headquarters in Borås. Key employees were educated in Borås, and the company had many suppliers in the Borås region. The first store was in Helsingborg in southern Sweden. In 1969, the company adopted a model of close cooperation between independently owned retailers. This model was a response to the intense competition in the 1950s and 1960s between department stores and specialty stores. Department stores, which expanded significantly in those years, posed an increasingly serious threat to the individually owned speciality stores. In this form of business organization, the independent storeowners could obtain the same large-volume discounts from manufacturers that department stores have.

In addition, through collaboration, the storeowners had the benefits of joint marketing and advertising programmes, shared development of products, and later, joint IT systems. These combined activities helped reduce their overall costs.

Taking advantage of the unisex trend in fashion that began in the 1960s, JC sold to both sexes. The company also sold children's clothes in speciality stores. The company grew by hiring more employees and opening more stores (primarily outside Sweden's largest cities). On its path to becoming the market leader in Sweden in the sale of denim jeans, JC expanded its chain to include various jeans brands that had previously been sold by individual retailers. With jeans now as its main product, JC created new jeans display shelving for its stores and supplied them with ironing/finishing machines for jeans. In addition to jeans, JC has been very successful in the sale of jackets under the brand name Marwin Jackets.

In the mid-1990s, JC was the fourth largest clothing retailer in Sweden; only H&M, Lindex and KappAhl were larger. It had four main retail concepts: Jeans and Clothes, Boys and Girls, Brothers and Sisters, and Marwin Jackets. In the late 1990s, JC had 275 stores and an annual turnover of 2.5 billion Swedish crowns, with locations in Sweden, Norway, and Germany. By the year 2000, JC was Sweden's largest jeans retailer, with a market share of 20%.

In 1999, JC abandoned its cooperative model and instead became a traditional retailer. In this transition, management changes meant that the former senior managers no longer had the same influence. JC became a publicly traded company in 2000, and moved its headquarters from Borås to Gothenburg at the beginning of 2003. One reason for the move was to gain better access to the labour market for buyers. However, JC soon began to show negative results after competent employees left the company because of the move. In addition, the company suffered from the lack of employee influence when JC became a more bureaucratic organization. In 2004, Retail and Brands (RNB), a Stockholm-based fashion company, purchased JC. Two years later RNB moved JC's headquarters to Stockholm.

As a result of JC's re-organization and its headquarters move, some top managers left the company. However, even with new owners and under new management, JC continued to lose money. Ultimately, RNB realized that JC, which had once been a highly successful business, was now a financial burden. After closing a number of stores, in 2013 RNB sold its shares in JC to Denim Island AB. Denim Island AB, which is part of the Denim Island Group in China, today owns 90% of JC.

There are several reasons for JC's decline. One reason was the loss of important social resources. As observed above, key people left the company after the re-organization and ownership change. JC lost other employees when the company moved its headquarters to Stockholm. To a great extent, the company's success was attributable to these managers. A second reason was that, with the headquarters move, top management lost its proximity to the actual business operations and its innovative work climate (Brorström et al. 2009). A third reason was the company's inattentiveness to the details that make a retail enterprise competitive (cf. Weick and Sutcliffe 2007).

The following incident illustrates this marketing myopia. On trips to New York and London, a former JC manager observed that star-print jeans—the so-called

trend jeans—were in high demand. He emailed his successor at JC and recommended buying 400,000 pairs of these jeans. The response was abrupt and brief: "JC has a budget for 14,200 pairs of trend jeans". In an interview in 2009, the former manager commented: "Under the old management, we would have worked night and day to produce the new models".

Despite its recent problems, the former innovative business climate at JC was a school for a future generation of entrepreneurs. The Borås cluster, with its many and varied resources, provided substantial support to these entrepreneurs. Former JC employees have founded a number of new companies, either alone or with others. These companies include: Gina Tricot, Fabric Scandinavia, the chain stores Weekday and Monki that are now part of H&M, Warehouse 157, Nudie Jeans, 8848 Altitude, Svea Babes, Sweden Concepts, Viskan Distanshandel, Unitail AB, FutureLab, and Total Logistics (now part of Aditro). Fabric Scandinavia, Nudie Jeans, and Unitail have their headquarters in Stockholm or Gothenburg. The other companies are still members of the Borås cluster. It is too soon to comment on the future of these companies, but it appears the textile cluster will continue to renew itself although previously successful companies have failed. JC enjoyed some 30 years of commercial success; none of the new companies has existed for more than 15 years.

The JC case reveals that many of the company's problems were self-inflicted. With the re-organization, the company focused more on administration than on operations and the competition. When JC lost its entrepreneurial spirit, it lost its position as a trendsetter closely attuned to changes in consumer taste. In the clothing sector, mistakes in colour and model decisions can be overcome if corrective action is swift and forceful. Such action is the very definition of organizational resilience.

In summary, two important conclusions can be drawn from the histories of Algots, Mölnlycke, and JC. First, organizational resilience is of critical importance for a company in managing change in all its various forms. Second, a business cluster can support new enterprises and spin-off companies when a member of the cluster declines.

12.4 Analysis: Resilience in Business Clusters

The histories of Algots and especially JC show that former employees in a company that lacks organizational resilience, even to the point of bankruptcy, may create new companies in the same commercial sector. A cluster of viable, enduring companies will have a sufficient variety of skills, experiences, and business ideas in many commercial domains. Early systems theory supports this conclusion. More than 50 years ago, Ashby (1956) formulated his "Law of Requisite Variety", which states that a social system must have at least as many variations in its action repertoire as in its surroundings.

In the analysis of cluster resilience, we limit the discussion to a specific industry sector (the textile/clothing sector) and to its wholesalers and brand name retailers (in the Borås region). The focus is the textile/clothing cluster's ability to generate new activities when individual companies in the cluster lose market position and the entrepreneurial, competitive spirit. When such events occur, leading to a company's decline or even bankruptcy, former employees, inspired and supported by the cluster, come up with new ideas. The close geographic proximity of the employees in the cluster naturally encourages their competition and development. Some employees may only change jobs, but others will create their own companies using the skills and experience acquired in their former employment. Because of the variety of resources (financial, technical, and especially social) in the cluster, new companies are supported as they build their own resource bases. In the process, new patterns of resources evolve.

Production of textiles in the Borås region has lost its importance as a technical resource. Instead, technical resources such as product development, design, logistics, and general know-how have become more important at the cluster level. The emphasis on retail and wholesale trade has led to stronger brands that are better able to meet increased competition. In addition, easy access to a variety of specialized suppliers has contributed to the renewal of the cluster.

Table 12.1 summarizes the background and development of companies who originated and conducted business in the Borås textile/clothing cluster.

Two companies in Table 12.1, Oscar Jacobson, which was founded in 1903, and Eton Fashion, which was founded in 1928, began by buying and selling the garments made by home-based dressmakers and tailors. (As late as 1950, there were around 5000 such workers in the Borås region). As both companies industrialized, they created brand names although they had limited manufacturing facilities. The business model of both companies focuses on the customer retail trade.

Entrepreneurs, who had acquired textile/clothing knowledge and experience in previous employment, founded the other ten companies in Table 12.1. Designers founded Svea Brudar AB and 8848 Altitude; marketing and sales people founded eight companies. The clothing manufactured by Rappson-Lapidus, Didriksons 1913, and 8848 Altitude are inspired by previous existing brands and collections.

All 12 companies in Table 12.1 are small or medium size. In 2013, their annual turnover ranged from 30 million Swedish crowns to over 250 million Swedish crowns. The smallest company employed 12 people, and the largest employed 65 people. In this sector, there is a correlation between company size and number of employees. Companies, such as these 12 companies, have neither extensive production facilities nor large sales groups; it is difficult for them to compete with the large retailers. However, the business cluster in the Borås region supports the existing suppliers and service companies in the region, which in turn leads to the founding of more textile/clothing companies.

In 2016, Borås had around 108,500 inhabitants and around 5200 registered limited liability companies. It is quite remarkable that a city of this size has so many companies. Recent financial data also show that the Borås region has weathered the recent financial crisis exceptionally well. This achievement reflects the strength of

Table 12.1 Wholesalers and brand name retailers in the Borås region

Company	Background	Development
Oscar Jacobson	Founded in 1903. Manufacturer of work clothes. Transition to trousers, jackets and suits	Börje Bengtsson, CEO 1973. Good salesman. The family sold company in 2008
Eton Fashion	Founded in 1928. Exclusive, high-quality shirts, etc.	Hans Davidsson, CEO 1990. Concentration on shirts
Swegmarks/Abecita	Founded in 1938. Belts and suspenders. Then corsets and lingerie	Purchased Abecita in 1981. Concentration on women's underwear
Oscar of Sweden	Founded in 1949. Diverse ownership. Now owned by the Åman Family	Concentration on men's shirts
Fashion Trade	Founded in 1970 in Stockholm. Owe Persson from Borås was hired. Experience, among others, from Algots	Supplier to large stores and Gekås. Also mail orders
Göte David Teko	Founded in 1976 by Göte David Johansson who worked in sales, and was Vice CEO and temporary CEO for Algots	Works with design, distribution, and logistics for wholesalers and chains. Bankrupt in 2016
Rappson-Lapidus AB	Founded in 1985 by P-A Gröndahl, salesman for Algors and then Göte David Teko	Wholesaler of trousers and shirts to men's stores
Cavaliere	Founded in 1986/87 by Jan Frick. Previously sold dress suits and tuxedoes for a Norwegian company	Retailer of dress suits, tuxedoes, business suits, and shirts
Unibrands	Founded in 1995 in Stockholm. When acquired by Ingemar Persson and Camilla Sandsjö, moved to Borås	Low price focus. Sells to Gekås, ICA Maxi, and Ellos
Svea Brudar AB	Founded in 1998 by Christina Wallmansson, former head designer at JC	Primary focus is on the youth market
8848 Altitude	Founded in 1998 by Magnus Berggren, designer, among others, for JC and Anna Larsson	Designer and retailer primarily of winter sports clothing
Didriksons 1913	Founded in 1998. Brand purchased by Sören Andreasson from Craft	Retailer of rainwear and other waterproof clothing

the local business community that supports and promotes the textile/clothing industry.

Although this textile/clothing cluster has enjoyed much success in both the wholesale and the retail aspects of the industry, there are challenges. The increasing globalization of the sector (especially lower labour costs outside Sweden) and recent corporate developments (mergers, acquisitions, new business models, etc.)

challenge the cluster's ability to innovate and to compete. Some companies in the cluster may lack the resources to develop and to defend their market position.

