

Dietmar Ernst / Robert Gabriel / Ulrich Sailer (eds.)

Sustainable Business Management

2nd edition



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Dietmar Ernst / Robert Gabriel / Ulrich Sailer

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UVK Verlag · München

Umschlagmotiv: © iStockphoto shark_749

Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.dnb.de> abrufbar.

2nd edition 2023

1st edition 2013

DOI: <https://doi.org/10.24053/9783739882017>

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- ein Unternehmen der Narr Francke Attempto Verlag GmbH + Co. KG

Dischingerweg 5 · D-72070 Tübingen

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Einbandgestaltung: siegel konzeption | gestaltung

CPI books GmbH, Leck

ISBN 978-3-7398-3201-2 (Print)

ISBN 978-3-7398-8201-7 (ePDF)

ISBN 978-3-7398-0591-7 (ePub)



Contents

Accompanying Words	13
Foreword	15
1 Sustainable Business Management (Robert Gabriel and Dietmar Ernst)	17
1.1 Introduction	17
1.2 History of Sustainable Business Management	19
1.3 Sustainable Business Management	20
1.4 Sustainable Corporate Success	23
1.5 "Nuertingen Model" of sustainable business management	26
2 Sustainability - An Introduction (Robert Gabriel and Ulrich Sailer)	31
2.1 Development of the concept of sustainability	31
2.2 Importance for companies	35
3 Economic Perspective and Environmental Economics (Christian Arndt and Marc Ringel)	41
3.1 Need for Action and Adaptation for Companies from an Economic Point of View	41
3.2 Economics as a Discipline for Steering Scarcities	42
3.2.1 Economics and Sustainable Development	42
3.2.2 Economic Mechanisms for Steering Systems	43
3.3 Conflicting SDGs, Strategies and Options for Action	44
3.3.1 Conflicting Goals as a Challenge for the Management of Sustainable Development	44
3.3.2 Resource Consumption and Climate Crisis	45
3.3.3 Strategic Approaches to Solving the Climate Crisis and Their Pitfalls Economic Perspective	46
3.4 Innovations and <i>social entrepreneurship</i> : start-ups for sustainable development .	49
3.4.1 Entrepreneurship for Sustainable Development	49
3.4.2 Opportunities through and for sustainable start-ups	49
3.5 Environmental Economics	50
3.5.1 Basic Considerations and Principles of a State Market Correction	50
3.5.2 The Environmental Economic Toolbox	52
3.6 State Support for Environmental Industries: "Green growth"	56
3.6.1 The State as an "Enabler" for Environmental Innovations	56
3.6.2 Green Future Markets in Germany	56
3.7 Conclusion	58

4	Social Responsibility: From Profit to the Common Good - and Back Again (Klaus Gourgé)	63
	4.1 The Social Meaning and Purpose of Companies	63
	4.2 Systemic Relevance, Sustainability, and Purpose	64
	4.3 Three Ethical-Normative Signposts for Companies	66
	4.3.1 License to Operate	66
	4.3.2 Shared Value, Public Value	67
	4.3.3 Impact	67
	4.4 Orientation Toward the Common Good as a (New?) Business Ethic	68
	4.5 Sustainable Corporate Governance: The "4 R" Factors for Success	69
	4.5.1 Relevance	69
	4.5.2 Resilience	70
	4.5.3 Resonance	70
	4.5.4 Reputation	71
	4.6 Outlook	72
5	Understanding Transformation (Thomas Ginter and Alexander Romppel)	77
	5.1 Transformation: Briefly Explained	77
	5.2 Transformation and Sustainability	79
	5.3 Mastering the Transformation Towards More Sustainability	81
	5.3.1 Dealing With Complexity	81
	5.3.2 Phase Model of Transformation	83
	5.3.3 Resistance in Transformation Processes	84
	5.3.4 Getting the Ball Rolling	86
	5.4 Outlook	87
6	Strategic Sustainability Management (Erskin Blunck)	91
	6.1 Introduction	91
	6.2 Classification Strategic Sustainability Management	92
	6.3 Dimensions Strategic Sustainability Management	93
	6.4 Organizational Purpose and Sustainability	94
	6.5 Strategy Process	96
	6.5.1 Strategic Thinking	96
	6.5.2 Strategy Formation and Strategic Innovation	97
	6.5.3 Strategy Implementation / Strategic Change	101
	6.6 Strategy Content	101
	6.6.1 Business Level Strategy	101
	6.6.2 Corporate Level Strategy	102
	6.6.3 Network Level Strategy	103
	6.7 Strategic Context	104
	6.7.1 Organizational context	104
	6.7.2 Industry Context	105
	6.7.3 International Context	106
	6.7.4 Ecological Context	106

7	Agile Leadership (Horst Blumenstock and Steffen Scheurer)	113
7.1	Leadership: Briefly Explained	113
7.2	Agile Leadership and Sustainability	114
7.3	Conception of Agile Leadership	118
7.3.1	Framework Conditions of Agile Leadership	118
7.3.2	Prerequisites of Agile Leadership	119
7.3.3	Characteristics of Agile Leadership	120
7.3.4	The Continuum of Human Resource Management	124
7.4	Advantages of Agile Leadership	126
7.5	Outlook	127
8	Legal Foundations of Responsible Corporate Governance (Katja Gabius)	129
8.1	Basics of Sustainability	129
8.2	Corporate Social Responsibility	130
8.2.1	Definition	130
8.2.2	Historical Roots	131
8.2.3	Legal Implications of CSR	131
8.3	Corporate Governance	134
8.3.1	Definition	134
8.3.2	Historical Roots	135
8.3.3	Principal Agent Model	135
8.3.4	Corporate Objectives and Corporate Governance: Stakeholder Versus Shareholder Approach	136
8.3.5	Legal Basis	137
8.3.6	The German Corporate Governance Code (GCGC)	137
8.3.7	Regulation of Corporate Governance at EU Level	140
9	Corporate Compliance (Peter Förschler)	145
9.1	Dimensions of Corporate Compliance	145
9.1.1	Compliance: Briefly Explained	145
9.1.2	Compliance With Government Regulation and Business Self-Regulation	145
9.1.3	Integrity as the Basis for Compliance	146
9.1.4	Social and Environmental Responsibility	147
9.2	Compliance and Sustainability	148
9.3	Compliance Management Systems	149
9.3.1	Compliance Management as Legal Risk Management	149
9.3.2	Compliance Management: Obligation or Freestyle?	150
9.3.3	Compliance Management System Standards	151
9.3.4	The Compliance Management Loop	152
9.4	Corporate Compliance in Practice	154
9.5	Outlook	155
10	International Management and Sustainability (Carsten Herbes)	159
10.1	Introduction	159
10.1.1	International Corporate Activities - An Overview	159

