

academic**network**

Burkhard Schwenker
Klaus Spremann

Management Between Strategy and Finance

The Four Seasons of Business



 Springer

Editorial Council

Prof. Dr. Thomas Bieger, University of St. Gallen, Switzerland

Prof. Dr. Rolf Caspers †, European Business School, Oestrich-Winkel, Germany

Prof. Dr. Guido Eilenberger, University of Rostock, Germany

Prof. Dr. Dr. Werner Gocht †, RWTH Aachen, Germany

Prof. Dr. Karl-Werner Hansmann, University of Hamburg, Germany

Prof. Dr. Alfred Kötzle, European University Viadrina, Frankfurt (Oder), Germany

Prof. Dr. Kurt Reding, University of Kassel, Germany

Prof. Dr. Dr. Karl-Ulrich Rudolph, Witten/Herdecke University, Germany

Prof. Dr. Klaus Spremann, University of St. Gallen, Switzerland

Prof. Dr. Dodo zu Knyphausen-Aufseß, Berlin Institute of Technology, Germany

Prof. Dr. Burkhard Schwenker, Roland Berger Strategy Consultants

G. Corbae · B. Jensen · D. Schneiderö

Marketing 2.0

VI, 151 pages. 2003. ISBN 978-3-540-00285-7

S. Dutta · A. De Meyer · A. Jain · GöRichter (Eds.)

The Information Society in an Enlarged Europe

X, 290 pages. 2006. ISBN 978-3-540-26221-3

M. Blatz · K.-J. Kraus · S. Haghani (Eds.)

Corporate Restructuring

XII, 180 pages. 2006. ISBN 978-3-540-33074-5

B. Schwenker · S. Bötzel

Making Growth Work

VI, 138 pages. 2006. ISBN 978-3-540-46486-0

B. Stauss · K. Engelmann · A. Kremer · A. Luhn (Eds.)

Services Science

VI, 172 pages. 2008. ISBN 978-3-540-74487-0

Burkhard Schwenker • Klaus Spremann

Management Between Strategy and Finance

The Four Seasons of Business



Springer

academic**network**

Prof. Dr. Burkhard Schwenker
Roland Berger Strategy
Consultants
Am Sandtorkai 41
20457 Hamburg
Germany
burkhard.schwenker@de.rolandberger.com

Prof. Dr. Klaus Spremann
University of St. Gallen
Swiss Institute of
Banking and Finance
Rosenbergstr. 52
9000 St. Gallen
Switzerland
klaus.spremann@unisg.ch

ISBN 978-3-540-85274-2 e-ISBN 978-3-540-85275-9

DOI 10.1007/978-3-540-85275-9

Library of Congress Control Number: 2008938189

© 2009 Springer-Verlag Berlin Heidelberg

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilm or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer-Verlag. Violations are liable for prosecution under the German Copyright Law.

The use of general descriptive names, registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Cover design: WMX Design GmbH, Heidelberg

Printed on acid-free paper

9 8 7 6 5 4 3 2 1

Springer.com

Preface

This book owes its origins to a question that we, the authors, have often been challenged with. What, in theory and on the basis of practical experience, is the correct path for a company to take when strategy comes into conflict with the thinking of the capital markets?

Our book is an attempt to answer this important question. It deals with the fundamental problem in corporate decision-making: the conflict between strategic and financial thinking. We compare these two main currents in business thinking and describe the tools used by each side. More than that, we develop an approach that reconciles the two conflicting schools of thought. We call this our Four Seasons Model. Companies pass through four seasons during their lifecycle: phases in which they must *position themselves*, *develop*, *grow* and, ultimately, *earn*. Each season follows on naturally from the previous one, logically building on it. Both the strategic and the financial perspective can act as a sort of compass in the management's decision-making processes. Depending on which season the company finds itself in, the needle swings more toward strategic or toward financial considerations.

In this book we have collated and synthesized many different theoretical insights, checking them against real life and backing them up with practical examples. This process led to the development of the Four Seasons Model – a model now also used by universities as a basis for teaching and further research. In particular, the Four Seasons Model forms part of the *Strategies for Growth* course regularly offered at Leipzig Graduate School of Management and the *Entrepreneurial Investment* course at the University of St. Gallen for students on the Master's program in *Accounting and Finance*.

With this book, we hope to open up a new, modern perspective in the teaching of business studies. This inevitably deals with a crucial question: What should a course in general business studies actually cover? In the old days, the answer was straightforward enough: production, sales, finance and organization, all taught as individual subjects. But this approach neglects the ways that individual disciplines are interconnected. We believe that our perspective on strategic and financial thinking is more holistic – and hence more fruitful. The weight companies give to strategy or finance as decision criteria depends on the phase in which they find themselves; for this reason, we also present the typical patterns according to which people, money and technology are interwoven.

We would like to take this opportunity to express our sincere gratitude to Professor Thomas Berndt at the University of St. Gallen for their valuable comments and suggestions. Dr. Tobias Raffel of Roland Berger Strategy Consultants oversaw the entire project. Ms. Andrea Wiedemann put the data and materials together and gave our writing polish wherever necessary. Finally, we would like to thank the Springer Verlag, and in particular Dr. Werner A. Müller and Ms. Irene Barrios-Kezic, for overseeing this latest volume in the series issued by the Roland Berger Academic Network.

Burkhard Schwenker
Klaus Spremann

Hamburg, St. Gallen
September 2008

Contents

PART 1: INTRODUCTION	1
PART 2: BASIC PRINCIPLES	13
1 Market or Firm?	15
1.1 Prudence and Cooperation	15
1.2 Hierarchy and the Firm	20
1.3 The Market and the Firm – A Comparison	23
1.4 Inner and Outer Layers	28
1.5 Summary	31
1.6 Recommended Reading	31
2 Resources	33
2.1 A Typology of Resources	33
2.1.1 Two Features of Resources	33
2.1.2 Private Goods with Externalities	34
2.1.3 Public Goods	36
2.1.4 Eight Different Types of Resources	37
2.1.5 Summary	39
2.1.6 Decisions Based on Strategy or Finance?	40
2.2 Lack of Marketability	43
2.2.1 Introduction	43
2.2.2 Transaction Costs	43
2.2.3 Technical Transaction Costs.....	46
2.2.4 Specificity.....	48
2.2.5 Synergies	49
2.2.6 The Problem of Hold-up.....	51

2.3	Public Goods.....	53
2.3.1	Knowledge – Definition	53
2.3.2	Knowledge – Use	54
2.3.3	Knowledge and Investments.....	55
2.3.4	Types of Knowledge	58
2.4	Summary.....	61
2.5	Recommended Reading	62
3	Transfer pricing	63
3.1	Internal Services	63
3.1.1	The Story so Far	63
3.1.2	Decentralized Decision-Making.....	64
3.1.3	A Simplified Example	66
3.1.4	Interpretations.....	68
3.1.5	Transfer Prices Equal to Marginal Costs.....	70
3.1.6	How it Works in Practice	71
3.2	Chronological and Logical Connections.....	73
3.2.1	Phases of the Business Process.....	73
3.2.2	Building a Decision-Tree	74
3.2.3	The Nature of Inputs.....	78
3.2.4	Backward Recursion.....	79
3.2.5	Theory into Practice	82
3.2.6	Four Phases.....	84
3.3	Summary.....	86
3.4	Recommended Reading	86
4	Think Strategically.....	87
4.1	History and Tools of Strategic Management	87
4.1.1	What Is Strategy?	87
4.1.2	The Beginnings of Strategic Management	88
4.1.3	Later Developments: The Market-Based View	92

4.1.4	The Resource-Based View (RBV)	94
4.1.5	Networks	99
4.2	Challenges for Strategic Management	103
4.2.1	Change Drivers	103
4.2.2	Limitations of Traditional Strategic Tools	109
4.3	Summary	111
4.4	Recommended Reading	112
5	Think Financially	115
5.1	Some Basic Finance	115
5.2	Focus on Cashflows	117
5.3	Choosing the Best Total Cashflow	119
5.4	Fisher Separation and Net Present Value.....	121
5.5	Summary	122
5.6	Free Cashflows	124
5.7	The Capital Asset Pricing Model.....	127
5.8	Company Valuation	132
5.8.1	The formulas for DCF	132
5.8.2	EBIT, "Equity Value" vs. "Entity Value".....	134
5.8.3	Development of Capital Markets.....	136
5.9	Summary	139
5.9.1	Principles of Financial Thinking	139
5.9.2	Finance-based Management	140
5.10	Recommended Reading	142
PART 3: THE FOUR SEASONS OF BUSINESS	143
1	Establish the Basics and Choose a Position	145
1.1	Selecting a Location.....	145

1.1.1	The Basics	145
1.1.2	Von Thünen.....	146
1.1.3	Hotelling.....	147
1.1.4	Location Theory Today	149
1.1.5	To Choose the Center or not?.....	151
1.2	Shifting position.....	155
1.2.1	Kondratiev Waves	155
1.2.2	Organic Growth.....	158
1.2.3	Corporate Transformation	161
1.2.4	Using Depreciation.....	164
1.3	The First Season – Conclusions.....	166
1.3.1	Identifying Phases	166
1.3.2	Summary	168
1.4	Recommended Reading	169
2	Develop and Build	171
2.1	Innovation.....	171
2.1.1	What is Innovation?.....	171
2.1.2	The Role of the Entrepreneur	173
2.1.3	Development and Scalability.....	174
2.1.4	Development and Variants	176
2.1.5	Innovation – A Growth Engine	178
2.2	Context and Influence – Inspiration and Environment	179
2.2.1	Five Factors	181
2.2.2	Macroclimate.....	184
2.2.3	Schumpeter vs. Kirzner	185
2.3	Entrepreneurship as a Process.....	189
2.3.1	Seven Steps.....	189
2.3.2	Internal Capital Markets	191
2.3.3	Target Costing	194

2.4	The Second Season – Conclusions	196
2.4.1	Identifying Phases	196
2.4.2	Summary	198
2.5	Recommended Reading	200
3	Grow	201
3.1	From Prototype to Market Success	201
3.1.1	Managing Resources and Risks.....	201
3.1.2	From Capital to Talent – Required Resources	205
3.2	Individualized Mass-Market Products	208
3.2.1	Four Stages of Development	208
3.2.2	Attributes and Add-on Services.....	210
3.2.3	Technological Leap	213
3.3	The Sales Process.....	214
3.3.1	Market Introduction.....	214
3.3.2	Branding	215
3.3.3	Market Penetration	219
3.3.4	Employees and Incentives	221
3.4	Different Paths to Growth	225
3.4.1	Organic Growth.....	226
3.4.2	External Growth	226
3.5	The Third Season – Conclusions	231
3.5.1	Identifying Phases	231
3.5.2	Summary.....	233
3.6	Recommended Reading	234
4	Earn	235
4.1	Present vs. Future.....	235
4.1.1	Balance	235