Business clusters in a particular industry thrive when they succeed in sharing infrastructures and supplier-distribution networks. Thus, companies in a business cluster are usually in the same geographic region. However, the geographic concentration of companies in itself is insufficient for the success of a business cluster; the cluster must also establish cooperative relationships with local governments and communities, universities, banks and other companies outside the cluster. The Borås region has long had a tight geographic concentration of companies, some of which have links to these other groups. Etzkowitz (2005) named this model of industry–university–government cooperation the Triple Helix (Swedish: *Trippelhelix*).

The companies' role in the Triple Helix model is to create and stimulate project collaborations, establish mutually beneficial contacts, and promote events that lead to innovation and business development. Universities can provide researchers and research facilities as well as collaborative research and training in professional and specialist skills. Governments can support business development by establishing company incubators, holding fairs/events that feature entrepreneurial ideas and expertise, assisting companies in working with banks, and making public investments in infrastructure such as buildings, roads, and railways.

The strength of the business cluster can be described in terms of the resilience model (see Chap. 3). The business cluster has more and different resources and skills than companies have individually. Moreover, the cluster has the ability to share these resources and skills among companies in the cluster via social and technical resources. For example, the sharing of know-how among companies in the cluster is an example of the use of a technical resource. The network movement of entrepreneurs as they found companies in the cluster is an example of the use of a social resource. Brorström et al. (2012) have described this entrepreneurial enthusiasm in the Borås region as "the peddler spirit" (see Chap. 13 for a further description of this spirit). The great variety in the companies and suppliers has allowed the cluster to retain enough know-how and entrepreneurial spirit to continue to grow and develop.

In recent years, the Borås region has been actively engaged in further strengthening its textile/clothing cluster using the Triple Helix model. For example, the community has rebuilt an old, centrally located industrial area to provide space for the School of Textiles, small companies, business incubators, start-up companies, and university–industry research projects. There are high expectations of this initiative known as the Textile Fashion Center, which is intended to provide a meeting space for creative activities in fashion, textiles, and design (Edström 2013). Judging by the experience of this initiative, as well as similar projects (see, e.g., Etzkowitz 2005), success depends on the active interest and involvement of companies in the cluster.

In addition, work is underway to create better transport connections from the Borås region to Gothenburg and other Swedish cities. For example, a new bus connection between Borås and Gothenburg has made employee commuting much faster and simpler. A new railway line is also planned that will link Gothenburg and

Borås via the Landvetter Airport near Gothenburg. Such community and national projects demonstrate the importance of public transit in support of accessibility and productivity in a business cluster.

12.5 Conclusions

For various reasons, an individual company's resilience is sometimes inadequate to respond to fundamental changes in its environment. Because of insight inertia, it is often difficult to break free of old ways of thinking. Companies are often inclined to follow past patterns; "more of the same" mentality may be the default position. Moreover, when new skills and knowledge are needed, change is rarely easy. Often such lack of resilience is a self-inflicted condition.

A business cluster may help rescue companies, employees, suppliers, and local communities, especially after an industry-shaking crisis. After just such a crisis, the textile/clothing business cluster in the Borås region supported many new companies and entrepreneurs in a community where entrepreneurship is a way of life. The cluster has provided assistance with training, education, and research, plus support of various business-related community projects. Even companies only indirectly associated with the cluster have been attracted by the support the region offers.

These are early days. It remains to be seen if the Borås textile/fashion cluster is strong enough to support the continuation and expansion of the textile/clothing industry. In part, the future depends on whether the Textile Fashion Center can support product innovation and development among new companies (Edström 2013). One obstacle to such growth is the limited amount of financial resources in the cluster and region. It is uncertain if outside investors are willing to supply the cluster's small and medium size companies with sufficient capital to develop the regional economy.

As a final comment, it seems clear that a single company can benefit from its position in a business cluster in a variety of ways: recruitment of personnel, knowledge of new technologies, new business opportunities, shared advertising, marketing programmes, and much more. However, the company must participate in, and commit to, the business cluster. To encourage such participation and commitment, a business cluster should be accessible, dynamic, and responsive.

12.6 Discussion Questions

1. Discuss whether is possible to create a business cluster through planned activities. If so, why and how are such activities important for the cluster's resilience?

2. Compare the textile/clothing business cluster in the Borås region with some other business cluster. What are the similarities and differences?
3. A business cluster may also stagnate in the same way a company stagnates. What factors make a business cluster, such as in the Borås region, sustainable over the long term?

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Chapter 13
Regional Resilience

Anders Edström, Margareta Oudhuis, Torbjörn Ljungkvist and Björn Brorström

Abstract The chapter focuses on the capacity of regions to learn from and adapt to challenging conditions. The theoretical perspective, which has guided the study combines earlier work on historical evolution and geographical location of regions. The empirical data is derived from three case studies set in Sweden, the United States and Canada. Among those, the Borås region in Sweden is the main case. The analysis shows that an increased capacity to adapt is the result of a combination of regional spirit and interacting actions of industry customization, mobilization of resources and public investments. The parallel evolution of these resources has contributed the most to the favourable results. Key messages of the study are the importance of undertaking multiple case studies and the role of knowledge networks which can initiate and coordinate the crucial development processes.

Keywords Regional resilience · Community spirit · Joint public–private ventures · Entrepreneurship

The chapter concerns regional resilience—defined as a region's capacity to learn from and adapt to changing and challenging conditions—and the theories behind the concept. Lessons are drawn from the management of such conditions in three case studies set in Sweden, the United States, and Canada. The analysis is based on the theoretical framework presented and developed in Chaps. 2 and 3. The main case in the chapter, the Borås region in Sweden, is compared and contrasted with the other two cases.

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13.1 Studying Regional Resilience

There are different perspectives on regional resilience in the resiliency research, the engineering-based resilience perspective that contrasts with the ecological resilience perspective, the evolutionary economic geography (EEG) perspective, and the evolutionary resilience perspective.

The engineering-based perspective assumes a system can return to the state of equilibrium that existed prior to an external shock (see, e.g. Fingleton et al. 2012; Hill et al. 2011; Rose 2004). According to Holling (1996), the faster a system returns to equilibrium, the greater its resilience. In contrasting the engineering-based perspective on resilience with the ecological perspective, Holling points to the difference in assumptions about whether 'multiple equilibria' exist. If the assumption is that an ecosystem has only 'single equilibria', or can be so designed, 'then the only possible definitions for, and measures of, resilience are the near-equilibrium ones, such as characteristic return time' (p. 38). This conclusion agrees with the engineer's desire that things work, don't break, and don't suddenly change behaviour. However, in nature, Holling notes, there are different 'stability domains'. Therefore, the ecological perspective on resilience is concerned with the role of constructive instability in maintaining diversity and persistence and in a design that allows the ecosystem to function even when external shocks occur.

The evolutionary economic geography (EEG) perspective, which is concerned with the structures of systems, maintains that system dynamics are path-dependent and are shaped by past events and their evolutionary history (Bristow and Healy 2014). Martin (2012, p. 10) defines regional resilience from the EEG perspective as 'the capacity of a regional economy to reconfigure, that is to adapt, its structure (firms, industries, technologies and institutions) so as to maintain an acceptable growth path in output, employment and wealth over time'.

We subscribe to the evolutionary perspective on regional resilience (see, e.g. Bristow and Healy 2014; Boschma 2014; Christopherson et al. 2010; Hudson 2010). In this perspective, a region can adjust and adapt its resources to changing conditions, setbacks, and crises as it returns to development and growth (see Chap. 2). However, Boschma, who claims this perspective is underdeveloped, proposes a redefinition of a region's resilience. In his redefinition, resilience reflects a region's ability to respond to sudden shocks by developing new growth paths (e.g. introducing new industries or technological breakthroughs). Connecting regional resilience to long-term regional development also requires an understanding of the main factors behind a region's ability to develop such new growth paths (Martin 2012).

Our position on regional resilience requires the consideration of a region's geographic location and its place in history (Boschma 2014; Christopherson et al. 2010). Every region gradually develops specific characteristics that differentiate it from other places and other regions. Understanding a region's past is necessary if one wants to understand its present, that is, how it develops new growth paths given the limitations and opportunities of its location as it seeks new resource

combinations and diverse structures. There is no success formula applicable to all regions. Every region has its own financial, technical, and social resources that it should combine as creatively and thoughtfully as possible.

Although social structures and culture influence, even limit, people's opportunities to work in the region where they live, possibilities always exist to make choices and to develop a life pattern with others in that region. Within a particular geographic area with similar social structures and a similar culture, gradually a core of values develops based on how its inhabitants view the world and how they behave (Couto 2002; Sheffi 2005). In this way, a local or regional value system is created that is often reflected in an attitude to life and work that is unique to that area. This attitude distinguishes the region from other, nearby areas. Well-integrated regions are typically reluctant to abandon these established attitudes and ways of behaving (Hedberg and Ericsson 1978). For example, a region may be heavily dependent on one large company, such as a paper mill, for employment. The life of the region revolves around the company, and its owner(s) has considerable responsibility for the inhabitants who almost look on the company as their caretaker. However, when the winds of change blow—the company shuts down or relocates, and jobs are lost—such a "company town mentality" may create severe hindrances to the region's resilience.

As the resource model in Chap. 3 (A resource-based model of organizational resilience) shows, organizational resilience depends on the availability of various external resources. These resources include raw materials from natural resources, labour, economic ecosystems, transportation/communication networks, and social capital. Although regions have different external resources, they still must develop specific resilience-creating strategies.

Metropolitan regions, for example, usually have resources such as universities, research institutions, and government agencies/departments that provide employment. These resources, combined with museums and galleries, sports events, and concerts, attract people (current and potential employees) to the regions. Many of these people are highly skilled, highly educated, and essential for knowledge-intensive companies and industries in very competitive environments.

Regions with natural resources such as oil fields, mines, and arable land in turn attract companies that develop these resources as well as support companies that provide peripheral services and products. Natural resource-dependent economies are often at risk because of swings in market demand for their resources. Regions favoured with natural resources therefore wisely diversify their economies by creating a network of industries and supportive infrastructures. Good transportation and communication systems are necessities for the development of efficient production and supply chains that contribute to the resilience of the companies and of the regions. If a region also develops a business-friendly environment, with business clusters and networks that include financial and business expertise, it strengthens its regional resilience even more (see Chap. 12).