10.1.2	International Character of the Sustainability Issue	160
10.1.3	Impact of international Business on Sustainability	160
10.2	International Specifics of Sustainability Aspects	162
10.2.1	Greater Room for Maneuver	162
10.2.2	Supranational Regulations on Sustainability Aspects	163
10.2.3	Other Supranational Sustainability Drivers	165
10.3	Approaches and Understanding of Sustainability in Different Countries	166
11	Integral Management - New Perspectives for Sustainable Development (Thomas Ginter)	173
11.1	Problem: Complexity and its Consequences	173
11.2	The Integral Approach	174
11.2.1	Holons	176
11.2.2	Statements	177
11.2.3	Development Stages	178
11.2.4	Development Lines	178
11.2.5	Typologies	179
11.2.6	Four Quadrant Model	180
11.3	The field of Tension of Integral Management	182
12	Marketing and Sustainability (Iris Ramme)	191
12.1	Marketing: Briefly Explained	191
12.2	Marketing and Sustainability	192
12.3	Sustainable Marketing Concept	192
12.3.1	Components of the Marketing Concept	192
12.3.2	Product Policy	194
12.3.3	Pricing Policy	197
12.3.4	Distribution Policy	199
12.3.5	Communication Policy	201
12.4	Sustainable Marketing in Practice	203
12.5	Outlook	204
13	Sustainable Procurement and Logistics Management (Monika Reintjes)	209
13.1	Basics	209
13.1.1	Definitions	209
13.1.2	Pressure to Adapt	210
13.1.3	Ecological Sustainability in Procurement and Logistics	210
13.2	Procurement and Procurement Logistics	212
13.2.1	Strategies and Structures	212
13.2.2	Processes	213
13.2.3	Technologies	215
13.3	Distribution and Distribution Logistics	216
13.3.1	Strategies and Structures	216
13.3.2	Processes	219
13.3.3	Technologies	221

14	Sustainable Production (Andreas Friedel)	227
14.1	Concept of Production	227
14.2	Concept of Sustainable Production	229
14.2.1	Vision of 100% Sustainable Production	229
14.2.2	100% Sustainable Use of Materials	229
14.2.3	100% Sustainable Energy Use	231
14.3	On the Way to Sustainable Production	232
14.3.1	Compliance with Environmental Regulations (Level 1)	232
14.3.2	Application of Environmental Standards and Guidelines (Level 2)	234
14.3.3	Fixing of Sustainable Production in the Company (Level 3)	234
14.3.4	Introduction of Sustainable Production in the Company (Level 4)	235
14.3.5	Implementation of Sustainable Production in the Company (Level 5)	236
14.4	Measuring Sustainability of a Production	240
14.5	Outlook	241
15	Sustainable Product Management (Brigitte Biermann and Rainer Erne)	245
15.1	Why Sustainable Product Management?	245
15.2	What is Product Management?	246
15.3	What is Product Success from a Business Perspective?	249
15.4	How are Products Made Successful from a Business Perspective?	251
15.5	What is sustainable product management?	255
15.6	What motivates companies to implement sustainable product management?	259
15.7	How can products be improved sustainably?	260
15.8	What is the Difference Between the Business Perspective and the Sustainability Perspective?	264
15.9	At What Points Do Decisions Have to be Made?	265
16	Sustainable Innovation Management (Frank Andreas Schittenhelm)	275
16.1	Innovation Management: Briefly Explained	275
16.2	Innovation Management and Sustainability	276
16.3	Conception of a Sustainable Innovation Management	278
16.3.1	Innovation Processes	278
16.3.2	Culture of Innovation	279
16.3.3	Innovation Manager	280
16.4	Sustainable Innovation Management in Practice	284
16.5	Outlook	285
17	Sustainability Controlling (Ulrich Sailer)	289
17.1	Controlling: Briefly Explained	289
17.2	Controlling and Sustainability	290
17.3	Management of Operational Sustainability	292
17.4	Organizational Integration of Sustainability Management	294
17.5	Guiding Strategies for Sustainability Management	296
17.6	Measuring Sustainability	296

17.7	Sustainability Communication	299
17.8	Outlook	302
18	Sustainability - Disclosure and Audit (Thomas Barth and Stefan Marx)	305
18.1	Introduction	306
18.2	CSR Directive 2014/95/EU	307
18.3	Audit of the non-Financial Statement	309
18.3.1	Review by the Supervisory Board	309
18.3.2	Development of the Audit of Sustainability Reports	310
18.3.3	Sustainability Reporting Auditor	311
18.3.4	Statutory Auditors' Mandatory Approach to the non-Financial Statement	312
18.3.5	Effects on the Audit Opinion	314
18.3.6	Audit Procedures	315
18.4	Critical Appraisal	316
19	Sustainable Financial Management (Frank Andreas Schittenhelm)	323
19.1	Financial Management: Briefly Explained	323
19.2	Financial Management and Sustainability	325
19.3	Conception of a Sustainable Financial Management	325
19.3.1	Sustainable Investment Calculation	326
19.3.2	Financing	329
19.3.3	Sustainable Company Value	331
19.3.4	Risk Management	331
19.4	Sustainable Financial Management in Practice	332
19.5	Outlook	333
20	Sustainable Investing (Dietmar Ernst)	337
20.1	Sustainable Investing	337
20.2	Specific Opportunities for Sustainable Investments	338
20.2.1	Definition According to GICS Sub Industries	338
20.2.2	Definition According to the Thomson Reuters ESG Score	341
20.2.3	Definition According to an Exclusion List	342
20.2.4	Investments in Sustainability Themed Investments	342
20.2.5	Best-in-Class Investments	343
20.3	Effects of a Sustainable Investment Concept on Risk and Performance	343
21	Operational Environmental Management (Hans-Jürgen Gnam and Lisa Schwalbe)	351
21.1	Development of Environmental Management	351
21.2	Environmental Management According to DIN EN ISO 14001	352
21.3	Environmental Management According to EMAS	354
21.4	Procedure and Implementation for the Introduction of an EMS	356
21.4.1	Steps 1 and 2: Environmental Assessment and Establishment of the EMS	356
21.4.2	Step 3: Internal Audit and Environmental Audit	360
21.4.3	Step 4: Management Review and Environmental Statement	361