4.1.2	Market Demands.....	237
4.1.3	Crises	239
4.1.4	A Healthy Company	243
4.1.5	Indicators	246
4.2	Value Orientation.....	248
4.2.1	Judging the Future	248
4.2.2	Profit or Cashflows?	249
4.2.3	Sales, Goods and Services, Finances	252
4.2.4	Ratios and Programs	254
4.2.5	Economic Value Added.....	256
4.3	Continue or to Liquidate?	259
4.4	The Fourth Season – Conclusions	266
4.4.1	Identifying Phases	266
4.4.2	Summary.....	268
4.5	Recommended Reading	269
5	The Four Seasons of Business – An Afterword	271
5.1	The Question: Strategic or Financial Thinking?.....	271
5.2	Lifecycle – The Key to the Question	272
5.3	Other Lifecycle Models	273
	PART 4: The Art of Balance – A Closing Remark	279
1	The Tug of War	281
1.1	Between Two Extremes	281
1.2	The Devil is in the Details	284
1.3	Shades of Gray.....	285
1.4	Integrated Approaches, Hidden Antagonism.....	286
1.5	The Phase-Based Approach.....	288

2 Management Between Strategy and Finance	291
PART 5: Test Your Understanding.....	295
APPENDIX	313
1 Index of Persons	315
2 Glossary of Terms.....	319
About the Authors.....	325

Part 1: Introduction

1 What This Book Is About

This book will be of use to anyone interested in modern management and the principles underlying it. The topic we address is a basic issue in decision-making within companies: Which is more important, *strategy* or *finance*?

Strategic thinking usually starts out with a concrete goal. The strategy then answers the question of how best to achieve that goal – what steps and actions the firm should take and how it should react to incidental factors or actions taken by other players, including the firm's "opponents". The starting point for strategy is an analysis of the situation in which the firm finds itself, the environment and the possible impacts on the firm. By developing a differentiated perspective, strategic thinking is able to address complexity and uncertainty. The strategy indicates a path that the entrepreneur believes in and pursues. Implementing strategy requires strength and stamina, as external recognition may be slow in coming. The entrepreneur follows his vision, and this sets him apart from the crowd. He is generally regarded as someone who "thinks out of the box".

Financial thinking, by contrast, involves adopting the views and judgments of the capital market. In other words, it's about adapting to what the majority of analysts and investors think. The finance-oriented entrepreneur looks at what the value goals of these individuals are and works out what actions they would like to see. He takes the perspective of the capital market and makes it the basis for decisions within the company. If he disagrees with the market, the expectation is that he will give way. He is oriented toward financial results and must regularly calculate the value of the projects he undertakes in the eyes of the market.

The strategy-oriented entrepreneur is a visionary, while the finance-oriented entrepreneur tries to adapt to the majority view. This is the essential difference between the two approaches.

Companies' planning and decision-making systems are in constant tug of war between strategic and financial considerations. This struggle has implications for all the core questions of business management:

- Should the company take a strategic approach, ignoring financial considerations if a particular course of action appears strategically necessary but is financially not desirable?

- Or should it develop a financial approach, ignoring strategic considerations if the financial calculations indicate that value will be destroyed?

Both positions are supported by different schools, prominent academics and the literature. However, when it comes to making specific decisions it is up to the entrepreneur to decide whether he is going to follow strategy and the requirements associated with it, or put greater weight on financial calculations and adopt the view of the capital market. Admittedly, in some situations both approaches will lead to the same result. But often they point toward different courses of action. Sometimes, following strategy implies doing the opposite of maximizing the discounted cashflow (DCF). This creates a tug of war between strategy and value creation. The question then is, which approach leads to *long-term success*?

Proponents of financial thinking see the DCF as a sort of cure-all. They aim to apply the judgments and criteria of the capital market within the company. The key concept for them is the *market rate of return*: All actions and investments by the company must provide this rate of return. For internal company decisions, the market rate of return is interpreted as *the cost of capital*. If the rate of return demanded by the capital market (the cost of capital) is achieved by the investment, the investment is considered worthwhile.

Supporters of financial thinking argue that even decisions lower down the company can be made on the basis of their profitability. They break down the financial calculation to the different levels of the organization. Strategic considerations become unimportant – they are only helpful as a sort of brainstorming exercise, a way of developing different scenarios and long-term business plans. The company then chooses the business plans that promise to deliver the greatest DCF.

This contrasts with the approach taken by supporters of strategic thinking. They put the emphasis on the company's mission as outlined by its founder, or choose methods that promise to deliver change or some other objective. The strategy functions like a master plan. The company implements this master plan, making sure that it meets its intermediate targets, the milestones. Every action it takes, every project or investment, must fit in with the plan: if it doesn't, it's rejected. For supporters of strategic thinking, rates of return are not so important in the decision-making process. True, they believe that the company should strive toward financial success and value creation over the long term. But they focus on strategy and the requirements associated with it, even where this takes the spotlight off the desire for profitability.

2 A Phase-Based Approach

Our first task in this book is to present the conflict that exists between strategic and financial thinking. In some situations one approach is better, in some situations the other. If this were not the case, the business world would surely have made up its mind long ago. The question is, *which* business decisions are best handled from a strategic perspective and which from a financial perspective? Where does the dividing line run between the realm of strategy and that of finance?

We set out to find this dividing line. We accept that the overall long-term aim of companies is to create value.¹ So the real question is *how far a finance-based system of management can be broken down to the different areas within the company* – i.e. how far it can be extended into the company's internal decision-making processes.

Mistakes often occur here. Separating out the different parts of the company and its projects for the purpose of financial calculations is tricky. Investment calculations are by their very nature somewhat imprecise. This is where strategy comes in. To quote ALBERT EINSTEIN (1879-1955), "sometimes what counts can't be counted, and what can be counted doesn't count." Mathematical calculations and formulas can be very helpful for certain business decisions, but they aren't a cure-all – especially in situations of high complexity where there are complicated interdependencies. Here, strategy proves the more effective tool.

Entrepreneurial thinking means finding a balance between the strategic and financial perspectives. This also means knowing which perspective should carry the greater weight in specific situations. In this book we show how the choice between strategic and financial thinking is determined by the *phase* of the business process in which the company finds itself. The tools of the capital market – present value, DCF, cost of capital – are highly effective in the later phases of the business process; in the earlier phases they are a non-starter. Strategic approaches are particularly effective early on in the business process; but in the later phases they can lead the

¹ The insight is not a new one. SHAKESPEARE's "The Merchant of Venice" tells us about the art of business as practiced in the Renaissance. In the play, the merchant Antonio tries to form useful contacts (including with Shylock himself), but ultimately everything comes down to money for him.

company in the wrong direction unless they fully coincide with the value orientation of the capital market.

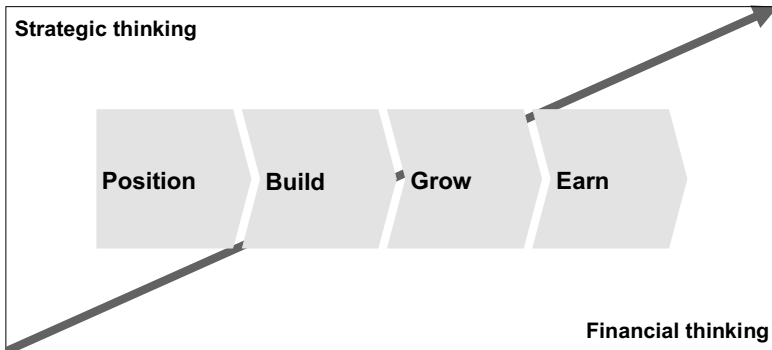


Figure 1-1: A recurring theme of this book: Strategic and financial thinking are of varying importance in the four phases of the business process; the two complement each other

It is our contention that strategy should take priority over financial thinking in the early stages of the business process. In the later stages, financial thinking comes to the fore as the basis for decision-making.

In other words, an entrepreneurial perspective and internal focus is required and more appropriate in the earlier stages of the value chain; a capital market perspective and external focus become more important in the later stages of business activities.

Academic research and evaluations of case studies indicate *four* phases of business activity and investment. Each phase requires different resources, operational principles and types of leadership. The four phases are as follows:

1. Choose the right positioning
2. Develop and build, from innovation to product launch
3. Grow through expanding production and sales
4. Earn and reap the profits

Just as the four seasons shape the agricultural cycle (choosing a field, sowing, growth and harvest), the entrepreneur needs to recognize the four phases of the business cycle – positioning, innovating, growing and

earning – and make his decisions on the basis of the season or phase. In this way he ensures long-term success.

Our particular choice of seasons may raise some eyebrows. Many lifecycle models claim that everything starts with innovation; this is followed by a phase of growth, ultimately leading to revenues and profits. We beg to differ. For us, developing and building forms the *second* phase. It is preceded by a phase in which the entrepreneur creates a basis for the company and determines its future positioning. This initial phase is often overlooked – as if fate or chance were responsible for deciding exactly where the company starts out. Not so. In reality, we are mobile with respect to the many dimensions of our modern life. Our first task in business is to carefully consider how to position ourselves and what should be the basis for our business. This depends on where we locate ourselves in the complex matrix of technology and perceptions. Accordingly, our model consists of *four* phases rather than three.

Our "four seasons of business" – to quote the subtitle of this book – offer a typology of entrepreneurial thinking grouped by phase. At the beginning of the business process, the company's leader starts out on a relay race, as it were. He chooses a position for the company and its subsequent activities. At the end of this phase he passes the baton on to an entrepreneur (in the true sense of the word). The entrepreneur stimulates innovation in the second phase and takes the company up to product launch. He then hands the baton on to a production and sales manager. This third section of the race requires financial thinking as well as strategy. Finally the baton is passed on to a value manager, who optimizes earnings and adjusts the value drivers in line with the perspective of the capital market. Each of these phases presents its own challenges. We indicate what the dominant criterion for decision-making should be in each phase in order to achieve lasting success.

In large corporations with multiple areas of business and products, the different phases naturally overlap. Various transformation processes run in parallel, and each of them can be in a different phase. Identifying the phase in question sharpens the company's awareness for the resources, relationships and principles of management required. The company must check its overall strategy as regards the value chain and make sure that it's compatible with the current phase, optimizing where necessary. Having identified what changes are needed, it can then also shape or modify its relationships with external partners. Finally, it must adjust the management structure and corporate culture in line with the phase.