Regional resilience is dependent on how a region develops its external resources. In other words, a region must be able to organize its external resources in a way that strengthens its overall management of other resources and thus reduces its vulnerability to unforeseen changes and events.

According to Boschma (2014), regional resilience depends on the internal structure of knowledge networks and their openness to the outside world. Some network structures are quite sensitive to the removal of supports while others can develop new growth paths and make radical changes. The greater the network density (its 'internal connectedness') in a region, the more likely the region will be structurally and functionally rigid and therefore less adaptive to change (Simmie and Martin 2010).

In this chapter we combine these perspectives on resilience in a new way. We take both an evolutionary economic geography (structural) perspective and a regional economic resilience perspective. We examine the use/misuse of external and internal resources in three very different regions in Sweden, the United States, and Canada.

13.2 Regional Values and Attitudes: The Influence of History

Because of its history, a region may have a spirit—certain attitudes and values—that is reflected in how its inhabitants think and act. Metaphorically, this spirit seems as much a part of a region's "walls" as stones and mortar. After years of socialization, a region's companies and organizations tend also to reflect this spirit (Brorström et al. 2012).

The Finnish language offers a word that is useful in this context. In Finnish, *sisu* (very loosely translated as pluck, grit, stoicism, resilience) is a kind of self-identified, historic, national spirit of the Finns. The word originates among people who have survived, even prospered, in a country of poor soil, harsh winters, and military conquest. An example of *sisu* comes from Finland's resistance movement in the "Winter War" of World War II. Against overwhelming military power, the Finns won the world's admiration for their tenacious stand against Soviet aggression. People who have the spirit of *sisu* never give up. They demonstrate courage and perseverance, whatever the odds, and are willing to risk the unknown and to imagine "what could be" (Välingkangas 2010).

Sisu, then, is a powerful spirit that can change people's lives and societies. However, as Lahti (2013) observes, caution is advised. While the cultural construct of *sisu* may help people survive extreme adversity, it should be combined with a large dose of common sense and a realistic understanding of one's surroundings. The inherent contradiction in *sisu* is that too much reliance on, and faith in, attitudes of perseverance and tenacity may distract people, organizations, regions, or countries from alternative, perhaps more productive, approaches. You have to know when to stop and try something different. If we think of *sisu* at the regional level, then it refers to resilience of people and organizations in a community who, when faced with difficulties and hard times, bravely dare to experiment, to innovate, and to break with traditional attitudes and values.

The region around the City of Borås in western Sweden is well known for its inhabitants' mental outlook called *knalleandan* [English: The peddler spirit]. This spirit is rooted in the region's history where for centuries people struggled to make a living on rocky farmland that produced only meagre crops (Ljungström 1872). It is a spirit quite similar to the Finnish *sisu*. Survival in the region meant finding a livelihood other than farming. Thus the cottage industry of handicrafts and textiles arose with distribution by itinerant peddlers who travelled between northern Sweden and Denmark. These peddlers soon developed a strong business sense about costs, thrift, and planning (Andersson Palm 2005).

Flexibility, simplicity, and creativity were the characteristics of these small, entrepreneurial activities. Soon entrepreneurs in the region saw the benefits of new technologies such as telegraphy and new transportation systems such as steamships and railroads (Lundqvist 2008). A spirit of independence in solving problem, often with simple and straightforward solutions, characterized these activities. Yet, a collective attitude also evolved as the entrepreneurs worked together to solve problems. In this way, the people in the Borås region developed knowledge and expertise as well as the shrewdness, practicality, and frugality required for operating successful businesses.

Independent thinking, self-reliance, and frugality have created some doubt in the Borås region about the value of higher education and external expertise (Brorström et al. 2012). Nevertheless, despite this hesitancy to seek or accept assistance from people outside the region, enough heterogeneity now exists among the region's population to drive business development and to avoid business stagnation.

For a region to maintain its resilience, its inhabitants must constantly renew the regional spirit as they adapt their financial, technical, and social resources to changing conditions. Such renewal and adaptation may mean, for example, abandoning the stubborn position that people can always solve their own problems and that practical knowledge always triumphs theoretical knowledge. It also means recognizing that sometimes cooperation with others is necessary, that a narrow focus on cost reduction may slow development, and that highly educated people can be very valuable resources (Brorström et al. 2012).

13.3 Flint, Michigan, and Other North American Cities

The Borås region is an example of a region that a few decades ago recovered from a very sharp recession and a financial crisis. However, there are many examples of regions that have not reversed a similar downward spiral.[1] One such region is the U.S. Midwest and Northeast where what was once the Manufacturing Belt is now

[1]See the following references:
http://en.wikipedia.org/wiki/Rust_Belt
http://en.wikipedia.org/wiki/Decline_of_Detroit.

the Rust Belt. This transformation mainly resulted from the decline of the steel and automotive industries as they struggled to adapt to a global market in which much of the production moved to Asia. The American cities of Buffalo, Cleveland, Detroit, and Pittsburgh have all suffered greatly from this decline in domestic manufacturing and heavy industries.

A smaller city, Flint, Michigan (located along the Flint River, some 100 km northwest of Detroit) has also experienced a severe economic depression after General Motors (GM) closed assembly factories in the area. In population, Flint's population is approximately the same as that of Borås although it is the largest in the Flint/Tri-Cities region of Michigan.[2]

In the late 1800s Flint was at the centre of Michigan's timber industry, but in the 1900s the city gradually developed into a major player in the automotive industry. For some years, all Buicks and Chevrolets (GM brands) were manufactured in Flint after the founder of GM, William Crapo Durant, located the company's headquarters in nearby Detroit in the 1920s. After World War II, Flint became the automobile powerhouse for the manufacture of GM's Buicks and Chevrolets. For decades, Flint was a major employment centre because of its importance in the automotive industry. In the 1950s and 1960s Flint was at the height of its prosperity and influence. In 1960 the city, at its highest level, had 197,000 inhabitants.

The stunning decline in automotive manufacturing in the United States, which is often said to have begun with the increase in foreign imports, worsened with the 1973 oil crisis. The number of people employed by GM in Flint thereafter decreased from 80,000 in 1978 to fewer than 8000 in 2010. Many factors explain the dramatic fate of GM when it was forced to the brink of bankruptcy and had to close factories: exorbitant overhead costs, employees' generous pension and health costs, lack of innovation, and indifference to competition are some of the explanations frequently offered.

Since the closure of GM factories in Flint, the city has suffered disinvestment, deindustrialization, depopulation, and urban decay, with high unemployment, poverty, and a high crime rate as a direct result. Flint today has the dubious distinction of being one of the country's most dangerous cities. Michael Moore, with grim humour, depicted Flint's decline in his 1989 documentary, *Roger and Me* (Roger Smith was the CEO when GM closed its factories in Flint.).

In the past decade, Flint has tried, with rather small success, to diversify its economy. Like neighbouring Detroit, Flint has torn down thousands of abandoned and blighted houses in an effort to reduce crime and the number of squatters who ignore trespassing laws. In the 2000s two financial emergencies in Flint resulted in the appointment of Emergency Managers. At best, Flint's future is uncertain with little success to date in attracting residents who are fiscally solvent.

Can we understand this negative development in Flint from a resilience perspective? Why has Flint's downward spiral continued? One explanation is its automotive manufacturing culture that dominated the city for decades.

[2]https://en.wikipedia.org/wiki/Flint,_Michigan.

This single-product culture certainly contributed to Flint's particular vulnerability. Automobile manufacturing, with its dependent suppliers of products, services, and technical know-how, gave Flint's inhabitants pride and self-respect in addition to high-paying jobs, many of which did not require a college education. Flint identified with this automobile culture to such an extent that it has been difficult to create a new identity. Early warning signs of the consequences of globalization, when GM began outsourcing components production, were largely ignored. As a result, there was little incentive to think about diversifying the economy of Flint.

This brief analysis of the Flint case is consistent with Boschma's (2014) idea that regional resilience depends on the structure of knowledge networks and the recognition that some network structures respond less well to the removal of supports than others that can develop new growth paths and make radical changes. The analysis also agrees with findings by Simmie and Martin (2010) that the greater the network density, the more rigid and less adaptive the region is.

Hill et al. (2011) also found that regions in the United States that were once dominated by a number of successful firms encountered severe problems when struck by the financial shocks. Lacking in skills and abilities, these regions were unable to adapt to changing conditions.

However, some metropolitan regions in the United States, with industrial cities, have been less affected by recent economic crises than the Flint region (Christopherson et al. 2010). Because of their diversified economies, combined with their education and health institutions, these cities have fared better than Flint. Moreover, unlike the Consumption Belt cities in California and Nevada to Georgia and Florida, these cities were not trapped in the spiral of inflationary housing prices and devastating mortgage fraud. As Christopher et al. comment, although some observers describe these cities as old fashioned with low growth rates, they have proven far more resilient than the Rust Belt and Consumption Belt cities.

Brouder and Fullerton (2015) present examples of successful development in rural Canadian regions that once depended heavily on industrial jobs. By diversification of the local economy, towards more service sector activities such as tourism and recreation, the regions have demonstrated resiliency. The Niagara Peninsula is one such region. When manufacturing jobs were lost after the last large, juice-processing plant closed in Niagara (Ontario, Canada) in 2007, the communities in the region turned to alternative activities, especially tourism. Even though the Niagara Falls is an iconic attraction, the Niagara-on-the-Lake area attracted few tourists. The more rural and peripheral areas attracted even fewer. Nevertheless, through the efforts of both private sector enterprises and public sector institutions, some of these communities have rebounded. Brouder and Fullterton point to the entrepreneurs and the institutions as key resources for community development and sustained entrepreneurial activity. They think such actors are essential to a community's long-term survival.

In short, judging by the experiences of the cities and regions described in this section, recovery from a financial shock requires a focus on continuous development, a willingness to break with industrial tradition and deep-rooted culture,

and sustained entrepreneurship and institutional actors. In addition, investments in education and cultural institutions may help support economic diversification.

13.4 The Borås Region: Resilience from Regional History

Small- and medium-sized enterprises dominate the economy in the Borås region of western Sweden although a few large companies are also located there. About half of the inhabitants of the region live in the City of Borås. In years past, the main industries were textiles, ready-to-wear clothing, and knitwear. This section deals primarily with those industries because they are still an important part of the region's identity. Data from 1950 show that 70% of the region's working population was employed in some connection with textiles, woven goods, knitwear, and other clothing. Relatively few people worked in heavy manufacturing or in public activities and services.