- 21.4.4 Step 5: Verification by External Auditors or Environmental Verifiers 362
- 21.4.5 Step 6: Award of ISO 14001 Certificate or Registration and Publication of the
Environmental Statement 362
- 21.5 Simplified System Approaches 363
- 21.5.1 Existing EMS Approaches 363
- 21.6 Further Development of Environmental Management 364
- 21.6.1 Energy Management Systems According to DIN ISO 50001 365
- 21.6.2 European Foundation for Quality Management (EFQM) 366

- 22 Enterprise Future: A Utopian Retrospective Back from the Year 2050 (Klaus Gourgé) . 371
 - 22.1 It Will Once Have Been ... the Fulfilled Future 371
 - 22.2 The "Great Transformation": Off to New Territory! 372
 - 22.3 A Tour Through the Year 2050: The city of the Future 373
 - 22.4 Better Different: How we Live and Work in 2050 375
 - 22.5 Alternative Futures: "By Design or by Disaster"? 375
 - 22.6 Restart: Because Tomorrow Today is Already Yesterday 377

- List of Authors 379

- Glossary 387

- Index 395

Accompanying Words

Sustainability management is not a special discipline of business administration. Rather, sustainability management is a fundamental and comprehensive, future-proof organizational and environmental development. Since no company can become sustainable without all operational functions, the core business, the strategy, the products and services, the supply chains and all stakeholder relationships being designed sustainably, sustainability management is modern business administration.

Prof. Dr. Dr. h.c. Stefan Schaltegger
Professorship for Sustainability Management
Head of the Centre for Sustainability Management
Head of the MBA Sustainability Management Leuphana University Lüneburg

Sustainability is also a very current topic in business administration. The book has already become a standard with the first edition!

Prof. Dr. Dr. h.c. Ernst Ulrich von Weizsäcker
Honorary President of the Club of Rome
Former President of the Wuppertal Institute for Climate, Environment and Energy
Former Member of the German Bundestag

Currently, there is often a tension between social responsibility and sustainability on the one hand - and profitability on the other. But in the service of the next generations, they must become team players. It is clear that our world must become more sustainable if it is to remain livable in the future. In the transition, however, economic efficiency must not be lost. Efficient entrepreneurial activity protects jobs and safeguards the ability to invest. We are convinced that companies can only be successful in the future if they combine sustainability and profitability. In this respect, it is to be welcomed if sustainable business management is taught at universities. This book provides a very good basis for this.

Sandra Coy, Spokesperson Corporate Responsibility & Quality, Tchibo GmbH

The aim of the book is to show how sustainable management can be implemented in all functions and business areas of companies and thus in all fields of business administration. With this integrated perspective, the book represents an innovative and interesting enrichment of the approaches pursued in existing business administration textbooks.

Prof. Dr. Dr. h.c. F. J. Radermacher
Research Institute for Applied Knowledge Processing

Zalando's sustainability strategy "do.More" is an important part of our future business success. Our vision at Zalando is to be a sustainable fashion platform with a net positive impact on people and the planet. This means we run our business in such a way that we give more back to society and the environment than we take. Our ambitious sustainability goals can be implemented all the better the more consciously and openly our stakeholders engage with the topic of sustainability. In this respect, we welcome the fact that sustainable business studies are taught in universities such as HfWU. This textbook is an excellent example of how economic success and sustainable action can be combined.

Patrick Kofler, Head of Investor Relations, Zalando SE

For more and more market participants, environmental, social and governance (ESG) issues are of great importance in their investment decisions. Institutional and private investors alike want to support the development of a more sustainable economy. This also leads to banks increasingly embracing sustainability issues and offering corresponding products for customers and investors. This book makes a valuable contribution by presenting the sustainable management of companies in a structured and innovative way in a textbook. It shows how sustainable management in companies not only becomes possible but also develops into a competitive advantage.

Rainer Neske, Chairman of the Board of Managing Directors, Landesbank Baden-Württemberg

Foreword

Sustainable business management encompasses the economical, ecological and social responsible actions of companies. All over the world, there are convincing examples of such responsibly acting companies that are also extremely successful economically with their sustainability concept. These companies are not "in spite of" but successful "because of" their sustainable actions.

More and more companies are setting out to follow this example. However, they are often still at the beginning of the journey and ask themselves how sustainable management can be implemented in their company. The aim of this book is to provide companies, managers, and students with comprehensive work to guide them on their way towards sustainability. This book, "Sustainable Business Management," is a joint effort by 23 professors from three faculties at the Nuertingen-Geislingen University of Applied Sciences (NGU; in German: HfWU). This Nuertingen approach to sustainable business management was developed over many years at NGU and represents a common understanding of sustainability in business management. With this basic book, we want to show both students of business administration courses and managers with responsibility how companies can be managed successfully in a sustainable manner. This includes the examination of the environment, society, the design of value creation, and management functions.

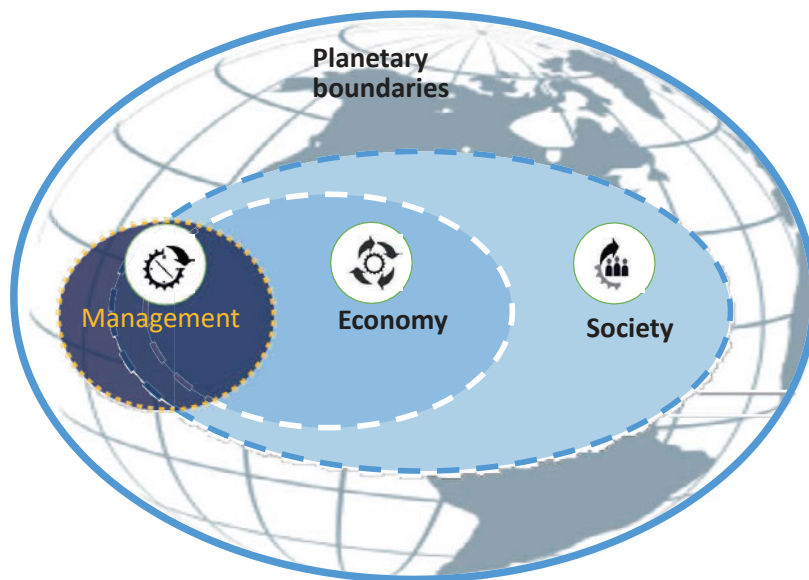
The first edition dates back to 2013. Since then, sustainability has evolved enormously in companies, society as well as in universities. Consequently, this second edition has not only been consistently revised, but also expanded to include numerous important aspects of business administration. As a pleasing trend, it can be observed that students from different disciplines are now very interested in dealing with sustainability.