Research shows that the shift from strategic to financial thinking does not involve a sudden about-face. Companies do not replace one mindset with another the moment they enter a new phase. What we find in practice is a gradual transition from strategic thinking in the early phases to financial thinking in the later ones. We describe this process as follows: In the first phase ("position"), strategic thinking is dominant and financial calculations are of little significance. In the second phase ("develop and build"), financial thinking is somewhat more effective, but strategic considerations still have the upper hand. In the third phase ("grow"), financial calculations become more effective, but strategic considerations remain necessary to fill the gaps. And in the fourth phase ("earn"), financial thinking is dominant and largely displaces strategic arguments.

3 The Limitations of Financial Criteria

As outlined above, strategic and financial thinking are of different importance in the four phases of the business process. They complement each other, and on no occasion does one approach entirely replace the other; but their effectiveness – and hence their importance – varies from phase to phase.

Financial thinking originates outside the company in the product and capital markets. Companies serve, and are financed by, people who vote with their feet. If they don't like what the company is doing, they can easily take their custom or their money elsewhere. Companies can't just ignore their wishes and act as if there were no alternatives out there in the marketplace. So the real question is, how deep within the organization – how far upstream – can companies apply the market perspective?

The answer depends on the phase. In the third and fourth phases, financial indicators and calculations are highly effective. But applying a financial criterion in the first or second phase is much more tricky. For this there are a number of causes. We have already mentioned the level of complexity and the number of interdependencies. Here are the reasons in greater detail:

- The ultimate financial impact of decisions is often *vague*. Companies by their very nature have to make *long-term* decisions – despite all efforts to be flexible. The precise impact of these decisions is not always known at the time of making them. There are two reasons for this. Firstly, there is the time span of the project and the general risk

involved in business. Secondly, and more importantly, there is the way in which each decision shapes the future course of things. Decisions and investments made early on can create the basis for later opportunities. Often these opportunities are discussed as real options, but whether they can actually be realized or not, and in what way, is unknown at the time of the decision. So companies are unable to estimate the ultimate value contribution of a long development process in the early phases.

- Internal resources have *spillover effects*. Companies' internal resources are important for their competitive strength. Many of these internal resources give rise to what are known as "spillover effects" – they facilitate other developments and projects within the company in the manner of public goods. Knowledge is a prime example. Investments make use of the existing knowledge within a company, and in turn generate new knowledge. Yet this bilateral relationship is not captured by the typical cashflows and forecasts in investment calculations. This is because the clear allocations necessary for investment calculations are possible for private goods, as long as transfer prices are set correctly, but is impossible for internal resources due to their public nature.

There is also a third reason, often neglected in the financial literature and overlooked by companies' finance departments. It is widely assumed that there is a close connection between the rate of return offered by a capital investment, as perceived by the external financial markets, and specific actions taken by the company. In reality, the connection is much looser. This is not because some companies' accounting policies allow them to portray projects in a particularly rosy light. It has to do with the availability of internal capital. Due to the dominance of internal financing², there is a clear distinction between *internal* and *external* capital. Within a company, the relevant rates of return are determined by the amount of money actually available, rather than the rates of return expected by financial investors in the external capital market. Of course, the company is reliant on the availability of funds in the external capital market, in line with the principle of financial sustainability – but only in the longer term. In the short term, the present, it is the internal availability of funds that counts. Accordingly, the net cash inflows forecast for the purposes of investment decisions should always be discounted differently from how

² Companies do not distribute money that relates to depreciation. Moreover, they retain a certain amount of profit (in cash) year on year.

one might expect on the basis of the risk/return ratio in the external capital market.³

4 Our Findings

What does this book say that is new? In the first place, we carry out a thorough investigation of the strategic and financial approaches, the two leading currents in business thinking, comparing them and their favored tools, their best practices. A number of books exist on either strategic or financial thinking, but we are not aware of any work that brings the two perspectives together.

Second, we present a unique *phase-based approach*. We identify four phases – positioning, developing and building, growing and earning – each following on from the one before and logically building on it. Together these four phases make up the business process. They form the basis for decision-making within the company, and in general for recognizing the particular situation the company finds itself in. For each phase, we discuss the company's resource decisions, its choice of partners and approaches to strategy definition. The differences between the phases also impact on the best way to measure a company's performance.

In the third place, we show why companies must allow strategy to guide them in the early phases, and why they cannot base their investment decisions at this stage on financial calculations. In the third and fourth phases, by contrast, we show how an increasing orientation toward the external capital market provides the necessary tools, and strategy-based management must take second place to finance. We also discuss how in all phases one approach should be complemented to some extent by the other.

Finally, we examine the various qualities that the entrepreneur or manager needs to display in each of the phases, the type of personality required. In the first phase ("position"), he needs to be a charismatic leader with great powers of persuasion. In the second phase ("develop and build"), he must be a coach. In the third phase ("grow"), traditional management skills are needed for the market launch, skills such as planning and coordination. The manager needs to be able to win over and integrate various partners in the process. He must also be able to motivate and supervise. In the fourth

³ This is generally done using the *Capital Asset Pricing Model (CAPM)*.

phase ("earn"), the manager must show that he can do the necessary calculations, implement appropriate optimizations and perhaps make difficult or unpopular decisions. He is a visionary who is able to convince shareholders and stakeholders to stay on board and not to start looking for a profitable exit. Finally, we show what happens if the season of earning does not lead to a new beginning, potentially with a new positioning, i.e. if the investment cycle is interrupted. The company then finds itself in a situation of financial distress and requires restructuring or other remedial actions.

5 About This Book

What should a company do when its strategy conflicts with the perspective of the capital market? It's a question that the authors of this book have frequently been confronted with in different professional contexts. What path should the company choose, in theory and on the basis of practical experience?

Some years ago a symposium took place on this very subject in Zurich. The majority of participants – consisting of academics, senior managers and business consultants – were of the opinion that the present value criterion or DCF is always correct in principle. They added, however, that it was difficult to forecast cashflows (e.g. for innovations) correctly, as they were only realized much later on. This fact puts limitations on the use of the DCF in practice, although it remained the correct approach in theory. Many academics, especially in the UK and US, still argue today that the capital market perspective should also be applied within the company at all levels and areas.

Recent research shows that the difficulty of making sufficiently accurate predictions for future cashflows is not the only problem. There are basic underlying reasons why advantageous investments in early phases do not necessarily have a positive net present value, and would therefore be rejected by companies taking a purely finance-based approach. These reasons include knowledge (a public good, generated and available within the company) and the fact that the company is only dependent on the capital market over the longer term, as discussed above – both reasons that managers overlook unless they take a phase-based approach to understanding the business process. It is wrong (as suggested by the literature on company valuation) to view the company as being in a

permanent state of earning and to judge all its actions as if they were financial investments in the capital market.

The question of strategic versus financial thinking is particularly relevant in the light of the challenges faced by today's companies. Over the last twenty years, four factors in particular – technological advance, globalization, deregulation and the growing importance of international capital markets – have created a new level of competition, one that is growing faster than ever before. The remarkable pace of change and the complexity of the environment have meant that the speed of reaction demanded of companies has multiplied many times over. This makes strategic orientation a difficult undertaking for firms today. And defining strategy is not the only problem: Successful strategies also reach their sell-by date much faster these days.

Companies need to be able to spot opportunities quickly and make the most out of them, even if it means changing the company's structure or adjusting its strategic direction. This takes guts. Top managers have to have the courage to make decisions whose future financial impact cannot be forecast down to the last eurocent.

The increasing pace of change and complexity of the environment mean that traditional planning and decision-making tools have reached the limits of their effectiveness. The typical strategic planning cascade, stretching over ten years or so, with a medium-term plan for the next five years and an operational plan for the next quarter, is very reassuring to managers. Unfortunately, it is also no longer viable. Strategic planning – and ultimately the entire system of management – must be structured differently. More than ever, decentralized structures are needed, otherwise the company will not spot any opportunities.

Mastering this challenge represents a difficult endeavor for companies. For them, it's not about abstract theories. Business decisions have real consequences – consequences that can improve prosperity or destroy it for a large number of people. So we don't just point out the contradictions between strategic and financial thinking in this book. We try to show that business thinking is not just about the antagonism between two perspectives, an "either/or" approach. Both the strategic and the financial perspective can act as a sort of compass in the management's decision-making processes – as long as the management knows which phase the company is currently in.

Part 2: Basic Principles

1 Market or Firm?

In brief:

The market and the firm are two forms of economic cooperation. How do they differ? When is the market the more efficient form of organization? When is the firm, as a form of cooperation, superior? The market functions where potentially concurrent exchange transactions in a homogenous resource with known characteristics are to be executed. However, it is not so much a mechanism for sequentially ordered individual steps of different types that follow on from each other in a logical order or specific time sequence. Here, the firm is more effective, performing multistage processes and longer-term allocations. In other words, the firm initiates and carries out investments.

1.1 Prudence and Cooperation

We begin our journey into the world of entrepreneurial thinking with a definition. Economic activity means:

- Handling resources in a *prudent* and careful manner, as described by ARISTOTLE (384-322 B.C.)
- Cooperating with other people in using and transforming resources, as taught by ADAM SMITH (1723-1790)

The prudent approach is like setting out on a lonely hike in the mountains. You can see the ultimate destination in the distance, you know what your resources are – your strength, for example – and you are aware of the dangers and risks. Acting prudently means rationing, not using all your resources up immediately, being thrifty. It also means being careful and keeping risks to a minimum so that you can cope with any setbacks on your own: you can't count on extra support or help from outside. The key here is self-sufficiency.¹

¹ See: KARL POLANYI: *Aristoteles entdeckt die Volkswirtschaft*, in: POLANYI (ed.): *Ökonomie und Gesellschaft*, Frankfurt am Main 1979, pp. 149-185. HANS CHRISTOPH BINSWANGER: *Die Wachstumsspirale – Geld, Energie und Imagination in der Dynamik des Marktprozesses*. Metropolis, Marburg 2006.

The prudent approach is essential when cooperation with other economic agents is impossible and the economic entity in question must reach its target alone. When you go on an expedition, you have to take all the resources you need with you and ration them carefully. When you're out in the wilds of nature, money is no good to you. Similarly, when resources have no market value, a prudent approach is called for. Robinson Crusoe had to act prudently, and we should all act prudently with the planet's finite resources. Likewise, if you have no access to external help, you need to use risk management techniques to make sure that you can survive even in the worst-case scenario. A small firm that doesn't have any more equity and can't count on external support in the form of bank loans must be prudent in its use of capital.