In the 1600s, although most people in Sweden lived and worked on farms, the Borås region was even then known for its widespread commercial activity. Many farmers took up trading or peddling to supplement their agricultural income; for some, this activity was even more important than farming. The farmers made wood and metal objects, spun yarn, and wove fabrics, all of which they sold in markets throughout most of Sweden. It was in this activity that the region's independent, entrepreneurial spirit developed. The estimate is that by 1800 Sweden had some 2000 farmer–peddlers (Lundqvist 2008) although their numbers decreased considerably in later years.

Industrial-scale textile production began in the Borås region in the mid-nineteenth century. Dyers and printers worked primarily with cotton fabrics. In the latter half of the century industrial production, financed by local capital, increased significantly. According to Winberg (2000), local financiers owned 17 of the 18 textile factories in Borås. With their experience as cottage industry producers, people in the region had the skills needed for textile factory work.

By the end of the nineteenth-century country stores and mail order companies had decreased the importance of the peddlers' activity. The first mail order companies in Sweden were founded about 1900. Goods, mainly clothes, were advertised and sold using printed catalogues that were distributed by post. Little capital was required to start a mail order company, and local entrepreneurs financed most of these companies in the region.

Initially, large textile mills dominated the textile industry in the region. Modern production began in 1870 when the large and integrated company *Borås Wäfveri* was founded. In the early 1910s industrial production focused on knitwear (replaced in the 1930s by ready-to-wear clothing). By the mid-twentieth century, the Borås region was the national centre in Sweden for the manufacture of textiles, clothing and knitwear. Although established companies produced products in all these areas, clothing manufacturers had the brightest future. The region also had a number of intermediaries in the textile chain, such as agents and importers,

and offered vocational training in the industry's various speciality branches. Other industries were attracted to the region because of its skilled workforce, good infrastructure, access to various suppliers, and new technologies. Sweden's politicians increasingly took an interest in the region because of its contribution to the national, as well as regional, economy.

13.5 The Textile Crisis in Sweden

In the 1970s and 1980s the Swedish textile industry was in crisis. The causes were free trade between countries, increased foreign competition, and escalating wage levels. Some large, clothing manufacturers under government ownership went bankrupt and then were liquidated or sold. Manufacturing moved abroad, first to Portugal and Finland, then to the Baltic countries and Eastern Europe, and then to Asia (especially China). With this development, the textile industry in the Borås region was left primarily with clothing design, purchase, and distribution. Ultimately, the country's successful mail order companies and retail chains gradually began purchasing their inventories from abroad.

A pattern is observable in how the major textile, clothing, and knitting companies in the Borås region dealt with this crisis. At first, they purchased modern equipment and outsourced some production. When these measures proved ineffective, they reorganized as holding companies with various activities in other business sectors. Or they created equity portfolios of shares in diverse sectors. Then, as the crisis continued, they sold assets including their trademark brands. Some companies eventually entered bankruptcy or completely restructured.

During the textile crisis, the number of jobs in the region's textile sector declined from about 20,000 to around 1000. The effect of the job loss was potentially very severe for individuals and their families as well as for the entire regional economy. When tax revenues declined, all publicly financed activities (education, health care, infrastructure) were threatened. Many industrial sites were underused, and some were simply abandoned.

However, the region's emergency response mitigated the worst effects of the crisis. Because generous unemployment benefits were provided, the region's purchasing power held relatively steady. Although the region's population decreased from a peak of 107,600 in 1970 to a low of 99,000 in 1983, thereafter the numbers slowly increased. By 2006 the City of Borås, now excluding the township of Bollebygd, had as many people as in 1970. In 2017 the population of Borås (and Bollebygd) is expected to reach 120,000, an increase of 20% from 1983. In fact, the population in the Borås region has increased more than other areas in western Sweden. The contrast with Flint, Michigan, is stark (Fig. 13.1).

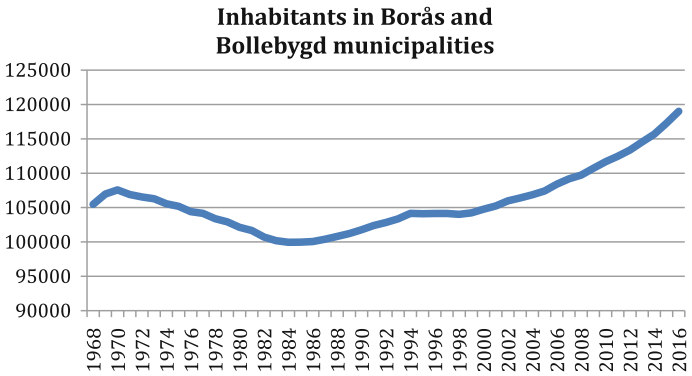

Fig. 13.1 Inhabitants in Borås and Bollebygd municipalities. *Source* Statistics Sweden

13.6 Crisis Management in the Borås Region

Crisis management in the Borås region can be divided into three separate although related development processes: industry customization and development, public investments, and regional mobilization of resources.

13.7 Industry Customization and Development

When textile manufacturing declined, the Borås region shifted to marketing, design, and fashion. With the disappearance of regional production, the region's mail order companies internationalized their supply chains and streamlined their management of orders, packing, and delivery. Gradually these companies became E-commerce companies with digital customer lists that improved customer contact and Internet sites that advertised products. There were still many employment opportunities because such companies need people to manage inventories, to fill client orders, and to deal with other physical tasks. Long before the Internet, these companies worked with advertising agencies and photography studios that also provided employment, especially for creative and artistic individuals. Today Borås remains an important city in the Swedish advertising sector. Before digital film, Borås was the camera film industry's best market in northern Europe, and one of Kodak's key markets (Nyrén and Olausson 2015).

In the 1960s franchise clothing chains entered the Borås region to be closer to their suppliers and to take advantage of the region's textile infrastructure. These chains changed their method of sub-contracting and spent more on marketing as international competition increased. One franchise in particular, the JC Jeans Company (JC), sparked the growth of other entrepreneurial companies. After JC became a publicly owned company and relocated its headquarters to Gothenburg, Sweden, former JC employees founded 12 clothing companies (Brorström et al. 2009).

Even before the fierce international competition that resulted in the textile crisis, some clothing companies in the region had strengthened their brands and increased their sales volume. Some companies, through geographic expansion, stable growth, continuous product development, and clever marketing and advertising, have created international brands. They now sell products in department stores boutiques (the store-within-a-store business model).

In addition to the adaptation and creation of textile, fashion, and marketing companies, the Borås region has also seen growth among the suppliers of related products and services such as labels, IT support, E-commerce solutions, business consulting, and various logistics capabilities. Over time these service providers have expanded their customer bases to other sectors.

Thus, the spirit of entrepreneurship, combined with a skilled workforce, good infrastructure, and supportive suppliers of goods and services, explains the recovery and resilience of the business sector in the region. The CEO of a Borås company described this entrepreneurial spirit:

> The business world around us does not mean much from a customer perspective. However, it does mean a lot for the industry and its various activities in terms of knowledge, the entrepreneurial spirit, and the fact that you can find ambitious people interested in the world outside our city and even outside our country. This is not a place where people are reluctant to test their wings.

13.8 Public Investments

The Borås region's recovery would have been improbable without support from the public sector. The City of Borås has achieved financial stability as a result of careful, municipal management of the diverse political interests and the adoption of the values of thrift that are characteristic of the region's private sector. The national government has also supported the region by stimulating conditions favourable to regional investment. For example, Ericsson established a factory for mobile phone base stations in the region, and Volvo AB built a new bus plant in Borås in 1977. Volvo Bus Corporation in Borås is one of the company's largest bus plants.

In addition to industrial investments, the national government has financed several public knowledge institutions in Borås. These include The Swedish School of Library and Information Science, opened in 1977, which is located at the University of Borås, and the *SP Sveriges Tekniska Forskningsinstitut AB* [SP Swedish National Testing and Research Institute], which was relocated from Gothenburg to Borås.

The City of Borås has invested in art and culture. Directors of the Museum of Modern Art have created an impressive collection of Swedish contemporary art and have built a network of international contacts. Borås is also known as the "sculpture city" because of its many public space sculptures that the City has financed in cooperation with various private donors. Moreover, spurred by private initiatives, the City annually hosts a street art festival that private sponsors help support.

The City of Borås also supports sports and other leisure activities. With the leadership of a local bank, various companies and individuals have created a strong association that sponsors the City's championship football team, Elfsborg. In addition, the City and the business community jointly financed a new football stadium that was inaugurated in 2005.

The University of Borås, with its programmes in general education and advanced research, employs 700 people and has 12,000 students. Research is conducted in seven areas including Business and IT, and Textiles and Fashion (Design and General). The University cooperates with other higher education institutions in the country and abroad, and especially welcomes international students.

These examples show how the public sector can support business development, promote regional and civic pride, and encourage tourist-friendly initiatives.

13.9 Regional Mobilization of Resources

As previously observed in this chapter, the cooperation among industry, academia, and the political sphere has increased significantly in the last decade within the Borås region and between the region and its surrounding communities. The clearest evidence of this cooperation is the region's work with the City of Gothenburg, which is the political and economic centre in western Sweden.

Cooperative organization structures are important for the Borås region because it has relatively few large companies. For example, an external study for the region pointed to various cooperative development opportunities, of which textiles and fashion is only one. In cooperation with the Swedish School of Textiles at the University of Borås, which has a long tradition of offering training and education in the textile sector, the region created a joint association that includes industry.

After some initial experiments, in 2008 the economic association, Marketplace Borås, 'Scandinavia's Business Arena for Fashion, Textiles and Design', was founded. Today more than one hundred companies are association members. The association has many activities and events aimed at people in the general public who are interested in fashion. With Marketplace Borås, an association has been created that can represent most of the regional companies working with textiles and fashion.

The University of Borås has long been active in research and development. One significant education/research programme at the University is, unsurprisingly, Textile Management and Fashion Design, which awards degrees for artistic and scientific studies. In 2008 the research programme, Smart Textiles, received an 8-year grant of 60 million Swedish crowns. Research in this programme, which is conducted in collaboration with regional companies, focuses on the region's role in technical textiles used in industrial applications.

The Swedish School of Textiles was becoming overcrowded by 2006–2007. After a search for new premises, the University purchased a nearby, rundown industrial building. In March of 2011, work began on turning the old textile factory

district, Simonsland in central Borås, into a location suitable for the development of the textile and fashion companies in cooperation with the University. The Textile Fashion Center is now a meeting place for businesses that are involved mainly with textiles and clothing (Edström 2013).