We would like to thank UVK Verlag, in particular Dr. Jürgen Schechler, for their excellent cooperation. Furthermore, we thank Philipp Seidel for the professional revision of the illustrations and to Daniela Horna for her comprehensive support in the preparation of the English edition. The editors welcome feedback from the readership, of any kind.

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Introduction

1. **Sustainable Business Management**
2. Sustainability - An Introduction

**Planetary Boundaries and Society
Management and Value Creation
Outlook**

1 Sustainable Business Management

Robert Gabriel and Dietmar Ernst



Learning Objectives:

The readers

- understand the transformational pressure that the need for sustainable development is creating in our economic system.
- can classify the approach of "Sustainable Business Management" in the history of business administration with its evolving research focus.
- recognize that there are constant developments within sustainable business management in order to find the best possible answers to social, technological and ecological challenges.
- understand how sustainability poses diverse, global and complex challenges for companies.
- understand that sustainability projects can have an impact on economic success in both positive and negative ways
- learn about the concept of "Creating Shared Value" as a mindset for linking sustainability with economic success
- know a business value framework with which the business case of sustainability projects can be systematically determined
- understand the "Nuertingen Model" of sustainable business management, which serves as the conceptual basis for this book.



Keyword List:

Decision-Oriented Business Administration, Factor-Theory Approach, Environment-Oriented Approach, Ethical-Normative Ecological Business Management, Ecology-Oriented Approach, Corporate Social Responsibility, Creating Shared Value, Sustainable Business Management, Sustainability Business Case, Business Value Framework, "Nuertingen Model", Conflict of Goals

1.1 Introduction

Only a few years ago it was absolutely necessary to explain to the reader at the beginning of an article related to sustainability why the topic under consideration was seriously affected by sustainability.¹ In the meantime, this usually means carrying owls to Athens, since - especially in times of "Fridays for Future" - most people have understood the ecological and social challenges.

1 In this book, this explanation takes place in Chapter 2: "Sustainability - an introduction."

Many countries are also increasingly committed to making their economies more sustainable.² A growing number of decision-makers are calling for a new, sustainable definition of economic success and new ways of thinking and acting.



Jacinda Ardern, former Prime Minister of New Zealand

"Economic growth accompanied by worsening social outcomes is not success, it is failure. Turning things around requires changing both the way we think, and the way we act, and the way we measure success".³

The pressure to act has arrived in the economy. Some sectors, such as automotive and energy, are in the midst of a transformation⁴ toward sustainable systems and technologies. However, opportunities and risks arising from sustainable development can be perceived in all sectors. In addition, there is a growing sense of responsibility for the environmental and social consequences of global value chains. The pressure from stakeholders is accelerating this change.



Example: Transformation of the Automotive Industry

The automotive industry is facing the biggest transformation of recent decades. In addition to technology-related triggers such as connectivity, digitalization or autonomous driving, sustainability is a key driver of change. The agreement under international law to limit global warming to 2 degrees, or 1.5 degrees, (see the so-called Paris Agreement⁵) results in an urgent, disruptive need for change for the automotive industry. Globally, 18% of CO₂ emissions are caused by road transport.⁶ In Europe, more than 60% of CO₂ emissions from road traffic are caused by passenger cars.⁷ As a result, automobile manufacturers are getting focused attention and are facing strong regulatory requirements. In 2021, new passenger cars could only emit 95 g CO₂/km on average in the fleet, and in 2030 this target value is to be reduced by a further 37.5%.⁸ This cannot be achieved by further optimizing combustion engines but requires the widespread use of new drive technologies such as electromobility or hydrogen propulsion. This will radically change the global value chains in the automotive industry. Managing these risks and opportunities properly is a huge task for the entire industry.

Integrating the requirements of sustainable development into business management is a major challenge. This chapter shows how this integration can be mastered. To this end, it first looks at the historical development of business management. Then, the requirements for sustainable business management are elaborated. Important principles, that are of central importance for successful implementation, are highlighted. And finally - as a common basis for this book - an

2 For a more detailed consideration of the role and possibilities of state environmental policy, please refer to Chapter 3: "Economic Perspective and Environmental Economics".

3 Ardern, J. (2019), Prime Minister of New Zealand.

4 On the subject of "transformation", see also Chapter 5: "Understanding Transformation".

5 United Nations (2015).

6 Kords, M. (2020).

7 European Parliament (2019).

8 Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2020), p. 2.

understanding of "Sustainable Business Management" is explained and visualized. This shows how the individual contributions fit into the conception of the book.

1.2 History of Sustainable Business Management

Business administration is a scientific discipline that has been continuously developing since its inception. It takes up current social and political developments and is in exchange with other scientific disciplines. The treatment of ecological and social issues within business administration was already a topic long before the orientation of sustainable business administration emerged.

After the Second World War, business administration was decisively influenced by the **factor theory approach**. Reconstruction and the associated industrial production were the focus of business administration. The aim was to produce as efficiently as possible. Methodologically, the neoclassical models of microeconomics were used, which dealt with production functions. Social issues were not explicitly dealt with. Labor was regarded as a factor of production and the image of man was reduced in the models to the rational being of "Homo oeconomicus". The environment served to provide the necessary raw materials for production. There was little awareness of ecological issues.

In the course of time, business administration increasingly developed into a scientific discipline independent of economics. A milestone was certainly the **decision-oriented business administration**, which is closely associated with the name Edmund Heinen. The decision-oriented approach introduced two innovations into business administration:

- the realistic consideration of concrete decision-making situations and thus the further development of business administration to management theory and
- the opening of business administration to social science issues.

"Decision-oriented business administration dismisses the homo economicus of classical microeconomics into the realm of fable".⁹ This sentence is formative for the development of business administration into a sustainable business administration.

A further step towards the inclusion of social aspects is the **behavioral science-oriented business administration**. Its goal is to explain the actual behavior of individuals and companies with the help of the findings of the behavioral sciences. This means that business administration opens itself to disciplines such as psychology, social psychology, and sociology, and their findings.

The ecological side of sustainability was only incorporated into business administration very late in the 1980s.