A modern term for acting prudently is sustainability. Sustainability means sticking to your chosen path and tempo until you reach your destination without needing support from third parties. Moving steadily and regularly is less draining on resources than constantly switching direction, stopping and starting. And when the economic entity in question is the planet as a whole, sustainability in resource use and risk strategy is essential.

However, when the resources in question are suitable for exchange with other economic agents, a prudent or sustainable use of resources imposes unnecessary restrictions on economic entities. Cooperation with other parties can take place under two conditions:

- There are other economic agents who are also interested in cooperation
- The resources in question are suitable for transfer between people and across time

In the overwhelming majority of cases, both conditions are met. As a rule, the economic entities in question are considerably smaller than the planet as whole. It is always possible to find other economic entities who are suitable cooperative partners – other firms, countries or generations even.

Often these players are also interested in cooperation. The options for cooperation begin with a simple exchange of goods – or barter system – and extend as far as creating a common system of money and capital and forming long-term contracts. The longer a cooperative venture is supposed to last, the more the different parties can specialize, which ultimately benefits everybody involved. If, on the other hand, the cooperative venture is unstable or experiences constant hiccups, neither of the parties will make the specialized, irreversible investments needed to carve out a special position for itself.

The reason is simple: Both parties realize that if things go wrong and they are thrown back on their own resources, they would then be at a disadvantage of their own making. Hence, sooner or later, the economic partners try to put framework conditions in place so that the cooperation can continue in a sustained and reliable fashion. At the level of different countries, this means strengthening trade agreements and potentially creating single economic areas; at the corporate level, it can mean a merger of two firms.

However, caution is required. A merger of two firms creates a rigid unit. This rigidity brings reliability and makes specialized investments possible, along with the advantages they bring. But at the same time, the newly created, larger unit is less flexible internally and less able to react to external problems in a non-rigid manner. The bigger economic entities grow, the less able they are to absorb risk. This means that their optimal size is restricted.

A frequently cited example of this general truth is the case of monetary unions. Several economists have written about the optimum size of currency areas. The closer two countries are linked to each other through trade, the greater the advantage of a currency union. ROBERT A. MUNDELL, winner of the Nobel Prize in 1999, argues that the *volatility* of exchange rates represents a major *threat* to prosperity. For this reason, single currency areas should be as large as possible. However, he adds that when the worldwide economy can no longer absorb *shocks*, single currency areas have grown beyond their optimum size. As currency areas grow in size, *other rigidities must be given up*. In this situation, MUNDELL recommends sufficient factor mobility and flexible labor markets.

MUNDELL's ideas have found wide acceptance and been further developed by other economic analysts. Later studies show that factor mobility is not the only thing that is needed with respect to shock absorption: In larger monetary unions, a certain elasticity is desirable in institutions such as the national budget, in order to absorb shocks.²

Even so, one party or the other sometimes places obstacles on the path to closer economic integration. The extent to which an entity prefers to act

² 1. ROBERT A. MUNDELL: *A Theory of Optimum Currency Areas*. American Economic Review 51 (1961), pp. 657-664. 2. RONALD MCKINNON: *Optimum Currency Areas*. American Economic Review 53 (1963), pp. 717-724. 3. PAUL DE GRAUWE: *Economics of Monetary Union*, 4th ed., New York 2000.

economically on its own or to integrate its activities with another entity can vary.

Time and again, companies must decide whether they want to produce components themselves or have a third party do it for them. Companies can develop new products and ideas for products in-house, in their own design departments, or they can buy them in from other firms. On the issue of outsourcing, firms must examine whether by pursuing market-based cooperation, the suppliers not only have lower costs, but can also inject the partnership with new energy with regard to technical progress and innovation.

A significant barrier to deepening cooperation is where the different partners have differing speeds of development. In this situation, some "slow" partners prefer to be self-sufficient. By isolating themselves they miss out on the advantages of specialization. However, at least they are not forced by the market to proceed at a speed that is beyond their abilities.

In many ways this is understandable. After all, it's always nice to lie back and put your feet up for a while. But companies that willingly subject themselves to two clear disadvantages – a lack of specialization and the freedom to proceed at their own slow pace – in fact soon end up trailing far behind their competitors.

Despite this, time and again one can observe economic entities trying to separate themselves off from a group that is proceeding too fast for their own comfort. For example, countries often control the extent to which they engage in international cooperation by restricting the movement of capital. Some such countries – Thailand, for example – are highly restrictive in this area in an attempt to protect their "economic independence" and what they see as their own development. Other countries – such as Singapore – are more open and so ensure greater prosperity for their citizens.

The conditions for economic cooperation, where two partners desire such cooperation equally, are a matter for negotiation. Every contract has both implicit and explicit elements. Even if countries publicly state that they are willing to engage in economic cooperation, it would be wrong to presume that both partners think in the same terms when it comes to fairness and that none would try to gain an advantage on the sly if the opportunity presented itself. There is, after all, a reason why the law, politics and psychology – not to mention ethics, religion and morality – constantly remind us of the general advantages of virtues such as honesty.

The fact is that economic cooperation does not consist solely of clear, explicit arrangements that are easy to monitor. Economic cooperation also involves numerous implicit contractual elements that, precisely because they are implicit and not explicit, may be interpreted differently by the parties involved. As a result it is altogether possible that, ultimately, economic cooperation will not extend beyond regions where a shared culture for interpreting implicit contractual elements exists.

In general, the second condition for cooperation outlined above is also fulfilled. Physical resources, standardized commodities and services can be transferred between economic entities. For the most part, the time of availability and the time of use may differ. Actions such as buying materials, taking out or issuing loans, and selling the results of production underline the importance of economic activity as a form of cooperation *between* people. The different parties involved can live in different places and at different times, almost without restriction.

The same is not true of *knowledge*. Knowledge and so-called *knowledge capital* consist not only of insights into the best methods of producing and selling goods or services. They also include signals, such as recognition or brands. Abstract, intangible assets like knowledge are generally so embedded in their particular environment that they are impossible to transfer easily in an isolated fashion. Moreover, it is impossible to make all knowledge available for future points in time. Sure, you can store and record data – but what that data actually means quickly alters as fashion develops and technology advances.

This aging process is self-evident in the case of design and production know-how. But in fact it's just as true for other forms of knowledge capital. Over the decades, Henkel has spent enormous amounts of time and effort in keeping the Persil brand up-to-date and attractive, for example.

Knowledge of whatever sort is firmly anchored in a particular time and place, making it much less suitable as an object of exchange in a cooperative economic relationship between individuals. Consequently, knowledge also requires a sustainable, prudent approach. Firms should take a sustainable approach to using and maintaining their skills.

To summarize, long-term economic cooperation that goes beyond the simple exchange of goods allows firms to make specialized investments. For the cooperative relationship to be stable, close integration is necessary – even to the extent of forming unions. But along with the advantages of stabilization, economic cooperation of this type can create

internal rigidities that leave the partners unable to absorb shocks and crises. Moreover, the optimum size of such unions is limited by the fact that the partners must be able to keep up with each other in terms of development, i.e. in they must achieve the same innovation speed. Finally, they also need cultures that are similar enough that they interpret the implicit elements in contracts in the same way.

1.2 Hierarchy and the Firm

The level of integration in economic cooperation can vary, as shown in Figure 1-1. At one extreme, we find a very loose market; at the other extreme, total union.

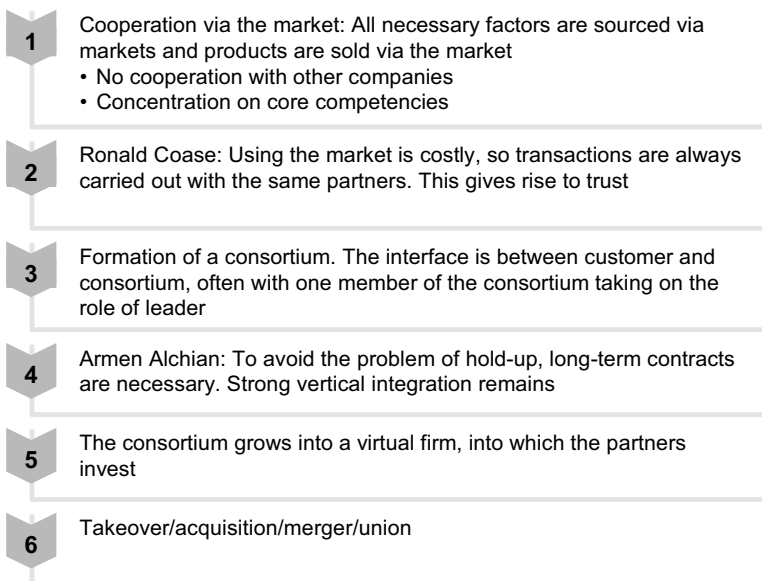


Figure 1-1: Levels of economic cooperation – from market to union

One basic type of union is the firm. The firm has its own legal character, speaks with a single voice in its relationship with the outside world, and enters into contracts with external parties in its own name. The firm also has an extended lifespan – it should exist for at least a certain period of time. This means that it can undertake longer-term projects and sign

longer-term contracts, allowing it to move beyond the limitations of simple cash-and-carry barter-type exchange.

Furthermore, the firm can acquire assets and protect them as its own property. It can also incur liabilities – liabilities that it cannot then simply shrug off. The firm's assets are first and foremost the result of its investments. Its liabilities relate to its financing arrangements. The unitary nature of the firm – as a single legal person – makes it more than just a loose collection of various pairings of assets and liabilities. The firm is not fragmented. Its liabilities relate to its assets as a whole, and its investments are possible thanks to its overall financing arrangements.

The firm acts either through the person of the entrepreneur or through the committees of the firm – i.e. the management – depending on its legal form. It formulates its policies as a single body, expressing them through its decisions. This gives the firm its typical hierarchical internal structure. Management makes the decisions and then implements them top-down (although some information may be channeled bottom-up). Naturally, the individuals who join this order by signing contracts of employment should be treated with respect, and not arbitrarily. But at the end of the day, the management issues directives and the employees must comply with them.

Hierarchies are entirely appropriate for the firm. They palpably increase the speed with which the firm can act – and react – in a dynamic market. The commitments made at the founding of the firm, in the form of its charter or its choice of legal form, contribute to this. For example, the charter may include a description of the firm's core area of activity or its basic objectives. The legal form of the firm and general corporate legislation may also determine whether the employees are to be included in all or some of the decision-making processes.

In firms originally set up by the state, government representatives often have a right of veto. Nevertheless, the firm – through its management – is free to make its own decisions. Hence the firm usually determines its basic objectives, in line with the expectations of the founders and the individuals financing the undertaking through venture capital.