Thus the University of Borås and the City of Borås have created a community of companies who have similar interests and have established a centre where they and other organizations and actors can meet. The Simonsland renovation project is an example of what can be achieved when a municipality, an educational institution, and companies work together.

The founding principle of the Textile Fashion Center is that it should provide a platform for the development of new knowledge, new products, and new business opportunities that can strengthen the economy of the Borås region. This means that the region must work, in cooperation with its various partners, to develop its cooperative relationships using its various resilience resources, in particular for improvements to the physical infrastructure (e.g. motorways and rail services). As an example, the fast commuter bus route between Gothenburg and Borås (now the second most-used commuter route in the country) facilitates transportation, not only for companies but also for the University's students and teachers. And Marketplace Borås now recruits new members from the Gothenburg area. All such activities that increase the flow of people and ideas can make a community more dynamic and more prosperous.

Still yet another macro-actor in these activities is Västra Götaland, a region on the western coast of Sweden with its 1.6 million inhabitants. Västra Götaland mainly represents departments engaged in regional development. Financing and operating the joint activities of Västra Götaland and the Borås region require the participation and support of many stakeholders. Government and private company grants provide much of the financial support.

13.10 A Summary of the Development in the Borås Region

The business economy in the Borås region is mainly driven by small- and medium-sized enterprises in the textile sector. In addition to the manufacturers, these enterprises include subcontractors, suppliers, shippers, and advertising agencies. Other groups provide education and training. With an increased focus on design, marketing, and brands, many of these companies have succeeded in international markets. Innovative spin-off companies have sparked still further growth and strengthened the reputation of the region as a centre for textile competence. In fact, from 2011 to 2014 over 600 new companies registered annually in the region; most of them involved in commercial activities. Statistics also show that the Borås region has a 34% higher share of small- and medium-sized enterprises than the rest of Sweden. The entrepreneurial spirit from years ago is as strong as ever in the region.

The Borås region has used its reputation as the country's leading business cluster for textile and fashion to obtain support from the Swedish government. On occasion, the government has taken ownership of companies in financial difficulty. However, more importantly, the government has invested in two large, industrial companies in the region, provided funds for the founding of a university and moved government knowledge activities from Gothenburg to the City of Borås. Pressure by regional politicians and industry has led to improvements in the region's infrastructure (e.g. roads and communication links). Further improvements are expected. The entrepreneurial spirit that has long characterized business activity in the region is now also evident in its administrative and political management.

Finally, the Textile Fashion Center is an excellent example of how business people, educators, researchers, supporters of the arts, and public officials/administrators, working in collaboration, can create a unique environment that promotes and supports entrepreneurship.

The Swedish government has contributed substantially to the region's diversification with its support of public institutions and of private industry. The government has allocated funds to regional private companies and has channelled public investments to the region. In addition, private companies and entrepreneurs with a background in textile businesses have expanded their businesses into new branches and into related technologies. Increased diversification has created growth and thereby increased regional resilience.

Are there any dark clouds on the horizon of the Borås region? One risk is that many venture capital firms, or large corporations with headquarters in Stockholm, own the fashion companies that are heavily involved in E-commerce. Despite the benefits these entities provide with investments, management expertise, and international networks, their typical business model, with its emphasis on short-term profits and its propensity for rapid ownership change, is always present. Some non-textile manufacturers in the region have cut costs by rationalizing their workforces or moved their production. One example is Ericsson that laid off 200 employees in the summer of 2015 and another few hundred employees were made redundant in 2016–17. In general, it has proved easy for those dismissed to find new jobs.

Another concern is that business growth may be hampered by the lack of available specialists and senior managers. The Borås region has a relatively low percentage of university-educated people compared to the country as a whole (21.2% vs. 26.0%). The salaries for such specialists and senior managers in the region are also below the national average. Moreover, various social problems, such as residential segregation and neighbourhood criminal activity, are a concern. Nevertheless, it may be observed, in this respect the City of Borås is not unique in Sweden.

However, clearly the business environment of the region has many economic advantages. The proximity of warehouses, the excellent transportation and logistics, the lower wages, and the lower rents all benefit business. The investments in cultural and sports activities by the City of Borås and private sponsors contribute to

the appeal of the region. While business development in the region may face some difficulties, our evaluation is that its strengths outweigh its weaknesses.

13.11 General Lessons

This analysis of the Borås region helps us understand how various, mutually reinforcing developments create economic resilience and promote long-term business growth (Boschma 2014). The three related development processes (industry customization and development, public investments, and regional mobilization of resources) in combination strengthen the region's self-image and advance its economic interests. The region supports the theory that regional identification develops more readily in rural areas and small towns where it is easier to develop a set of common values and a community spirit. Next, we present five lessons from our comparison of the Borås region with Flint, Michigan, and the Niagara Peninsula in Canada.

The first lesson comes from Flint. This lesson, with its human and civic tragedy, teaches us that society cannot allow a city to sink into urban decay for lack of imaginative industrial restructuring, development, and diversification. A powerful hierarchical structure in which remote leaders made local decisions trapped the politicians, officials, and citizens of Flint. When GM's management in Detroit closed several Flint factories, thousands of jobs were lost. Flint struggled to reverse the downfall as it sank into a deep economic recession.

By comparison, although they also suffered severe economic shocks, the fates of the Borås region and the Niagara Peninsula in Canada were far different from that of Flint. A decentralized industrial structure in the region, with its many small- and medium-sized enterprises operating in various textile sub-sectors, combined with a regional "can-do" spirit, provided the regional resilience needed to adapt to a radically changed business environment. In a different, although effective, approach on the Niagara Peninsula, private companies diversified the local economy by creating a vibrant and sustainable tourist industry.

A second lesson comes from the Borås region. This lesson on how a community can thrive despite adversity teaches us that groups in harmonious and focused cooperation can achieve far more than any single individual. We call attention again to how the region united to achieve common goals. The University of Borås offers advanced education and training and promotes local employment. The City of Borås supports cultural events and sports activities that create a civic image, draw tourists, and attract investments. Many actors in remarkable cooperation, and with admirable vision, created the Textile Fashion Center. Thus financial, technical, and social resources, in combination, support the "peddler spirit" that is the defining characteristic of entrepreneurism in the Borås region (cf. the CAS approach; Brouder and Fullerton 2015; Cattani and Ferriani 2008).

A third lesson comes from the Borås region and the Niagara Peninsula. This lesson teaches us how community/municipal and national governments can

effectively provide external resources for improvements in infrastructure and for the support of alternative economic activities. By contrast, government intervention in Flint originally focused on the appointment of emergency financial managers, reductions in officials' salaries and pension benefits, and demolitions of vacant houses. While doubtless justifiable, these actions were not part of an economic stimulus package.

A fourth lesson comes from the Borås region. This lesson teaches us the importance of knowledge networks for industrial innovation and growth (Boschma 2014). Although it is still early days, and probably too soon to evaluate its resilience effect, the Textile Fashion Center (first opened in 2013) is a prime example of how such networks can cooperate. We found no similar knowledge networks with the simultaneous mobilization of know-how and social relationships in the Flint or Niagara Peninsula case studies.

A fifth lesson is related to the importance of individual entrepreneurs. The City of Borås, in particular, exemplifies this lesson. Entrepreneurs start new companies, form business associations, and cooperate in artistic, athletic, and other civic projects. They also work with external actors from surrounding regions (cf. Bristow and Healy 2014).

We conclude this discussion of the five lessons from the three case studies with some additional comments on the Borås case. We chose this region for the central focus of this chapter because of the region's comprehensive use of resilience resources provided by the national and local governments, its businesses, its public institutions, and its citizens. Investments, joint public–private ventures, a powerful history of industrialization, and, not least, the citizens' entrepreneurial spirit have created the vibrant economy we see in the region today.

Finally, we argue that the multi-case analysis, such as in this chapter, allows the analyst to compare and contrast histories and events, developments and decisions, and the characteristics and motivations of the main actors. Detailed case studies are especially useful for the analysis of mechanisms and causal relationships that are otherwise difficult to examine. Although case study design is criticized because its data are not necessarily generalizable, the case of the Borås region is instructive in its facts and inspirational in its message. Other regions and cities can profit from these lessons.

13.12 Discussion Questions

1. Which of its resilience resources are most important for the Borås region? Explain your reasoning.
2. How can a region organize its resilience resources to best manage new conditions?
3. What are the distinguishing characteristics of entrepreneurship in the Borås region?

4. Identify another region comparable in size to one of the regions described in the chapter. Describe their similarities and differences with emphasis on the use of resilience resources.

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Part IV
Conclusions

Chapter 14
Conclusions: The Resilience Framework Summarized

Stefan Tengblad and Margareta Oudhuis

Abstract A central claim in the chapter is that organizational resilience is not only a capability but also a philosophy of how organizations can manage surprises and face adverse, complex and uncertain environments in responsible and proactive ways, often even before crises occur. The chapter presents a holistic framework that analyses resilience from different perspectives: 1) as traits, 2) as processes, 3) as resources 4) as capabilities and 5) as prime sources. Furthermore, the main results from the book are summarized in seven main conclusions: 1) the changeable nature of the concept, 2) the multifaceted nature of the concept, 3) the importance of stakeholder interactions, 4) the relation between economies of scale, standardization and flexibility, 5) the importance of high reliability and 6) of local conditions and 7) that resilience is created by combining reliability, efficiency and change capacity.

Keywords Organizational resilience · Standardization · High-reliability-organizations · Flexibility

14.1 Introduction

This book offers several theoretical contributions to organizational resilience: a new definition, a holistic perspective based on an explicit theoretical base, two new models (the REC model and the resource model), and seven general conclusions. The presentation of these conclusions is the main theme in this final chapter together with some further theoretical discussions.

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14.2 Theoretical Contributions of the Book

The organizational resilience perspective differs from many other schools of thought in management in that it does not ignore the complexity and unpredictability (particularly at the strategic level) of managers' and leaders' work. As observed in Chap. 1, every organization is unique in its own way and therefore must assemble a unique resource combination. The organizational resilience framework thus recognizes that more than the two dimensions must be considered in the analysis of companies (e.g. the popularity of 2 × 2 matrices such as the Boston Matrix). Additionally, the framework recognizes that consumers' purchase decisions are not a linear process that moves from need recognition through information search and evaluation to the actual purchase. Many management models are far too simplistic and offer almost mechanical and superficial solutions to management problems. In a way, these models recall the style of cookbook recipes: cover potatoes in two inches (or more, for large potatoes) of cold water, boil 15 min, drain, and salt to taste (Tengblad and Alvesson 2013).