The **environment-oriented approach** was a reaction to the increasing environmental problems of industrial society, which led to a rethinking in politics, business, and science. Two basic currents can be identified in business management research today:

- ethical-normative ecological business management¹⁰ and
- the ecology-oriented approach.¹¹

Ethical-normative ecological business management is a critical approach to economic systems and calls for a fundamental reorientation of economic thinking and action by focusing

9 Heinen, E. (1976), p. 395 (own translation).

10 Freimann, J. (1988), p. 16.

11 Freimann, J. (1988), p. 10.

on the compatibility of ecological and economic perspectives. It is less about what is immediately feasible in individual areas, but rather about a fundamental examination of the relationship between economy and ecology.¹² Global warming is an example of this fundamental debate, the results of which flow into the economy via political measures. A prominent representative of ethical-normative business economics is Maja Göpel.¹³ She doubts that the capitalist-market economic system is capable of averting the climate catastrophe and calls for an alternative economic system. What this might look like in concrete terms, however, remains to be seen.

The **ecology-oriented approach** does not involve a reorientation of business management thinking, but rather the inclusion of ecological issues in traditional business management. Environmental protection is understood as a new element in the business target system. It does not compete with the pursuit of profit, but is a secondary condition in the pursuit of economic goals.

The **sustainable business management** concept presented here is strongly anchored in classical business administration and in the ecology-oriented approach, yet it encompasses all three dimensions of sustainability. It can also be described as **functional-sustainable business management**, as it deals with the integration of sustainability in the various functional areas of the company. This approach often dominates in practice. With the help of innovative environmental technologies, new, environmentally friendly processes and products are to be developed that contribute to achieving corporate and societal environmental goals. Nevertheless, companies should also contribute to the discussion on the ethical-normative aspects of a sustainable economic system and assume responsibility so that future generations will find an intact economic, ecological, and social system.

The question of what contribution sustainable business management can make to sustainable development can be seen in the area of conflict between the ethical-normative and the ecology-oriented approach. The ethical-normative approach demands that the political and legal framework be set in such a way that ecological goals are quickly achieved without endangering prosperity. In a globalized economy, for example, it is important to ensure that sustainable companies remain competitive with international competitors. If this is the case, companies are expected to make an active contribution to sustainability within the framework of the ecology-oriented approach. Corporate action geared towards sustainability can thus lead to competitive advantages.

1.3 Sustainable Business Management

The challenges that arise for companies from the maxim of sustainable development¹⁴ **are diverse, global, and complex**. This diversity is primarily due to the fact that the three dimensions of sustainability – economic, ecological, and social – comprise numerous individual issues. This can be seen, for example, in the indicator catalog of the sustainability reporting standard provided by the Global Reporting Initiative (GRI).¹⁵

In addition, the **value chains of most industries are globalized** and have a strong division of labor. An almost uncontrollable number of actors interact in the value chain, and changes are

12 Freimann, J. (1987), p. 381.

13 Göpel, M. (2020).

14 See also Chapter 2: "Sustainability – An introduction."

15 GRI (2021).

very difficult to implement. The following example on conflict minerals illustrates this situation. The value chain should be considered not only "upstream", which includes the activities before materials or goods reach the company, but also "downstream". This includes further processing as well as the use and final exploitation of the products and services.

Example: Conflict Minerals

The extraction of minerals can have serious social consequences in certain politically unstable regions. For example, corruption or human rights violations such as forced labor or the use of violence can be observed. The so-called conflict minerals - tin, tungsten, tantalum and gold - are particularly in focus here. These minerals are used, for example, in information technology, cars and jewelry. One country that is particularly affected by this problem is the Democratic Republic of Congo.

To address this issue, the EU has put in place requirements via a new regulation that came into force on 1 January 2021. All companies importing these minerals or metals into the EU (around 1,000 importing companies are affected) must establish management systems, assess risks, carry out audits and report on them annually, using a five-stage framework developed by the OECD.¹⁶ The requirements of sustainable development thus have a strong influence on value chains.¹⁷



The activity in many different countries, with differing legal frameworks, value systems, and cultural influences, further increases the requirements for sustainability management. At this point at the latest, the system changes from a complicated to a complex, hardly predictable system that is difficult to manage and control.

A central question the actors are facing is the **conflict of goals between economic success and sustainable economic activity**. In the capitalist economic system of the Western world, economic success is the inevitable target. Without economic success, no company can survive in the long term. And now these additional requirements for sustainable management emerge. Doesn't this make it even more difficult for companies to achieve the economic success they need to survive?

In the minds of more than a few decision-makers, the idea prevails that sustainable action is ethically desirable, but at the expense of economic success. A much more differentiated view is necessary here. This one-sided "traditional" view has been refuted many times. There are numerous examples in which companies have been able to increase their economic success through sustainability measures. These measures can be, for example, reduction in energy costs and mitigation of CO₂ emissions through increased energy efficiency.

At the same time, however, there are also examples where decisions for sustainability lead to rising costs or decreasing sales, at least in the short term. This can be, for example, the voluntary installation of an exhaust filter on a chimney, when there is no legal requirement for this filter. The company may nevertheless succeed in deriving long-term economic benefits from this through credible communication or increased acceptance among stakeholders. Nevertheless, this will not always be possible, so there are cases in which sustainability and economic success are very much in direct conflict with each other. Functional-sustainable business management is critical of such

¹⁶ OECD (2016).

¹⁷ European Commission (2018).

projects. In this case, it is rather the ethical-normative ecological business management theory, which questions the absolute importance of economic success and the system requirements, which is supportive.¹⁸

As a result, the relationship between economic success and sustainability performance must be viewed in a differentiated manner. Figure 1.1 illustrates this graphically.

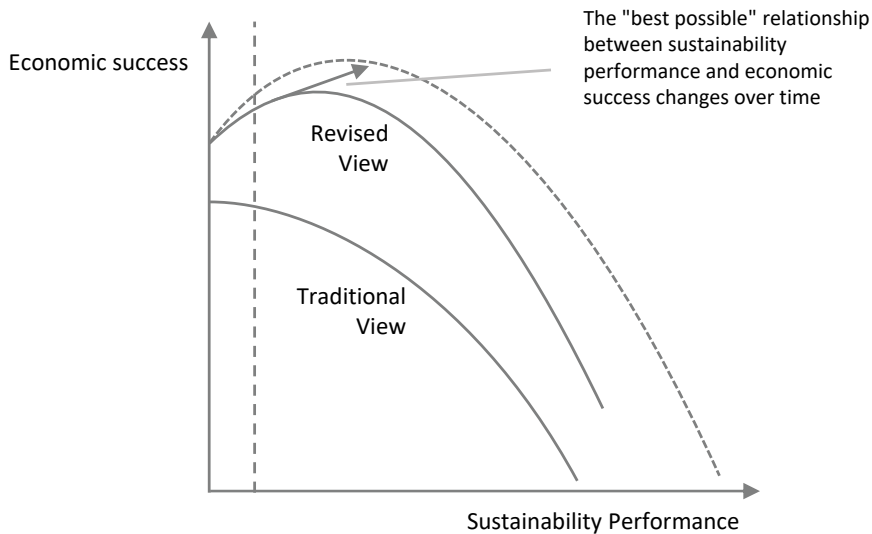


Fig. 1.1: Correlation between economic success and sustainability performance according to Wagner and Schaltegger.¹⁹ (own translation)

Sustainability measures, therefore, do not always reduce economic success, but can also increase it. These financially beneficial measures should be identified and implemented. The increasing sensitivity of stakeholders and regulatory intervention by the state will cause the curve in the above figure to shift upward toward the dashed line, and the number of measures that are economically, environmentally, and socially beneficial will increase over time.