The basic objectives of the firm are usually primarily business ones. Striving to achieve them is what gives the firm its typically dynamic form of activity. Entrepreneurship is responsible for opening up or developing new fields of activity, creating new employment possibilities, promoting development, manufacturing products and offering services. The economist and political scientist SCHUMPETER – whose work we will

return to later – sees entrepreneurs as the driving force behind the economic order. The majority of our economic life owes its existence to entrepreneurial activity.

OLIVER WILLIAMSON shows when a hierarchical decision-making structure is superior to other models of joint decision-making. Williamson compares hierarchy with the market and develops the theory of the firm as governance structure. Two concepts play a central role in his theory of economic contract:

- The specificity of assets (as opposed to their universal application). Clearly, assets with a high level of "asset specificity" must be protected in a completely different way from assets that can be used everywhere in the same way
- The effectiveness of "safeguards", i.e. measures ensuring that contracts are credible and commitments adhered to in practice. The effectiveness of safeguards depends partly on the uncertainty and the nature of the influences coming from the outside environment, and partly on which of the contractual parties – if either of them – is able to observe these external influences, and how well they can observe them. In economic contract theory, different combinations in terms of these two concepts and their various expressions are found, as shown in Summary 1-1 (below)

The market and the firm are not the only two institutions of economic activity. Various forms of cooperation have appeared over the centuries, on their own and in various different combinations. Four basic forms of organization exist:

1. The market
2. The firm
3. The state, with its rule-based activity
4. Partnerships (e.g. within families), whose close cohesion is based on implicit contracts

Here we must sound a note of caution. Many associate the firm with hierarchy. But today's companies often also have market-based elements and rules. However, due to the will of the entrepreneur, hierarchy is still the dominant factor. The entrepreneur decides which contracts to sign and

which treaties to participate in. In this sense, the firm has been described as a "nexus of treaties".³

Similarly, the state sets out the framework for economic activity. This occurs primarily through legislation. Other coordination mechanisms are also located in the public arena. The same is true of partnerships, where mutual understanding (in the form of numerous implicit contracts) and joint decision-making dominate. Market-based elements, hierarchical factors and rules also play a part in partnerships, but their role is a subordinate one.

1.3 The Market and the Firm – A Comparison

The market is the "easiest" form of cooperation. Consequently, it leads to "efficient" allocations. Interestingly, from a historical perspective, the market as a form of economic cooperation appeared on the scene rather late – well after hierarchies, partnerships and legislated systems.⁴ This is probably due to the fact that certain conditions must first be met before markets can function. First and foremost, the type and quality of the goods exchanged must be generally known, otherwise swift trade is impossible. In other words, the market as a form of cooperation is suitable for the transfer of *homogenous* resources of a *standardized* nature between people. Goods whose qualities were generally known only came into being as time progressed; hence economic activity began not with markets, but with partnerships and the state.

Risk of Market Failure

Early work by GEORGE A. AKERLOF, MICHAEL SPENCE and JOSEPH STIGLITZ – jointly awarded the Nobel Prize in 2001 – shows that if the differences in information available to buyers and sellers on the market about the quality of the goods traded are too large, there is a risk of market failure.

Because markets are open, anyone can bring their own ideas to the market in the form of their own specific supply or demand, thereby expressing their personal utility. In this way, markets generate – through their prices – a *universally shared judgment about the value of the resource*. The dictio-

³ MASAHIKO AOKI, BO GUSTAFSSON and Oliver WILLIAMSON: *The Firm as a Nexus of Treaties*. Sage Publications, London 1990.

⁴ RICHARD A. POSNER: *Anthropology and Economics*. Journal of Political Economy 88 (1980) 3, pp. 608-616.

nary defines as "valuable", things that are desired by the majority of people, following a process of social development and maturation. In a market-dominated economy, the value of an object is revealed by its market price.

Because of these positive characteristics, modern economists tend to favor the market over other forms of cooperation. The market process is straightforward. It leads to efficient allocations and indicates through its prices the value of goods – i.e. the aggregated personal utility of the goods for the different market participants. Economists only allow for the existence of other forms of cooperation, such as hierarchies, partnerships and legislated systems, in situations where the market fails. This is a key point.

■ The firm – like other economic institutions – comes into existence, and functions best, where the market is weak or fails.

Markets function where homogenous resources with known characteristics are involved in exchange transactions, potentially occurring in parallel. In this sense, raw materials, loan agreements, securities and consumer goods are "marketable".

■ The market can carry out transactions of the same type in parallel. However, it is not a suitable mechanism for sequentially ordered steps of different types, arranged in logical order or sequence of time.

The market, then, is not a suitable economic institution for investment. Investments can be initiated on the market, but multistage or longer-term processes require a different form of cooperation. For example, the construction of the 1,200 km-long Nord Stream pipeline that from 2010 will pump natural gas directly from Russia to Germany was only possible thanks to the creation of Nord Stream AG, the joint operating company in which the Russian energy firm Gazprom and the German companies E.ON and BASF hold shares. Simple cooperation between the two partners would not have sufficed.

Shares and interests in the results of investments can be traded on markets. However, after the transfer of a security, the market is cleared again and can be closed down. Any further dealings in the investment, transfers of interests in it between people, must take place in another economic forum.

Markets lose their power when it comes to the *transformation* of resources, rather than *transactions*. Transformations take place in several stages over a certain period of time. If longer sequences of different individual stages are required, markets are not able to organize these timed, structured

processes. In this sense, markets are more suitable for short-term than for long-term allocations. Markets fail if they attempt to carry out longer-term projects; they are overstretched when it comes to projects made up of various phases.⁵

Within the framework of a market-based transaction, certain transformations of the goods exchanged are, in fact, possible. However, these transformations must be simple. Simple transformations include division, i.e. transformations of volume, and transport or short-term storage, i.e. transformations of the place or time of transfer. Such transformations are often carried out by the brokers or market-makers who act as the facilitators of the market process. On some occasions, these facilitators also create simple bundles, for example providing the goods traded with additional information, such as a guarantee. The market as an economic institution is thus capable of simple transformations and creating simple bundles.

That, however, is about as far as it goes. Longer-term transformations, multistage processes and the creation of more complex bundles are beyond the capabilities of the market. Here, another form of cooperation is needed. Creating complex bundles of different resources requires a central coordinator – the firm. Still, markets represent a robust form of cooperation when the exchange transactions can proceed in an uncoordinated way and in parallel, without the intervention of a central coordinating body. In this context, ADAM SMITH speaks of the "invisible hand".

The objects of exchange on markets are not public goods, but private ones. This means that the seller must release the goods when they are transferred to the buyer. PAUL A. SAMUELSON, winner of the Nobel Prize in 1970, shows that the market economy has difficulty in dealing with *public* goods. As soon as public goods are made available by one person, it is impossible to exclude others from their consumption, and this consumption does not limit the use of public goods by others. For this reason, everyone waits around in the hope of a free ride: No one is prepared to create and pay for public goods. The result? Market economies constantly suffer from the under-provision of public goods.

Where the market finds itself overstretched, the firm comes into its own:

- Unlike the market, the firm can effect multistage processes and longer-term allocations, i.e. sequences of various transformation stages

⁵ KENNETH J. ARROW: *The Limits of Organization*. Norton, New York, 1974.

coordinated from a unified perspective. In other words, the firm initiates and carries out investments

- The firm can create more complex bundles where the type of combination and the resources to be included in the combination are not immediately apparent
- The firm can undertake activities that generate and use public goods (within the firm)

The firm is good at creating more complex bundles and extended sequences of individual steps. In other words, it is the right forum where a wide variety of resources are to be brought together over longer periods of time and in various stages, and the creation and use of public goods is involved.

This is not to say that the market is weak as a form of organization. The market is strong in the areas that fall within its competence. Thus, for example, it can carry out a large number of exchange transactions involving private goods easily and quickly, if no central coordination or planning is required. But the market as a form of organization has certain basic limitations. For economic cooperation that goes beyond these limitations, other forms of organization are required. And the key form of organization for us here is the firm.

Goods are considered private if their consumption or use by one party prevents other parties from consuming or using them. Goods are considered *public* when their consumption or use by one party does not prevent other parties from consuming or using them. Private and public goods represent the two extremes. Many goods are not purely private, but demonstrate *positive externalities*. Their use by one party also gives rise to certain benefits for the others around them (as in the case of a well-tended garden). There are also goods that are not purely public, as their use gives rise to *negative externalities*. Thus infrastructure – for example, the road network – can demonstrate congestion.

Now this does not mean that a firm must provide all the functions involved in a long and elaborate chain of processes on its own. The comparison between the market and the firm does not imply that an automotive manufacturer must necessarily produce all the components himself. These days, thanks to the development of markets, business networks and other forms of cooperation, companies can focus on their core area of expertise. Yet even when they are highly focused on one activity, they still carry out

complex processes in this core area. If they didn't, they would be swallowed up by the market.

MARKET

Parallel transactions involving homogenous resources

Market process is completed in the shortest time possible

At most, simple transformations and bundles

Private goods

Two parties on each occasion

Local activity

FIRM

Transformations, i.e. longer sequences consisting of a number of steps following on from each other

Completed over a longer term

Complex transformations and bundles

Public goods too

Integration of several parties

Central coordinator (the firm)

Summary 1-1: Market versus firm – two key forms of cooperation

According to KENNETH ARROW, the firm takes up where the market leaves off. The firm represents a new form of organization – one that is different from the market and is able to do different things. Companies exist, are necessary and desirable for society, because markets are unable to provide all the necessary forms of cooperation. Yet the firm also has certain limitations. If an entrepreneur tries to do what the market itself could in principle, he soon finds himself at a disadvantage. The market is simply much better at it.

To deliver what the market considers valuable, the firm must perform longer-term allocations. In particular, the firm must carry out investments and form complex bundles involving the creation and use of resources that are public within the firm. If the firm tried to do what market participants could do themselves, it would be inferior to the market – because of the differing strengths of the market and the firm, which we have discussed above.

Irrelevance Theorems

Irrelevance theorems were proposed some fifty years ago by FRANCO MODIGLIANI (1918-2003) and MERTON H. MILLER (1923-2000). They demonstrate that actions taken by an entrepreneur or manager bring no additional value if the same actions could equally be undertaken by the market participants themselves. Thus, an entrepreneur who founds a company but limits its activity to simple transactions not involving public goods will not be able to create value. The market participants could easily produce the results delivered by the company themselves. By contrast, the company is at an advantage if its products and services cannot be delivered by means of simple transactions involving private goods.