The evolutionary perspective and the financial, technical, and social resources model can be used to explain organizational development and to demonstrate how these resources, when uniquely combined, contribute to organizational originality, growth, viability, and competiveness. When a company or organization succeeds in creating value for its customers and others, over long time frames, it is possible to say organizational resilience has been achieved, at least temporarily.

This book, which builds on previous literature on organizational resilience, expands the focus from accident prevention and crisis management (i.e. exceptional events) to ideas on organizational viability over the long term, under various and changing conditions. In this regard, the book develops Välingkangas's (2010, p. 3) conclusion that resilience should be "an everyday habit rather than something grasped for only in moments of crisis".

The book also advances this area of research with its discussion of the proposed theoretical foundation of organizational resilience, namely evolutionary theory with its general concepts of variation, selection, and retention. This discussion helps us understand why organizations grow, succeed, and survive.

In this framework, organizational resilience is strongly connected to the retention concept, namely, *the capacity over time to maintain a variation selected by the environment*. Therefore, organizational resilience should be seen as a dynamic concept: despite a company's successful combination of resources in certain situations, this is no guarantee of its success in different situations or even in similar situations at some future time. Demand for variation is always volatile as well as unpredictable. A good example is the evolution of music listening devices: vinyl records to compact discs to online music streaming (and recently somewhat of a renaissance for vinyl).

Managing complexity and unpredictability is always challenging. Well-laid plans are often unrealized. Or management strategies and control measures produce unintended and undesirable consequences (Alvesson 2013; cf. Merton 1936). However, these are not reasons to abandon planning and control. Rather, they are

the impetus for management to plan more flexibly and to control more interactively, and to not spend too much time on detailed planning in advance, at least not in changing business matters.

This managerial approach is analogous to Hollnagel's (2013) Safety-I and Safety-II thinking. Hollnagel claims it is better to strive for the best possible outcome (Safety-II thinking) than merely attempt to avoid mistakes and minimize variances from fixed plans (Safety-I thinking). Stubborn adherence to former plans often leads to failure, especially when conditions are changing. The resilient organization is in such circumstances the flexible and adaptable one.

In previous research on organizational resilience, traits and processes related to the concept were emphasized. In this book we examine three additional aspects that we see as the foundation of the processes and traits of resilient organizations. These aspects are the following: Capabilities (the REC model), Resources (financial, technical, and social), and the Prime sources of competitiveness (the successful handling of variation, selection, and retention).

Table 14.1 summarizes the theoretical framework and its most important components. On the most concrete level resilience can be understood as organizational traits as described by Zolli and Healy (2012) and Weick and Sutcliffe (2007). Such traits, "risk-awareness" for instance, must be built on processes and habits described by Hollnagel. Organizational resilience can also be understood as capabilities (i.e. the REC model in Chap. 2) and as organizational resources. At the most generic level organizational resilence is based on the competitive forces behind the abilities to produce for the environment attractive variation over longer periods of time. This framework, which gives us a holistic understanding of organizational resilience, clearly illustrates the multi-dimensionality of the concept (Table 14.1 and Fig. 14.1).

14.3 Seven General Conclusions

The summary of the organizational resilience framework and the links between the various organizational resilience models relates to the presentation of our general conclusions. Our conclusions derive from the empirical findings in the book's empirical chapters (Chaps. 4–13). Therefore, in this chapter, we list and explain seven general conclusions about organizational resilience.

1. Factors that create organizational resilience are changeable and varied.
2. Organizational resilience is created through holistic management of resources and capacities.
3. Organizational resilience is created by interactions with others.
4. Value is created by economies of scale, standardization, and flexibility.
5. The importance of organizing for high reliability.
6. The importance of local business conditions.
7. Resilience is created by combining reliability, efficiency, and change capacity.

Table 14.1 Overview of the organizational resilience framework

	Level one: organizational traits for resilience	Level two: organizational processes for resilience	Level three: organizational capabilities for resilience	Level four: organizational resources for resilience	Level five: prime sources of organizational competitiveness and survivability
Key concepts	Risk-awareness—cooperativeness—agility—improvisation. The HRO perspective	Anticipate—monitor—respond—learn. Safety-I–Safety-II. The reflexive inquiry	Reliability—efficiency—change capacity (flexibility)	Financial, technical and social resources	Evolutionary theory: variation—selection—retention
Focus	Organizational traits	Organizational processes	Organizational capabilities	Organizational resources	Organizational dynamics/survival
Main references	Zolli and Healy (2012), Weick and Sutcliffe (2007). See Chap. 5	Hollnagel (2014), Hollnagel et al. (2011), Stacey (2012). See Chap. 2	A new model launched in this book (Chap. 2)	A new model launched in this book (Chap. 3)	Aldrich (1999). See also Chap. 2

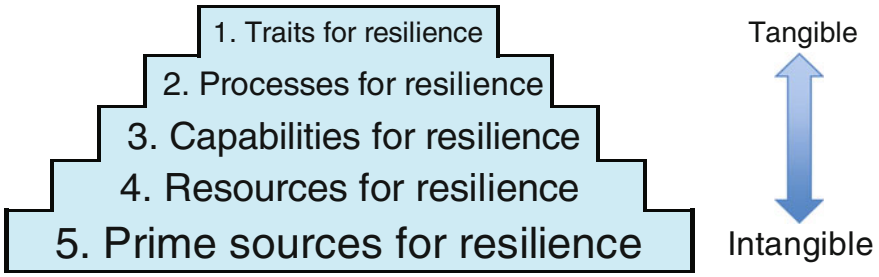

Fig. 14.1 Relation between levels in the organizational resilience framework

14.3.1 Factors that Create Organizational Resilience Are Changeable and Varied

Several chapters describe companies in crisis as the result of changes in their markets and business conditions. Chapter 11 describes a textile company that, despite its earlier market success, failed to innovate its brands. Customers increasingly found its fashions quite boring. Perhaps Chap. 4, with its history of Circuit City, the home electronics retailer, is the book's most dramatic example of the effect of a changed business market. A once-thriving company made the fatal mistake of clinging to old success recipes as competitors, in very unsentimental fashion, innovated with modern marketing ideas such as new department stores and e-business concepts. The message is that, to maintain organizational resilience, a company must be willing to change as conditions change.

Organizational resilience is a dynamic concept. External changes require renewal and reassembly of resources through both adaptation and innovation. Chapter 6 describes three Swedish business leaders who relied on adaptation and innovation when they created more decentralized companies in which employees worked actively with customer satisfaction, improvements in internal efficiency, and new technologies.

Other examples are in Chaps. 11 and 12. Chapter 11 describes how the new owners of a fashion company introduced a new business model that rescued a failing company. Chapter 12 describes the success of a business cluster of clothing companies in the Borås region of Sweden that achieved a renewal of resources through energetic and courageous innovation by company managements. As Chap. 12 explains, such renewal required overcoming both insight inertia and manoeuvrability inertia.

Such inertia, to a large extent, is explained by people's natural reluctance to abandon previous recipes for success and by the very human inclination to avoid bad news. When these attitudes prevail, long-term changes in the marketplace may be regarded as only temporary. In addition, the strength of competitors may be under-estimated because they start small, lack experience, and have limited resources. Such short-sightedness allows competitors to build their resources as they develop innovative goods and services.

Courage and an optimistic outlook, however, are not always positive qualities. The danger is that they may lead to foolhardy and unnecessary risk-taking as observed by Kayes (2015). Chapter 5, which describes British Petroleum's use of untested technology and unreliable production methods in the Gulf of Mexico at the expense of safety and the environment, is an extreme example. The cost of the resulting catastrophe was many lives, many injuries, many billions of dollars as well as company reputational damage and hazardous pollution along the Gulf Coast. The message, among others, is that companies need to strike a balance between inaction and action through timely and effective communications. Furthermore, the Skandia Case and the Circuit City Case (Chaps. 1 and 4) illustrate the dangers of unwarranted expansionism and financial risk-taking.

14.3.2 Organizational Resilience Is Created Through Holistic Management of Resources and Capacities

Customers, employees, suppliers, and financiers find organizational resilience an appealing quality. To achieve such resilience, the organization must satisfy the diverse interests of these groups by using its many different resources in efficient and versatile ways in harmony with changes in its surroundings. Financial resources are needed to develop technical and social resources, which, in turn, support the financial resources. Because it is not always clear how to coordinate the use of these important resources, it is worth management's time and effort to examine how they interact and influence each other.

Coordinating the use of these resources is rather like trying to solve a Rubik three-dimensional cube with its puzzle of nine small squares, six sides, and six colours where one square movement affects all other squares. It is quite easy to solve one side so long as you don't worry about the other sides. The analogy with management is that company leaders need to investigate all dimensions and relationships of planned actions; one action inevitably influences another action. Moreover, most textbook management techniques are quite one-dimensional. While such techniques often achieve intended objectives in one area, they can also produce various unwanted and unintended outcomes in other areas.

As an example of this reasoning, Chap. 6 quotes the Swedish industry leader, Marcus Wallenberg, on his theory that business decisions should be harmonious, just as music is harmonious. His idea was that such decisions should benefit not only the company but also the employees and society at large. In essence, this was an early expression of the organizational resilience philosophy. If a decision is lacking in some dimension, then it should be re-evaluated and incorporate a more holistical solution.

The book reveals that many different financial resources are important for achieving organizational resilience. Chapter 4, in its analysis of the rise and fall of Circuit City, shows that a narrow focus on shareholder gains is dangerous.

The attempt to satisfy shareholders, by holding to an unsustainable level of dividends, weakened the company's cash position to the point where it could not pay its suppliers. It may seem rather against their own long-term interests that company shareholders would act so passively while their company's financial position deteriorated to the point that their shares became worthless.

This owner passivity can be compared with the actions of owners who take a very pro-active position as far as company management and support. Chapter 7, which describes such situations, also shows how a strong financial position can help a company survive a grave crisis. Perhaps a company's most important financial resource is its earning capacity and its financial position. This resource allows it to make investments that satisfy its own and its financiers' interests.

Chapter 8 focuses on the importance of technical resources in its description of supply chains. Chapter 5 focuses on the importance of safe production methods and the likely disasters when efficiency is prioritized over thoroughness. Chapter 6, which includes descriptions of Volvo's car safety innovation and Astra's (today, AstraZeneca) development of pain relievers, points towards the value of technical resources in the innovation of new goods and services.