Even without government intervention, many sustainability measures with which companies assume responsibility already lead to an improvement in economic performance. Consequently, there is no conflict of goals for these measures. Consistently identifying, developing, and implementing these projects, products, or business models is an important part of the competitiveness of companies today, and thus also at the core of modern, sustainable business management.



Ray Anderson, CEO and Founder of Interface Floor

"Business and industry is the major culprit, causing the decline of the biosphere, but it is also the only institution that is large enough, and powerful enough, to really lead human kind out of this mess".²⁰

18 Section 2.2 of this chapter. See also Chapter 4: "Social Responsibility: From Profit to the Common Good - and Back Again".

19 Wagner, M. / Schaltegger, S. (2003), p. 9.

20 Anderson, R. (2009).

1.4 Sustainable Corporate Success

If we look at the implementation of sustainability and **Corporate Social Responsibility (CSR)** in companies, we see that many companies try very hard to "look good" and protect themselves from criticism. Adaptation and change at the core of the business model are rarely observed in these companies, or at least do not take place in a sufficiently consistent form. This is also reflected in the fact that social and environmental problems have not been adequately addressed to date.

Companies are therefore often busy trying to safeguard the business models that are successful today. This happens through lobbying, or by reporting success stories. The responsibility is not accepted, but shifted to the consumers or the state. There is more reaction than action, and the core of the business model is not touched as far as possible in order not to endanger today's success. In this context, sustainability activities are mainly there to protect against external pressure and to boost short-term success through an improved reputation. Such an approach could be described as "playing not to lose", as an attempt to protect today's model of success - which will be yesterday's model tomorrow. In recent years, however, the number of companies taking sustainability seriously has been on the rise. These companies are taking an entrepreneurial approach to the challenge. They recognize the inevitable development and take action, asking themselves what opportunities and risks the sustainability megatrend entails. Options are examined and evaluated, and strategy and core processes are adapted. This requires entrepreneurial courage, as there is great uncertainty about future developments. This approach could be described as "playing to win!" A strategy that takes up a major challenge at an early stage is obviously more successful in the long run.

How can companies best tackle these new challenges? Here it depends strongly on the mindset. One positive approach is the one outlined by Porter and Kramer:

The concept of "**Creating Shared Value (CSV)**". It builds on the idea of products and business models that generate value for society and companies at the same time. The two authors show (in an over-simplified manner) the differences between CSR and CSV (Table 1.1.). The bottom line is that CSV is about developing new solutions. In these solutions, the contribution to sustainable development shall be generated through the core activities and the business model. At the same time, of course, the new approaches should be as profitable as the existing activities. These new, profitable activities, which are at the same time welcomed by society, are superior to the previous solutions: they provide the company with long-term, secure, and socially accepted business success and a stronger competitive position. For society, these new business models and products offer ecological, social, and/or economic advantages.²¹

21 Porter, M.E. / Kramer, M.R. (2011).

Corporate Social Responsibility (CSR)	Creation of "Shared Value"
Target: Doing good as a respected element of society	Target: Creating value for companies AND society
CSR activity is decoupled from core business and profit maximization; philanthropy	Social added value is an integral part of core activities and profit maximization
Attention to reporting and self-selected focal points	Focus on concrete entrepreneurial opportunities and competitiveness
Firmly defined and limited CSR budget	Opportunities and risks determine the investment

Tab. 1.1: Comparison of CSR and "Shared Value" according to Porter and Kramer (2011)²²

With such a mindset of "Shared Value Creation", the role of sustainability management changes. A staff unit that is responsible for the sustainability report becomes a nucleus for innovation and new solutions. Sustainability managers thus need a high level of understanding of the core business and good networking within the company in order to develop new, sustainable solutions with the departments. Sustainability experts act as a catalyst, helping to achieve business goals and sustainability goals at the same time. The example of Kimberly Clark shows how greenhouse gases can be reduced and energy costs cut at the same time.



Example: Energy Efficiency at Kimberly Clark

The Kimberly Clark (KC) company, known for example through the Kleenex brand, made approximately \$18 billion in sales of hygiene products in 2019 with 42,000 employees. The pulp and paper industry is very energy intensive, and KC had energy costs of over \$1 billion. By using a sophisticated technology benchmarking approach, the company was able to achieve energy cost savings of more than \$150 million within two years. By transferring an Excel-based system with more than 10,000 linked Excel files into a dedicated sustainability software (SoFi Software), KC has transparency about the effects of their decision options. The system currently contains planned or outlined measures with a volume of 300 million US dollars. By selecting the right projects, KC has the potential to save an additional \$200 million in annual energy costs by 2022. This represents approximately 7% of the 2019 operating income.^{23, 24}

For **sustainable business management**, it is crucial to develop new business models, products, services, and processes that are sustainable and profitable. For this, it is important to understand the business case of the respective projects. Frameworks exist for implementation, such as those from McKinsey²⁵ or the "**Business Value Framework**" from thinkstep (Figure 1.2).

22 Ibid.

23 Stewart van Horn, Director of Global Sustainability, Kimberly Clark: Presentation at the symposium "think 15", 11 March 2015, Stuttgart.