This brings us to two conclusions:

1. The firm must protect from the external market the public goods it uses in its internal combinations and in the bundles it creates (i.e. its capabilities) and which are generated by its activities (i.e. its knowledge). It must distinguish the internal sphere – that within the firm – from the external sphere, that is, the market
2. In many areas, the firm must make different decisions from those that would seem correct to the participants in external markets. If the firm were to act in concordance with the ideals of the market in all the different stages, it would end up evaluating public goods, capabilities and knowledge wrongly

1.4 Inner and Outer Layers

As we have seen, companies can deliver results that the market regards as valuable by providing services that market participants are not able to provide directly themselves. These services are:

- The creation of complex bundles (combinations) of various resources involving public goods; the market itself can create simple bundles and manage the exchange private goods
- Transformations, i.e. multistage processes and sequences consisting of a number steps following on from each other in a logical order and specific time sequence; in short, investments and their economic use over time. The market itself can manage simple transformations itself, but not complex ones

Intra-Public Goods

"Intra-public goods" are resources that are public within the firm, but are not for external use or consumption. Examples of intra-public goods are information management systems or data recorded in Intranet systems: employees of the firm have access to these goods, but passing them on to external parties is not permitted. Shared services such as IT or research departments are also considered intra-public goods.

Secondly, the business process must to some extent be kept separate from the market. The reasons are as follows:

- The firm's public goods must be protected
- The firm must be able to make exactly those allocations and coordinations that in the eyes of the market's participants should be different

The firm's protective skin must prevent (or at least limit) direct access to what we call its

"intra-public goods" (see box) and ensure it has a room for autonomous decision making.

Such protection is particularly important for stages in the process chain in which public goods are used (i.e. capabilities) or created (i.e. knowledge). This is more often the case for earlier stages than for later ones. There are two reasons: In earlier stages, the focus is on creating the potential for further stages, i.e. public goods that then form the input for subsequent stages. This potential is created in the early stages by creating complex bundles of a wide variety of resources, especially knowledge – i.e. public goods.

Put simply, in the earlier stages the company produces and uses public goods. In the later stages, the focus is primarily on changes in private goods, which can therefore be evaluated from a market perspective. The output of later stages can also be dealt with by the market.

Accordingly, our analysis is simpler if we distinguish two areas in the firm's protective skin – inner and outer layers:

- The inner layers are the *early* phases and complex, firm-specific combinations
- The outer layers are the *later* phases and transformations, which generally involve well-known processes

In the early phases and inner layers, public goods are generated (in the case of potential) and used (in the case of knowledge). In the later phases and outer layers, the focus is on transformation processes, mainly involving private goods. The early phases and inner layers require decisions that are free from market thinking; the later phases require market-based decisions.

There is a natural limit when companies try to develop and internally elaborate their finance-based system of management. Finance-based management is ineffective in the early phases and inner layers, where complex combinations involving the use of intra-public resources (such as skills and knowledge) are created. However, it is effective in the later phases and outer layers, where predominantly private goods are used as input and generated as output. A phase-based analytical approach is therefore appropriate as earlier phases and the "inner core" of the business process are the furthest removed from what the market can achieve on its own.

**EARLY PHASES AND
INNER LAYERS**

 Complex combinations

 Public goods generated and used

 Firm-specific resources are key

 Decisions based on internal
objectives (strategy)

**LATE PHASES AND
OUTER LAYERS**

 Transformations

 Predominantly private goods, with
little involvement of public goods

 Well-known technology used

 Decisions based on external values
(finance-based management and
capital budgeting)

Summary 1-2: Inner and outer layers

In the early phases and inner layers, companies can establish the potential for generating services later on that will be valued by the market. Entrepreneurs must distance themselves from market-based thinking and follow their own perspectives. This will enable them to achieve results later that the market recognizes as valuable.

In this book we examine four phases. The first phase is that of positioning. The positioning phase creates the potential for all following phases. First and foremost, firms generate potential by means of knowledge. In this early phase, public goods feature on both the input and output sides.

The first phase leads directly into the second phase – that of developing and building. Here, companies use firm-internal public goods – knowledge, again – to generate an entirely private good: a new product. Because public goods are involved, financial calculations reach the limits of their applicability. In this phase, companies should employ a strategy-based approach in their decision-making.

The third phase begins with product launch and extends through market penetration to growth. This phase sees the beginning of a process of transformation, whereby a basic competitive advantage is transformed into real financial gain. Accordingly, market-based considerations gain more and more weight over strategic thinking. At the same time, goods of a public nature are still involved and must be developed – goods such as the brand, for example.

In the fourth phase, sales efforts serve purely and simply to generate income. Accordingly, firms can base any decisions they need to make entirely on market considerations.

1.5 Summary

Companies are a necessary institution for economic cooperation. There are three reasons:

1. Through their long-term activities (i.e. long sequences of individual steps) firms achieve results that the market cannot, because market participants lack a long-term perspective. The market process focuses on quick comparisons, trade, balances and transactions, and not on the realization of sustainable projects
2. Firms can create more complex bundles of resources than the market. Markets are good at simple transactions, but cannot create complex bundles
3. Firms can use and generate goods of a public nature. The allocation of public goods pushes the market beyond the limit of its abilities

Value creation by the firm lies in the fact that the firm does what the market cannot. To overcome the limits of the market for the economy as a whole, the entrepreneur must be able to build his own kingdom – an inner realm in which he can make his own decisions based on his own perspective, aimed at the long term and taking various factors into account. Many of the entrepreneur's decisions will be incomprehensible to the market, with its rather unsophisticated comparisons and short-term approach.

At the same time, it is useful to distinguish between different phases and layers. In the early phases of the business process, internal objectives (i.e. strategy) rule the day when it comes to decision-making; in the later phases, decisions should be based on market calculations.

1.6 Recommended Reading

1. On the different forms of economic cooperation: OLIVER E. WILLIAMSON: *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. The Free Press, New York 1985.

2. Core reading: 1. RONALD H. COASE: *The Nature of the Firm*. *Economica* 4 (1937), pp. 386-405. 2. ARMEN A. ALCHIAN and HARALD DEMSETZ: *Production, Information Costs, and Economic Organization*. *American Economic Review* 62 (1972), pp. 777-795. 3. MICHAEL C. JENSEN and W. H. MECKLING: *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*. *Journal of Financial Economics* (1976) 3, pp. 305-360. 4. EUGENE F. FAMA: *Agency Problems and the theory of the firm*. *Journal of Political Economy* 88 (1980), pp. 288-307. 5. ROBIN MARRIS and DENNIS C. MUELLER: *The Corporation, Competition, and the Invisible Hand*. *Journal of Economic Literature* 18 (1980), pp. 32-63. 6. SANFORD J. GROSSMAN and OLIVER D. HART: *The costs and benefits of ownership: a theory of vertical and lateral integration*. *Journal of Political Economy* 94 (1986) 4, pp. 691-719. 7. SHERWIN ROSEN: *Managerial Compensation, Control, and Investment*; in: HORST SIEBERT (ed.): *Trends in Business Organization: Do Participation and Cooperation Increase Competitiveness?* Institut für Weltwirtschaft an der Universität Kiel. Mohr, Tübingen 1995, pp. 143-158. 8. ROB GOFFEE and GARTH JONES: *What Holds the Modern Company Together*. *Harvard Business Review* (1996), pp. 133-148.

2 Resources

In brief:

As we saw in the previous section, the business process takes place in stages or phases. The investments and transformation processes of later stages build upon, and are connected to, input from earlier stages. This applies to non-marketable input and to input that has externalities and can be used as a public good in numerous subsequent business activities without being used up in the process.

2.1 A Typology of Resources

2.1.1 Two Features of Resources

The business process – indeed, economic activity as a whole – consists of interlinked processes of transformation. Accordingly, the resources that appear in the transformation processes as inputs or outputs, and can be passed between the interlinked processes, are of central importance.

In fact, the concept of "resource" is broad. It ranges from screws to insurance policies, from a country's infrastructure to its knowledge – these are all different types of resources. Naturally, the decisions made by a company depend closely on the nature of the resources involved. How, then, should we categorize different resources? What are the key features that distinguish them?

Our typology should help us to determine whether decisions about specific resources should have a primarily *strategic* or a *financial* basis. For this purpose, two features prove the most useful:

- Can the resource be bought or sold by the company in its relations with external parties? In other words, is the resource *marketable*? If not, it is a resource that is produced and used entirely within the firm
- Is the resource a *private* or a *public* good? If it is a private good, then using the resource in one location within the firm makes it unavailable for use in other locations within the firm. If it is a public good, it can be made available freely and be used by all, without excluding anyone

Why are these two features of resources so important for our question of *strategy* versus *finance*? In the case of marketability the answer is clear: A marketable resource is one that is actively exchanged and traded between partners, and not just transferred on a one-off basis between a firm and the outside world. Such resources have a *market price*. From this it is easy to derive costs (in the case of purchasing the resource) or profit figures (in the case of selling it). For marketable resources, then, firms can use cost and financial calculations to help with their decision-making. Companies operating close to the market can make the right decisions by keeping a close eye on market prices.

In the case of non-marketable resources, it is not so easy to construct a cost or financial calculation. This is due to the lack of market prices. Yet it is still possible to derive internal values for the resources in question. These internal prices are known as *transfer prices*. They represent an attempt to quantify indirectly the internal usefulness of a resource. Companies derive the internal value or transfer price from the output that can be achieved with the resource in question by other points further down the transformation chain.

Imagine a situation in which a company has the option of developing a particular innovation at a certain cost. It does not have to develop the innovation – it can choose whether to do so or not. If it does develop the innovation, parts of the company further down the chain – the production and sales departments, for example – will be able to use the innovation to boost their income by EUR 1 million. This means that the innovation has a maximum internal value of EUR 1 million. If developing the innovation would cost the company more than this amount, the company should not pursue this course.

This method of quantification – deriving internal values for non-marketable resources by looking at the financial benefit they deliver in subsequent processes of transformation – allows companies to think on a financial basis again. We examine the methodology in greater detail in Part 3, Section 4.

2.1.2 Private Goods with Externalities

The method of assessing the value of non-marketable resources indirectly is more difficult than simply using a market price. What is more, it does not always lead to a clear or helpful evaluation of the resource in question.

Let's go back to our example of the company with the option of developing an innovation. Imagine, now, that the innovation in question actually has some additional positive effects – over and above its positive impact on the production and sales departments. Developing the innovation also improves the company's image. This makes it easier for the company to recruit good staff. Moreover, the experience gained from developing the innovation makes it easier for the company to develop other innovations later on.

In this situation, the innovation is no longer simply a private good that is used up by later stages in the chain (in our example, by the production and sales departments). Rather, it is a resource that has positive external effects. Consequently its internal value should be set at more than the EUR 1 million advantage calculated earlier on. How much more depends on the externalities – and these are not easy to capture and evaluate.