14.3.3 Organizational Resilience Is Created by Interactions with Others

Several chapters illustrate the importance of social resources such as good stakeholder relationships that are characterized by trust and responsibility. Chapter 9, for example, deals with the relationships among subsidiaries that explain, in part, why a factory has survived (at the time of this writing) despite many changes in top executive positions and ownership.

Chapter 8 explores supplier relationships in the supply chain as another example of an important social resource. Chapter 12 describes how fashion companies (which no longer manufacture clothing) in a textile cluster depend on their suppliers for quality materials and reliable delivery. These relationships are crucial in maintaining a profitable brand.

Chapter 5 presents yet another example of the importance of suppliers. This chapter describes British Petroleum's relationships with its various partners in oil exploration and drilling (among them, Transocean for an oil platform, Halliburton for cement foam, and Cameron for a blowout preventer system). The focus is on the absence of good supplier relationships that, ultimately, actively contributed to a human, economic, and environmental catastrophe.

The importance of good relationships with owners and financiers should not be under-estimated. Chapter 11 depicts how new owners contribute both capital and competence as they reposition a stagnating company. Chapter 6 describes the importance of active company ownership with particular reference to the industrialist, Jacob Wallenberg. Chapters 4 and 8 also describe the importance of good relationships with owners and financiers.

Last, but certainly not least, many chapters emphasize the importance of employee engagement, responsibility, initiative, and loyalty. Followership is a central theme in Chap. 11 (the fashion company), Chap. 9 (the Floby Factory), and Chap. 10 (healthcare organizations). Chapter 4 (the Circuit City story) stresses the importance of the lack of followership where, in a cost-saving measure, unskilled and unmotivated staff replaced others who had more relevant experience and knowledge. In reality, it is difficult, if not impossible, for a company to be profitable if coworkers do not have relevant competence and experience. Employees require training and coaching in order to handle challenging and stressful work situations as well as maintain personal well-being (Hesketh et al. 2015).

Even company–union relationships are part of followership. Chapter 9 (the Floby Factory) makes this point. The factory managers and unions, to a considerable extent, collaborated productively. The union representatives supported responsible worker empowerment, which contributed to the positive development of the workers' abilities for the benefit of both the company and themselves.

Stronger support for followership, even by middle managers, can increase the likelihood that catastrophes can be avoided. As described in Chap. 5, the chief driller on the Deepwater Horizon drilling rig was critical of the lighter-than-normal cement foam and the unproven sealing technology, both of which were used to save time and money. If he had had veto authority, such as an airplane pilot or surgeon has, perhaps the disaster might have been prevented, and his and other crew members' lives might have been saved. With low "authority gradient"—the idea that it is relatively accepted that someone with lower authority may question or challenge someone with higher authority—the risk of accidents is most certainly reduced (Schröder-Hinrichs et al. 2012).

These cases where followership was ignored have parallels with the Challenger disaster in 1986 in which the space shuttle exploded one minute after lift-off.[1] The engineers had warned the launch commanders that the fuel tank seals were not safe at temperatures below 12 °C (large icicles clung to the rocket from the previous night's frost), but their warnings were ignored.

14.3.4 Value Is Created by Economies of Scale, Standardization, and Flexibility

Some 250 years ago, Adam Smith, the Scottish political economist, stated that economies of scale are often economically superior to small-scale production. More recently, among other things, researchers have explained this phenomenon with references to learning curves: the more a person does something, the better he or she becomes at it. Specialized machinery has made it possible to mass-produce many products that once required much more skilled labour. With economies of

[1] http://en.wikipedia.org/wiki/Space_Shuttle_Challenger_disaster.

scale and standardization, products and services can be sold to customers who value their uniformity and predictability.

Such economies of scale, however, have certain disadvantages. Often, both consumers and companies, dissatisfied with the "one-size-fits-all" concept, are quite willing to pay a premium for more specialized and/or flexible goods and services. A classic example is Henry Ford's assembly line Model T that eventually lost favour with the public despite its low production costs and sales price. Hamel and Välikangas (2003) pointed out that economies of scale and standardization simply do not encourage imagination and flexibility. The fashion company, described in Chap. 11, found that innovative design and rapid response to fashion change were more important than economies of scale. Chapters 12 and 13 describe other examples of the importance of the flexibility that the cluster composition provides in the renewal of a business cluster and a regional economy.

Companies that invest in economies of scale combined with work specialization are often highly bureaucratic. The various divisions and departments are so specialized that cooperation and communication among them are often very poor or even non-existent. No individual seems to have the vision to coordinate all the company's disparate activities that might lead to sweeping changes. In such instances, flexibility is sacrificed to efficiency. Managers and specialists are needed who can manage more than one isolated department or activity, and thereby bring a holistic perspective to the entire production process.

Another weakness with the bureaucratic organizational form is that it is generally ill-suited to the identification and exploitation of new business ideas. In the 1970s and 1980s, it was assumed that computer giants—for example, Digital Equipment, Texas Instruments, Honeywell, NCR, RCA, IBM, and Fujitsu—would successfully transition to personal computers and would create new information technologies and services. However, smaller and more innovative new companies were the pioneers in these areas. Apple, Amazon, Intel, Microsoft, Google, Facebook, and many others are today's IT champions although IBM continues as a vibrant organization.

It should be emphasized that general methods aimed at production efficiency can have different consequences in different environments. It is far from evident that a single way of working is desirable in an organization. Chapter 10, for example, describes the difficulty in introducing standardized work practices in flexible and patient-centred healthcare. The difficulty varies with the kind of care provided. This is a very important message in times when the principles of Lean Management are spreading through many work sectors. A risk with such standardization is that employees can be so occupied with working in a certain way that they do not anticipate problems. Following routines becomes a matter of doing the "right" thing even if the result is "wrong". Thus, dealing with performance problems reactively (the Safety-I perspective) may decrease the ability to deal with such problems proactively (the Safety-II perspective) when conditions change (Hollnagel 2013). In addition, there is the risk that professional knowledge and skills may be "unlearned" when employees rely on standardized forms, documentation, and procedures instead of their broader knowledge, skills, and expertise. A lively discussion

Table 14.2 Examples of positive and negative results from lean management

Standardized processes	Positive result: improvement in production flow and efficiency
	Negative result: loss of flexibility and decrease in employee competencies and skills
Elimination of waste	Positive result: lower costs
	Negative result: increase in stress and pressure because of understaffing: "things fall through the cracks" and employee participation is viewed as wasted effort
Customer-driven production	Positive result: increase in customer-perceived value
	Negative result: deterioration in work climate, and decrease in production speed
Organization in production flows	Positive result: clearer roles when everyone knows what to do
	Negative result: fragmentation and reduction of tasks, and increased vulnerability to disturbances
Systematic improvement work	Positive result: increase in engagement and participation
	Negative result: loss of empowerment by production staff

is needed around how work activities develop and how a work culture can prepare people for dealing with accidents and mistakes.

Not all production processes are suitable for the various popular improvement methods (Oudhuis 2013). Lean Management, which Chap. 8 discusses, can contribute to increased organizational resilience although it also has many associated risks, such as when an improvement in one area causes deterioration in another area. Table 14.2 lists five examples of Lean Management methods that may produce both positive and negative results.

At the same time, of course, the weaknesses of economies of scale, standardization, and bureaucratic organization forms do not necessarily mean organizations should radically reject these principles. The network organizational theories and practices, introduced in the 1980s and 1990s, as alternatives to the bureaucratic organization, have merely proven inadequate (e.g. Kanter 1990; Peters 1987).

Instead of eliminating bureaucratic organization structures, the challenge is to create an organization that in many ways continues to be hierarchical and specialized but still permits members to exchange information with each other and to produce innovations in cross-functional teams. In other words, the key is to strike a balance between division of labour/standardization and efficiency/innovation. Even very large organizations need to innovate if they are to make changes in their surroundings and to exploit new business possibilities.

In Chap. 6, the Handelsbanken model shows how economies of scale and flexibility can be combined. The model is based on the standardization of products and services and the use of common technology throughout the bank's branches. However, each bank branch, which has decision authority, can tailor its activities to fit its customers' needs, for example, by offering certain discounts and unique service combinations. Chapter 11 describes how such flexibility, achieved through enhanced services and improved customer orientation, resulted in the renewal of a

stagnating fashion company. Chapter 10, which examines healthcare activities, contrasts standardized care with more flexible, patient-centred care.

A central theme in the book is that care should be taken when implementing changes in a recipe-like manner—even when very successful organizations provide the recipe. Because there is always a risk that a recipe is not suitable, it should be tested first. In many instances, it is good advice to "translate" the recipe to the new situation (Abrahamsson and Sederblad 2013; Andersen et al. 2014; Oudhuis and Tengblad 2013).

An improvisational leadership style (Tyrstrup 2006) has many advantages when the goal is to develop more holistic, multi-dimensional, and creative management practices. Improvisation is also beneficial in activities in which major innovations are more often the result of coincidence than of carefully constructed plans. However, the idea that a company can rely solely on its own closed information system to produce innovations is largely out-dated. A company cannot be the leader in everything. During the 1990s, for example, when Ericsson tried to develop competences in the entire telecommunications industry, the company found the goal was too expensive and too difficult. Ultimately, the company sustained huge losses because customers were unwilling to pay the high product prices intended to finance these ambitions.

14.3.5 The Importance of Organizing for High Reliability

We think our rather sceptical opinion of Lean Management (Lean) is justified (see Chap. 8). Some advocates of Lean are almost fanatic in their support of the method even though there is no substantial evidence for its superiority over other methods. Our scepticism derives from our belief that Lean may reduce a company's flexibility and may distract its attention from a focus on high reliability. Some managers, who support Lean, may think give-and-take discussions on organizational problems are essentially time wasted since they believe all discussions should result in a "standard" solution to be used without further discussions (cf. Lovén 2013). However, the fallout from the emphasis on waste reduction may be a reduction in employee work skills and competences and/or loss of customer focus. This caution does not exclude the existence of mature Lean implementations that do take these potential dangers into account.

Although customers typically have little understanding of the reliability of different production methods, they often view high reliability as much more important than operational efficiency, especially if they can afford to choose. Many consumers are fearful of transportation systems, healthcare service systems, and IT systems that they suspect are unreliable and even dangerous. High reliability is essential in many sectors such as milling and mining, transportation, infrastructure activities, and in many areas of consulting (e.g. legal support and construction consulting services). Industry has often suffered severe consequences when the principles of the high reliable organization (HRO) were not followed. A recurrent (and costly)

example comes from the automobile industry where all-too-often cars are recalled for brake or steering problems. The Volkswagen emission manipulation is another very costly example.