24 Kimberly Clark (2020).

25 Bonini, S. / Görner, S. (2011), p. 13.

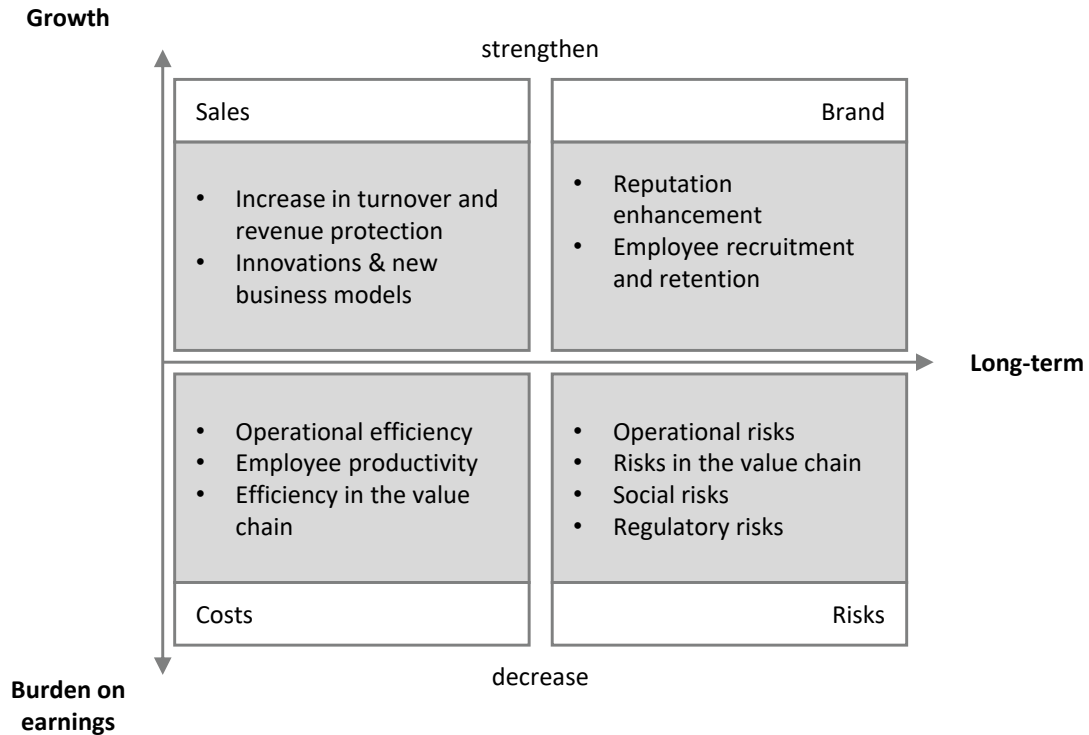


Fig. 1.2: "Business Value Framework" according to thinkstep (own revision)²⁶

Based on the application experience of many hundreds of projects, the authors of the framework conclude that all business benefits from sustainability projects can be found in the four main categories: more revenue, lower costs, lower risks, and improved reputation. Thus, the framework can be used as a checklist, and each project is examined for its benefits across these categories. In addition to identifying the value drivers, the second challenge is to quantify the magnitude of the value contribution. For example, it is necessary to answer the question of how much additional revenue a green product portfolio could deliver. This quantification is demanding, but at the same time, it is part of every business case and therefore not a dedicated challenge for sustainability projects.

In conclusion, the sustainability megatrend will force a transformation of our economy. This will give rise to major risks and opportunities, which companies will best manage if they move forward actively and courageously and align their strategies and core processes accordingly. If they succeed in developing new business models, products, services and processes that are both profitable and sustainable, they will be future-proof and competitive. The task of sustainable business administration is to provide the necessary methodological foundation for this.

²⁶ Slight revision and translation of the framework by thinkstep (2016). The initial concept with the four categories can be found in Esty and Winston (2006), p. 295.

1.5 "Nuertingen Model" of sustainable business management

As part of the implementation of this book project, the authors jointly developed a visualization for the concept of a new, sustainable business administration (Figure 1.3). This visualization, referred to as the "Nuertingen Model" of sustainable business management, is the underlying foundation of this publication.

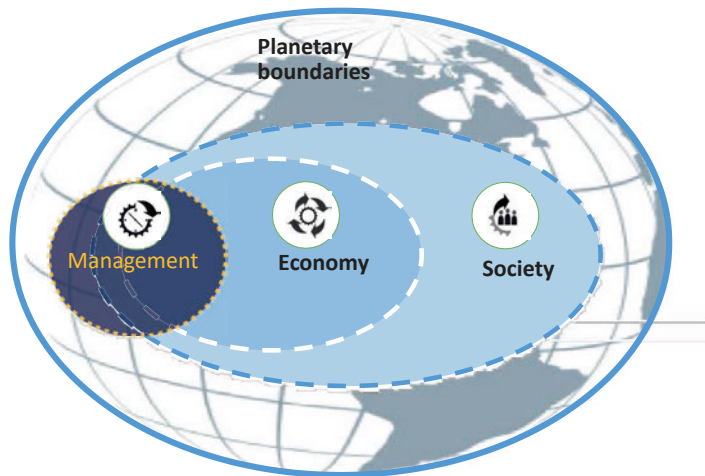


Fig. 1.3: "Nuertingen Model" of sustainable business management

The visualization is based on the understanding that business administration has made an important contribution to prosperity and peace in the past. Despite all justified criticism of the prevailing economic system, these positive achievements must be acknowledged. A new, more modern model of business administration should therefore not discard existing concepts, but rather develop and adapt them, making them sustainable and future-proof. This means that social, ecological and also economic sustainability aspects must be integrated.

Against this background, the visualization, viewed from the outside in, presents the following basic relationships:

1. Planetary boundaries for value creation and society

Society, including economic activity and value creation, must operate within planetary boundaries for obvious physical reasons²⁷. A linear system of "take, make and waste" is only possible for a certain period of time with finite resource supplies and a limited possibility to absorb pollutants and emissions. In the medium and long term, there is no way around a circular economy and a consideration of the unchangeable planetary boundaries in the future design of our society, and thus also in our economic system and companies.

27 For scientific sources on the topic of "Planetary Boundaries", please refer to Chapter 2: "Sustainability - An Introduction".

2. Value creation is only possible within society

Any economic activity has innumerable points of contact with society. Obviously, the development and operation of value creation systems requires the production factors labor and capital, i.e. employees and investors as partners. In addition, there are many other stakeholders who try to exert influence on value chains and strategies of companies. There are two reasons for this: either stakeholder groups are affected by companies' actions, or companies depend on certain stakeholder groups for their success.²⁸ Examples of typical stakeholder groups are customers, business partners, the government/authorities or even the residents of a large industrial plant. All these groups represent parts of society, and the dependencies shown underline that value creation can only take place in exchange and balance with society, i.e. "within" society.