This phenomenon has serious consequences. In the case of non-marketable resources – resources lacking a market price – a finance-based management approach can run into difficulties. This is particularly true where the resource has a further impact above and beyond its direct use and its exploitation in a subsequent stage of transformation – i.e. when it has externalities. Where this is the case, the values used in finance-led management approach and the transfer prices tend to be rather vague, and a supplementary basis for decisions becomes necessary – strategy-based thinking. In Sections 2.2 and 3 we examine in detail the reasons for non-marketability and see that the limitations of deriving transfer prices using the principles of finance-led thinking relate to the extent of the external effects created by the non-marketable resource.

Of course, resources' externalities vary in terms of strength. If they are very strong, then the resource – just like a potential or a public good – can be used to advantage in various locations without being entirely consumed. In this case, it is actually impossible to quantify the internal usefulness of the resource, as this value depends on which processes ultimately use the potential – a matter of extreme uncertainty.

Three different cases therefore occur for non-marketable resources:

1. The resource is a purely private, yet non-marketable good. In this case internal values may be calculated, and financial and cost-based thinking represents an adequate basis for decision-making. An example is internally developed software for a specific task, where the software is not used for other jobs within the company and is not sold externally

2. The resource demonstrates certain external effects. Evaluations are not accurate enough, as the external effects are impossible to capture and evaluate properly. The financial calculations become somewhat fuzzy and should be supplemented by strategic considerations. An example would be an innovative production technique for product A that might be later used for follow-up products B and C
3. The non-marketable and private good demonstrates strong external effects. Here it is no longer possible to calculate reliable internal values. Consequently the firm cannot make decisions about the resource based upon financial considerations. Strategic thinking must step in and fill the gap. An example would be an internal knowledge platform that is likely to enable several new developments

2.1.3 Public Goods

Let's go back to our two features of resources: their marketability and their public nature. The question of private versus public goods is also critical in determining whether strategy-based or finance-based thinking is required. In the case of public goods, third parties cannot be excluded from their use, or can only be excluded at great cost. Third parties always find some way to access such goods. Furthermore, once the public good has been created, there is little sense in trying to prevent others from using it – the people for whom the good was primarily created are not prevented from using it by other people using it.

As we have seen, a decision about public goods that is based on financial considerations will not yield optimal results. An extensive literature in the field of finance deals with the difficulties of allocating public goods. Even surveys of the general public are unable to determine the extent of the public goods desired by society. This is because the respondents are afraid that they will be steered toward paying for the creation of the public good themselves, if they say what they would really like. As a result, everyone pretends to have no interest in the good, in the hope that someone else will pay for its creation – safe in the knowledge that they themselves will not be excluded from its consumption later on. This is the concept of the *free ride*, discussed in greater detail in Section 2.2.

When it comes to public goods, then, companies need other bases for their decisions. The gap left by financial calculations can be filled by strategic considerations. When the attempt to make calculations involving public goods falters, strategy must step in to save the day.

In fact, many of the resources that companies use are public in nature. Knowledge is a good example. At this point, we need to introduce a further sub-classification of resources. Some public goods produced by companies are not only available for use at all points within the organization, but are also made available to interested parties outside the company. These goods are what we might call *global-public* resources. In much the same way, public goods can be made available by external entities and used by the company.

With some other resources of a public nature, generated within the company and used internally throughout the organization, the company would like to prevent external use. In this case, using the public good outside the company would destroy their usefulness inside the company. Examples include corporate secrets, such as technical breakthroughs. Such developments give the company a competitive edge – as long as imitators do not appear too early on. In the relationship between what takes place within the company and the outside world, the public good in question behaves like a private good. If it is used outside the company, it loses its usefulness within the company.

Resources of this type are made freely available within the company, as public goods. However, they are protected from the outside world as private goods. We call such goods *intra-public* resources; they include the majority of the knowledge within a company.

2.1.4 Eight Different Types of Resources

The distinctions outlined above give us a total of eight different types of resources. Firstly, we have private goods that are marketable (1) and those that are not. For marketable private goods, we can further distinguish those that are produced externally and bought in by the company as required (1A) from those that are (partially) internally produced and sold to the outside world (1B). In both cases, finance-based thinking fits the bill: companies operating close to the market can reach the right decisions by simply looking at market prices. Examples of private, marketable goods of type (1A) are plentiful. They include materials and power bought in from external sources by the company. Resources of type (1B) are standardized intermediate products that are easy to sell on the market.

Secondly, we have non-marketable resources (2). These resources are both produced and used internally. In Section 2.2 we examine in detail the

reasons for their lack of marketability and give some specific examples. This category of resources is particularly interesting for the subject of this book – management between strategy and finance. Some of the non-marketable goods have no external impact: For these goods it is still possible to determine internal values or transfer prices, and cost and financial calculations do the job nicely (Type 2A). For other non-marketable goods it is only possible to derive rather vague internal values, due to the influence of external effects. In this case, financial calculations lose their precision and must be supplemented by strategic considerations (Type 2B). For a third sub-group of non-marketable goods it is impossible to derive internal values as their external impact is too great; decisions about such resources must be based on a strategic perspective (2C).

CATEGORY	TYPE OF RESOURCE	DECISION
1) Private, marketable goods	A) Bought in from outside, e.g. power (oil, electricity) B) Produced internally and partially sold externally, e.g. software for company processes	Financial Financial
2) Non-marketable, private goods, generated and used internally	A) No externalities – Internal value can be determined accurately, e.g. tacit knowledge, present in certain individuals and valid only in a specific context, making it difficult to formalize or communicate B) Some externalities – Internal value can only be determined approximately, e.g. a firm-specific production process that produces certain emissions C) Strong externalities – Impossible to determine internal value, e.g. corporate culture	Financial Strategic and financial Strategic
3) Public goods	A) Intra-public goods – Created and used internally, protected from the outside world, e.g. specific company expertise B) Global-public goods – Created internally, available both internally and externally, e.g. published research C) Global-public goods – Created externally but also of use within the company, e.g. specialist knowledge and skills taught at professional training schools	Strategic Strategic

Summary 2-1: A typology of resources

Thirdly, we have resources that show certain properties associated with public goods (3). Here we have examined three separate sub-groups. The first sub-group is intra-public goods (3A). Intra-public goods are public goods within the company, but the company strives to prevent access to them by external entities. In the relationship between what takes place within the company and the outside world, they are protected as if they were private goods. For such goods, financial thinking is no longer sufficient; a strategic approach is needed. The second sub-group is global-

public goods that are created internally and also made available unreservedly to the external world (3B). They, too, require a strategic approach. The third sub-group is global-public goods created by an external entity (3C).

In our enumeration of eight different types of resources, we have ignored mixed cases. However, one such case must be mentioned. This is where a private good is combined with a public good. An example is a part or a component that contains knowledge within it. Here, a combination of resource types (1B) and (3A) may arise.

Parts and components that contain know-how that must be protected from the outside world are not sold by the company manufacturing them. Mixed goods of this type are potentially, in their capacity as private goods, highly marketable. However, the company does not wish to lose hold of the knowledge or the innovation contained within them – that is to say, the public good that the private good is coupled with.

These mixed resources have strong *externalities* owing to the public good combined with them. Often they can easily be taken apart by specialists and through a process of reverse engineering reveal what new production techniques their manufacturers are using. This combined type of resource therefore resembles type (2C). Other mixed types are similar, and need not concern us here.

2.1.5 Summary

By looking at two features of resources – their marketability and whether they are private or public goods – we have defined eight different types of resources. For each of these types, we have stated whether a strategic or a financial perspective should dominate in entrepreneurial thinking. This allows us to identify three different overall *mindsets*: pure finance-based thinking, mixed strategic and financial thinking, and pure strategy-based thinking. In Summary 2-2 below, we re-order the eight types of resources and show how they relate to these three different mindsets.

We can now add two further insights:

- Firstly, there is a connection between the scope and the strength of the externalities. For the group marked *, few or no externalities occur; for the group marked **, some externalities occur; and for the group marked ***, there are strong externalities

- Secondly, there is a connection between the magnitude of the externalities and where they occur in the transformation processes. Thus, resources in the group marked * (few or no externalities) are found predominantly in later and external transformation processes; resources in the group marked ** (some externalities) typically occur in the middle phases and transformation processes; and resources in the group marked *** (strong externalities) occur in the early phases and internal transformation processes

RESOURCE TYPE	REGROUPING	DECISION BASIS
(1A), (1B) and (2A)	*	Financial
(2B)	**	Strategic and financial
(2C), (3A) and (3B)	***	Strategic

Summary 2-2: Regrouping of resource types by mindset

Putting these two insights together gives the following picture: In the early phases and inner areas of the company's transformation processes, it is strategy that does the trick. In the middle phases, a mixture of strategy and finance is what is needed. And in the late phase and in external areas, finance-led thinking is the order of the day.

2.1.6 Decisions Based on Strategy or Finance?

Let's now take a closer look at the two insights discussed above. So far, we have seen which types of resource finance-led thinking is adequate for – types (1A), (1B) and (2A). We have also seen that a mixture of strategic and financial thinking is required for type (2B). For types (2C), (3A) and (3B), strategy-led thinking is more important than financial thinking. The one remaining type of resource, (3C), is unproblematic.

We have thus have reduced our eight original types of resources down to three groups (see Summary 2-2). Furthermore, to determine when financial thinking is preferable to strategic thinking and vice versa, we have distinguished three different overall mindsets:

- Mindset 1: Financial calculations are possible for private, marketable goods of type (1A) and (1B). The same applies to private, non-marketable goods with no externalities (2A)

- Mindset 2: Some non-marketable goods are produced and used internally, but they show certain externalities. For these resources, the attempt to derive internal values gives unclear and rather vague results. Financial calculations are therefore only partially applicable and should be supplemented by strategic considerations (Type 2B)
- Mindset 3: Financial calculations are impossible for non-marketable private goods with strong externalities (2C) and intra-public resources (3A). A strategic approach is required. The same applies to global-public goods (3B)

This is how the eight types of resources relate to our three different mindsets. We now know where financial thinking alone will suffice, where strategic and financial thinking are needed in parallel, and where strategic thinking alone is appropriate.

This finding prompts another question: Can the three different mindsets be "localized" in different areas of the business process? As we have seen, the first mindset (finance-based thinking) is associated with private goods with insignificant externalities. The second mindset (strategic and financial thinking) is associated with resources that display certain externalities. The third mindset (strategic thinking) is associated with resources that display strong externalities or even have the nature of a public good. The three mindsets differ primarily with respect to the extent of the resources' externalities. This was the first insight, discussed above.