In the public sector, the justice system, military defence, the police and emergency services, and health care are all areas in which high reliability is vital because it influences the strength of our economy, our safety, and our health.

As an example, consider the maternity ward where we trust physicians, nurses, and midwives (rather than parents or administrative personnel) to use their experience and knowledge to deliver babies safely and to care for mothers. The organizational costs from poor maternity and neo-natal care are not only those incurred by the hospital's maternity ward and obstetrics department; other healthcare agencies, society, and parents and relatives, as well as the new born children, pay these costs in one way or another. A maternity clinic must, therefore, be managed as reliably as possible.

Another example is in education where breakdown of important routines can cause parents and educational authorities to question schools' legitimacy.

The HRO principles are essential for experienced and knowledgeable organizational members, especially the experts who manage problems and disruptions. These experts, who may lack formal authority, often report to managers who do not have deep knowledge of the relevant area of expertise. It is not uncommon that managers and experts lack confidence in each other due to poor communications (given the knowledge gap between them).

Therefore, it is essential that administrative managers maintain respect for technical complexity and knowledge. It is all too easy for managers to dismiss objections and warnings of a highly technical nature that they do not really understand. Chapter 5, on British Petroleum's oil well disaster, is a clear case of the tragic dismissal of expert warnings. Chapter 4, on Circuit City, is another example where unqualified sales people replaced knowledgeable and experienced sales people at a time when customers wanted better service and advice.

When the advice of experts is ignored, often employees' commitment and sense of responsibility decreases. Because managers have so little time to address the minutiae of many everyday problems, it is generally better that they assist subordinates in finding other solutions rather than insist on implementing their own (Denti et al. 2013). Managers who understand that successful organizations need to integrate many different knowledge areas as a functioning whole are more likely to recognize that many different skills are needed for decision-making and direction.

14.3.6 The Importance of Local Business Conditions

A business location may include larger or smaller communities and towns as well as cover an entire region. It is often true that some business locations are identified by the special work competences and mentalities of their residents (as described in several chapters in the book). These competences and mentalities are often reflected

in the location's companies, many of which were founded by entrepreneurs with a propensity for risk, an appreciation of teamwork, and an independent and self-confident "can do" spirit. This entrepreneurial spirit often seems innate in a location's residents—as if it were a birthright.

Thus, location is a very influential factor from the perspective of a company's success and longevity. According to Castells (1996), knowledge of a location's history and identity is crucial for its economic development.

Several of the book's chapters deal with the special role location plays in the development of organizational resilience. Chapter 9, on the Floby Factory, shows how global and societal changes (e.g. foreign ownership) can risk undermining a company's organizational resilience that is largely based on a regional sense of community in which the factory dominates a small town. Chapter 11, on the fashion company, however, reaches a different conclusion. In this case, the focus is on how new owners were able to halt the downward spiral of a company by overcoming the entrenched regional resistance to outside ownership, excessive cost-savings measures, and distrust of advanced education. Chapter 12, on the business cluster concept, and Chap. 13, on regional renewal, deal with the importance of regional locations that promote companies and organizations with a special emphasis on fostering an entrepreneurial culture.

Although history may create different values and attitudes in different locations, these values and attitudes are not necessarily fixed. Alterations may occur when national and international changes influence the location. This means that to maintain the conditions favourable to organizational resilience, a location may have to adapt to the challenges of the times even as it maintains its special ethos (e.g. entrepreneurial spirit and innovation; see Chaps. 12 and 13). Johannisson and Sundin (2010) explore this idea in their study of the societal-entrepreneurial world of Astrid Lindgren, the Swedish author of a popular children's book series.

Chapter 12, on the business cluster concept, also emphasizes the decisive importance of location in its examination of the ability and willingness of residents in a particular location to start new businesses or to help others start new businesses. Location, with its inherent characteristics, can thus be a fundamental factor in the creation of organizationally resilient entities where financial, technical, and social resources interact in various ways (see also Chap. 9 on the Floby Factory).

14.3.7 Resilience Is Created by Combining Reliability, Efficiency, and Change Capacity

The conclusion that a company achieves resilience by its combination of reliability, efficiency, and change capacity is perhaps the most important in the book. This is a conclusion based on the organizational model presented in Chap. 2, developed in Chap. 3, and empirically examined in the following chapters. Every company, with its own story and circumstances, needs to develop a particular blend of secure,

cost-efficient, and flexible processes. A company may achieve success by selling low-cost products (e.g. discount retailers such as Walmart and fast food franchisers such as McDonald's), by offering highly reliable products or services (e.g. Volvo cars or DHL Express mail/package delivery), or by adapting rapidly to changing trends and fashions (e.g. Zara, H&M, and the fashion companies described in Chaps. 11 and 12). Economies of scale may explain the success of many of these large and specialized companies, but the arrival of smaller companies in the same sectors proves the economic value of flexibility and of close customer interaction.

No company can be successful by concentrating on only one of the three dimensions (reliability, efficiency, and change capacity). For example, Ford Motor Company's problems began when its customers demanded car models besides the Model T and when General Motors (in particular) successfully offered customers a broad range of models. Chapter 4, on Circuit City, and Chap. 5, on British Petroleum, also illustrate what can happen when a narrow focus on efficiency creates problems with reliability. Chapter 11, on the fashion industry, also shows how a short-sighted efficiency focus on keeping costs down can damage change capacity. Even Chap. 12, on the clothing companies (Algots and JC Jeans Company), reveals how the focus on economies of scale and hierarchical control, at the expense of customer demand, can contribute to profitability problems. However, by contrast, Chap. 9, on the Floby Factory, and Chap. 10, on the healthcare sector, describe situations in which a more successful balance of efficiency and reliability was achieved.

Very resilient organizations are strong in several areas by successfully combining cost-efficient production with high reliability and high change (innovative) capacity in an ever-changing business environment. A good example is Google that creates new and imaginative innovations that combine very strong cost efficiency and reliability. Organizations that want to maintain their resiliency should understand that historical success is no guarantee of future success. Continuous improvements in the three dimensions are essential. Mere satisfaction with past achievements, with no effort to improve, is not a plan for success. There is always the future to prepare for.

In this connection, Bjørn Dæhli, the Norwegian cross-country skier and businessman who won more gold medals in the Winter Olympics than any other skier, commented on the reasons for his success: "You can never be a world champion; you can only become a world champion". His message is that the day after a victory (or success) is the day to begin to focus on the next championship (or goal).

14.4 Final Thoughts

We have now reached the book's end after describing organizational resilience from multiple perspectives. However, we have not emphasized the wisdom perspective that may also provide some additional understanding of the fascinating concept of organizational resilience. Which insights related to organizational resilience do

successful business leaders think most important? To some extent, Chap. 6, which described Jacob Wallenberg, Jan Wallander, and Pehr G. Gyllenhammar, dealt with the wisdom perspective in the context of their business philosophies and actions. These leaders created extraordinarily successful and resilient organizations. In particular, we salute Wallenberg and Wallander for their independence and courage in making decisions that were not always popular. Such actions require the leader's willingness to engage in dialogue, to learn from experience, and to dare to experiment as different ideas are proposed and different solutions are tested. Such daring, when the outcome of new endeavours is uncertain and the pressure to conform to external expectations is strong, is to be admired, even imitated.

Solving problems successfully requires a group of employees (including managers) who prioritize the good of the organization over selfish interests. The challenge for managers is to create in the organization an attitude we call *collective deed power*. Given what we have learned from the book's empirical chapters, collective deed power is best created when managers delegate responsibility downward at the same time that they demand engagement and commitment upward —so long as they hold in check their need for control that may stifle employee independence and initiative. This also means resisting pressure from consultants, board members, and recently employed coworkers.

It takes courage and integrity for managers to propose unconventional and daring problem solutions, especially "home-grown" ones. However, the task is much easier once subordinates see that such solutions work. Nevertheless, because of the real-world complexity and unpredictability, it must be admitted that many, seemingly brilliant, ideas are less than brilliant in practice. At the same time, ideas once thought of as second-class ideas may eventually emerge as first-class.

One last thought. We need an organizational climate in which we do not accept that the normal and the average as good enough. The organization that aims for organizational resilience must acquire and combine its exceptional resources such that it can continue to develop products, offer services, and innovate in its ways of working and its organizational structures. In short, organizational resilience results when an organization uses its financial, technical, and social resources to create a strong, flexible, viable, and sustainable identity by combining the three qualities of reliability, efficiency, and change capacity.

14.5 Discussion Questions

1. Which of the book's lessons do you think are most important? And why? What have you learned from the book?
2. Which actions can an organization's or a company's management take to increase its organizational resilience?

3. How can managers and leaders resist the pressure to conform to popular business trends that are poorly suited to their organizations?
4. In your opinion, what are most common pitfalls that prevent many organizations from achieving organizational resilience?

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- Saab 2012
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- SAS 2000–2012
- SCA 2012
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Quarter Report

- Ericsson 2002 (Q1–Q4)

Articles (From the Newspaper's Home Pages)

- *Affärsvärlden* (3 April 2007), Så portades Christer Gardell från Volvos styrelse [That's how Christer Gardell was ported from the Volvo Board].
- *Affärsvärlden* (9 September 2009), Ericssons nära-döden upplevelse [Ericsson's near death experience].
- *Dagens nyheter* (29 September 2012), SAS hade bara cash för tio dagar [SAS had cash only for ten days].
- *Dagens Nyheter* (1 Juli 2013), Nokia köper ut Siemens [Nokia buys Siemens].
- *Dagens industri* (6 September 2006) Gardell in i Volvo [Gardell into Volvo].
- *Dagens industri* (4 January 2013a) Ericsson kan detroniseras [Ericsson may be dethroned].
- *Dagens industri* (5 September 2013b) Ericsson får se upp [Ericsson has to watch out].
- *Financial Times* (24 November 2011) Ireland seeks EU help over bank bail-out.
- *Svenska Dagbladet* (26 October 2012a) SAS svart hål för staten [SAS a black hole for the state].
- *Svenska Dagbladet* (13 December 2012b) Därför var Renault en bra partner för Volvo [That's why Renault was a good partner for Volvo].
- *Svenska Dagbladet* (2 December 2013) Gardell ökar i Volvo [Gardell increases in Volvo].
- *Wall Street Journal* (24 December 2010*)* Ireland takes over another of its banks.