3. Management as a compass, taking into account all dimensions

In business administration, there has traditionally been a great deal of focus on how management designs value chains for the greatest possible economic success. Today, this is no longer sufficient for long-term success. In addition, management must also consider interactions with society and planetary boundaries in strategy and decision making. As explained above, this is important for the success of the company for functional reasons, but it also serves to meet the ethical and normative expectations of stakeholders and society,

The content of the visualization is based on the nested circles of sustainability shown in Figure 2.1 (Chapter 2). Further development lies in the role of management, which must act as a guiding element (compass), keeping all three systems - economy, society, and the planet - in view and taking them into account. Visually, there is also a certain similarity to Kate Raworth's donut model²⁹ resulting from the identical motif of planetary boundaries.

This "Nuertingen Model" of sustainable business management forms the conceptual basis of this book. In the **introduction**, after an introduction to sustainable business management in chapter 2, there is a detailed presentation of the **concept of sustainability**. This is followed in Chapters 3 and 4 by a **consideration of planetary boundaries and the role of society**. For this purpose, aspects of environmental economics are presented and in the chapter on social responsibility the field of tension between profit and public welfare is discussed.

Chapters 5 to 21 then deal with the subject area of **management and value creation**. Here, all activities and functional areas of companies are taken up individually and the concrete significance and effects of sustainable business management for these areas are explained. The approach behind this is that value-adding does not mean that sustainability is imposed by a separate staff unit. Rather, the individual departments must develop new solutions and take responsibility for their area, knowing their environment, their tasks, and their challenges. This is the only approach that allows for a holistic and effective implementation of sustainable business management.

The book concludes with a utopia, a view of our economic life in the year 2050. This utopia stands for something we all wish for, and which has essentially motivated the writing of this book: a **LIVABLE FUTURE!**

28 GRI (2018), p. 19.

29 Raworth, K. (2012), p. 4.



At a Glance

Our economic system is under great pressure to change due to the sustainability megatrend. Business administration has taken this on board, and an ethical-normative as well as a functional approach have been developed for sustainable business management. Companies should adapt their strategies and core processes early and courageously, to best manage the risks and opportunities of the upcoming transformation to a sustainable economic system. By developing new business models, products, and processes that are not only sustainable but also profitable, companies improve their competitiveness. The "Nuertingen Model" presented in this book - which is mainly based on the approach of functional-sustainable business administration – provides a new and in-depth methodological basis.



Suggestions for Further Reading

- Wagner, M. and Schaltegger, S. (2003): How Does Sustainability Performance Relate to Business Competitiveness. In: Greener Management International, No. 44, Winter 2003, p. 9
- Porter, M.E. and Kramer, M.R. (2011). Creating shared value: How to re-invent capitalism and unleash a wave of innovation and growth, in: Harvard Business Review, Vol. 89 (1/2), pp. 62-77.



Literature

- Anderson, R. (TED Talk, February 2009). Ray Anderson: The Business Logic of Sustainability. https://www.youtube.com/watch?v=iP9QF_IBOyA&ab_channel=TED.
- Ardern, J. (dated September 25, 2019). Jacinda Ardern, Prime Minister of New Zealand, speaking at the #goalkeeper19 Event, <https://twitter.com/gatesfoundation/status/1176872758548074496>.
- Bonini, S. / Görner, S. (2011): The Business of Sustainability. <https://www.mckinsey.com/capabilities/sustainability/our-insights/the-business-of-sustainability-mckinsey-global-survey-results>, accessed 4 March 2021.
- Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (2020): Das System der CO₂-Flottengrenzwerte für Pkw und leichte Nutzfahrzeuge, 4. Mai 2020. https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Luft/zusammenfassung_co2_flottengrenzwerte.pdf, accessed 4 March 2021.
- Esty D.C. and Winston, A.S. (2006): Green to Gold, How smart companies use environmental strategy to innovate, create value, and build competitive advantage. Hoboken, New Jersey, John Wiley & Sons.
- European Commission (2018): What you need to know about the Regulation (on conflict minerals), update of January 5, 2018. https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index_en.htm, accessed 4 March 2021.
- European Parliament (2019): CO₂ emissions from cars: facts and figures, updated 18/04/2019. <https://www.europarl.europa.eu/news/en/headlines/society/20190313STO31218/co2-emissions-from-cars-facts-and-figures-infographics>, accessed 4 March 2021.
- Freimann, J. (1987): Ökologie und Betriebswirtschaft, in: Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung, Vol. 39, pp. 380-390.
- Freimann, J. (1988): Zum Stand der Ausarbeitung einer sozial-ökologischen Betriebswirtschaftslehre, in: Freimann, J., Priem, Or. (1988): Ökologische Betriebswirtschaftslehre und -praxis, in: Schriftenreihe IOW, Band 12.
- Göpel, M. (2020): Unsere Welt neu denken: eine Einladung. Ullstein Buchverlage.
- GRI (2018): GRI Standards Glossary 2018. Global Reporting Initiative, Amsterdam.

- GRI (2021): GRI Standards download area. <https://www.globalreporting.org/standards/>, accessed 4 March 2021.
- Heinen, E. (1976): Grundfragen der entscheidungsorientierten Betriebswirtschaftslehre, Munich.
- Kimberly Clark (2020): Kimberly-Clark Announces Year-End 2019 Results And 2020 Outlook [Press release]. <https://kimberlyclark.gcs-web.com/news-releases/news-release-details/kimberly-clark-announces-year-end-2019-results-and-2020-outlook>, accessed 4 March 2021.
- Kords, M. (2020) Transport modes' share of global CO2 emissions from fossil fuel combustion in 2016. Quoted from <https://de.statista.com/>, <https://de.statista.com/statistik/daten/studie/317683/umfrage/verkehrstraeeger-anteil-co2-emissionen-fossile-brennstoffe/>, accessed 4 March 2021.
- OECD (2016), OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition, OECD Publishing, Paris.
- Porter, M.E. / Kramer, M.R. (2011). Creating shared value: How to re-invent capitalism and unleash a wave of innovation and growth, in: Harvard Business Review, Vol. 89 (1/2), pp. 62-77.
- Raworth, K. (2012): A safe and just space for humanity, Can we live within the donut? Oxfam Discussion Papers, available at https://www-cdn.oxfam.org/s3fs-public/file_attachments/dp-a-safe-and-just-space-for-humanity-130212-en_5.pdf, accessed 02/26/2021.
- thinkstep (2016): Business Value of Sustainability Framework. <https://slideplayer.com/slide/7804141/>, accessed 4 March 2021.
- United Nations (2015): Paris Agreement to the United Nations Framework Convention on Climate Change, 12 December 2015, T.I.A.S. No. 16-1104.
- Wagner, M. / Schaltegger, S. (2003): How Does Sustainability Performance Relate to Business Competitiveness. In: Greener Management International, No. 44, Winter 2003, p. 9.