So where in the company's processes of transformation do we typically find strong externalities, and where do we typically find weak externalities? Here, the second insight comes into play:

- If we look back at the description of interlinked transformations (Section 2), we see that the earlier, inner stages of the business process lay the foundations for what follows. The resources created in these early stages have strong externalities or even have the nature of a public good. Financial calculations are therefore impossible. In these areas of the business process, a strategic approach is required and can be a powerful tool
- In the middle stages, non-marketable resources and goods dominate. These resources have partly private and partly public characteristics. In the middle stages of the business process, certain externalities come into force. As a result, both financial and strategic thinking are needed, the one complementing the other

- In the later and outer stages, the resources overwhelmingly have the nature of private, marketable goods. In these stages of the business process, financial calculations can be used. In the later and outer stages of the transformation processes carried out by the company, financial considerations thus rule the day

WHEN AND WHERE?	WHY?	CORPORATE DECISIONS
Early phases and inner layers	Resources are intra-public in nature and have strong externalities	Strategic thinking
Middle phases and transformation processes	Resources are non-marketable and have some externalities	Combination of strategic and financial thinking
Late phases and outer layers	Resources are non-marketable and have no externalities	Financial thinking

Summary 2-3: Typology of resources, showing which of the three mindsets works best in each phase, and why

The typology of resources shows the connections between, on the one hand, the different phases and stages of the business process (early/inner, middle and late/outer), and on the other, the type of business thinking required (strategic, financial). These connections provide an answer – albeit a theoretical one for the present – to the overall question addressed in this book. In the following sections we will add the meat to the bones, as it were, showing what the different stages actually consist of. In so doing we will arrive at our theory of the four seasons of business, and see that our as yet theoretical answer is actually supported by hard facts.

To summarize our findings so far, we see that in the early phases of the business process, strategy is king; in the middle phases, strategy and finances are both important; and in the later phases, financial thinking rules the day.

2.2 Lack of Marketability

2.2.1 Introduction

In this section we take a closer look at one of the three categories of resources – non-marketable private goods. As they are not marketable, they cannot be bought in from outside: they have to be produced internally. Moreover the goods, once produced internally, cannot then be sold externally.

The resources in question belong to category (2) with its sub-groups (2A), (2B) and (2C) in our typology of resources (see Summary 2-1). Non-marketable resources are of particular interest to us as they may involve all three mindsets (purely financial, strategic and financial, purely strategic). These resources occur, as we have seen, in the middle phases and transformation processes within the company.

Why do non-marketable resources exist at all? What is it that stops them from being marketable? There can be four different reasons:

1. The resource in question is available everywhere in principle, but transaction costs prevent it from being exchanged, or a market from emerging
2. The resource is not used outside the firm, so there is no market for it. This is because the resource has a high, company-related specificity
3. Although the resource is primarily a private good, it also contains certain information. It is therefore a mixture of a private and a public good. Its public good element must be protected from the outside world – due to synergies, or the fact that if it were sold externally, internal knowledge would be lost along with it
4. Certain individual market participants go against the usual patterns of behavior (price taking) and act toward other participants in a calculated, strategic manner. This is referred to as hold-up

2.2.2 Transaction Costs

The first two reasons above – transaction costs and resource specificity – have formed the subject of copious research. In an earlier section we already mentioned OLIVER WILLIAMSON, whose theory of economic

contact states that *specificity*, along with the problem of safeguarding, is the reason for the existence of firms (Section 1.2). The idea that resources lose their marketability as a result of *transaction costs*, and that this leads to the emergence of firms, originates with RONALD H. COASE. COASE investigates the costs related to the use of the market.

Key transaction costs relate to:

- Identifying business partners
- Negotiating conditions and agreeing contracts
- Establishing quality standards
- Making technical adjustments
- Coordinating transfers
- Carrying out payment transactions¹

Sources of Internal Financing

The money for internal financing can come from two sources. Firstly, the firm may choose not to distribute certain money it receives by not recording it as profit. The best-known example of this is (cash income from) sales revenue resulting from the use of fixed assets (depreciation, or non-cash expenses). Firms may also retain profits. To do this, they can record lower profits than they actually generate – for example by pushing up depreciation or creating disproportionately large provisions. What's more, the management can convince those providing the equity that they should not withdraw all the money recorded as profit, as that might jeopardize the future of the company. This gives the management a sizeable pot of money that it can use for investment purposes, with little control possible on the part of the shareholders.

Any use of the market involves such transaction costs. If the costs are high, economic actors find it advantageous to form lasting arrangements with partners who they know and trust, thereby keeping down their search and negotiating costs. This gives rise to bilateral relationships, groups and networks consisting of partners who trust one another and work together on an ongoing basis. Cooperation within this circle of trusted partners is to a certain extent protected from the rigors of the market. It also harbors certain inefficiencies. However, breaking up the circle and letting the market in would mean having to bear the transaction costs. A first-best allocation is impossible; the question is which of the possible second-best allocations to choose.

COASE argues that companies exist because of the internal savings that are possible through established transactions

¹ 1. LOUIS DE ALESSI: *Property Rights, Transaction Costs, and X-Efficiency: An Essay in Economic Theory*. *American Economic Review* 73 (1983), pp. 64-81.
2. HARVEY LEIBENSTEIN: *Aspects of the X-Efficiency Theory of the Firm*. *Bell Journal of Economics* 6 (1975) 2, pp. 580-606.

within such networks. If the networks were to collapse, markets would have to be created – and using markets is expensive. The result is that integrated firms appear, within whose boundaries cooperation is straightforward and trust-based. So COASE distinguishes two different contexts: where transaction costs are low, markets appear; and where transaction costs are higher, firms appear.²

Let us continue our discussion. Internal trust and openness act like a public good. But this action is absent in the case of transactions between internal and external parties. Where a distinction arises between internal and external parties, insiders raise objections to cooperating with outsiders. This resistance to cooperating with external parties is due to the belief – borne out by experience – that such cooperation always involves transaction costs, and that these transaction costs are initially underestimated. Internal trust and internal openness to transactions therefore represent an intra-public good.

Before we move on to other types of transaction costs, we should take a closer look at a company's risk-bearing capital – its equity. Now, it may seem paradoxical that transaction costs can arise with relation to equity. Yet the internal availability and the external availability of capital can vary greatly. Within the firm, free capital is available through internal financing and occasionally through increasing the equity level. In terms of internal financing, the main source is the cash generated by using fixed assets (depreciation). These resources are available internally, although in reality they are only needed when replacement investments are actually carried out. Up to this point, they remain within the firm. They can be invested in money markets or bonds, but investing them in a share portfolio would be interpreted by the stakeholders as mismanagement.

So there are times when internal risk-bearing capital is in excess – at least temporarily. At such times, less profitable investments become worthwhile, even if they do not offer the usual rate of return available on the external capital market. And there are other times when risk-bearing capital is in short supply within the firm. At such times, the internal capital requirement cannot be met directly by approaching the providers of equity: raising the level of equity is a complicated process that requires lengthy preparations. On some occasions, then, due to a temporary shortage of

² 1. RONALD H. COASE: *The Institutional Structure of Production*. American Economic Review 82 (1992), pp. 713-719. 2. RONALD H. COASE: *The Nature of the Firm*. *Economica* 4 (1937), pp. 386-405.

equity, firms must reject even investments that offer the usual rate of return on the external capital market.

To put it simply, equity is a resource that is available both inside and outside the firm. But it is a resource that involves transaction costs: not every investment in the external capital market (at the usual rates of return) that the firm's management would like to make is acceptable to stakeholders, and increasing the level of equity requires lengthy preparations. Thus the price or value of capital inside or outside the firm may vary. Thus, we classify equity as a resource of type (2A).³

Even without detailed modeling, it is clear that if a firm happens to have extensive means at its disposal, it can consider projects offering a relatively low rate of return. If, on the other hand, internal finances are in short supply, projects and investments must offer comparatively high rates of return in order to be considered acceptable.

2.2.3 Technical Transaction Costs

The magnitude of transaction costs can change as a result of economic developments. As an example, standardization leads to falling technology-based transaction costs, and the resources in question shift from type (2A) to category (1). Technical transaction costs relate to the alterations that must be made prior to market transactions taking place. Such modifications are generally expensive, which prevents the smooth functioning of the market. The resource is available both internally and externally, but in different varieties. As a result of this lack of homogeneity, the market fails.

³ R. GLENN HUBBARD: *Capital-Market Imperfections and Investment*. Journal of Economic Literature 36 (1998) 1, pp. 193-225. OWEN A. LAMONT: *Cash Flow and Investment. Evidence from Internal Capital Markets*. Journal of Finance 52 (1997) 1, pp. 83-109. 3. ROBERT H. GERTNER, DAVID S. SCHARFSTEIN and JEREMY C. STEIN: *Internal versus External Capital Markets*. Quarterly Journal of Economics 109 (1994) 4, pp. 1211-1230. 4. OLIVER J. BLANCHARD, FLORENCIO LOPEZ-DE-SILANES and ANDREI SHLEIFER: *What Do Firms Do with Cash Windfalls?* Journal of Financial Economics 36 (1994) 3, pp. 337-360. 5. TONI M. WHITED: *Debt, Liquidity Constraints, and Corporate Investment: Evidence from Panel Data*. Journal of Finance 47 (1992) 4, pp. 1425-1460.

In the past, technical transaction costs were of critical importance. Up until recently, countries insisted that consumer goods had special features that actually prevented similar goods being imported from abroad, in an attempt by countries to protect their own economies. For instance, the plug on foreign electrical equipment didn't fit into domestic sockets, the lights on imported cars didn't meet the requirements of the domestic vehicle licensing authority, and foreign DVDs wouldn't work on home-grown DVD players.

This situation, in which trade was possible only after technical modifications were made, also applied to industrial production. Different companies had special intermediate products, parts and components – even where no design secrets were involved. Parts fulfilling exactly the same function at different companies had different specifications and were not interchangeable. Spare parts for cars are a classic example: the brake blocks or shock absorbers on a Volkswagen could not be used on an Opel, and vice versa.

In the past this was partly due to eccentricity on the part of manufacturers. Partly it was also due to them overestimating the importance of spare parts for differentiation by customers. Many firms thought that they could generate added value by selling their own custom-made parts: they made each component unique to ensure they had a monopoly. They then went to great lengths to prevent other manufacturers from imitating their spare parts. In so doing they forgot that they were actually damaging their image in the eyes of consumers, as well as introducing inefficiency – these were the days of long, highly integrated production lines and large interim storage facilities.

Those days are now gone. Countries have opened up, abolishing duties and lifting trade barriers. Companies nowadays apply standard engineering principles worldwide in their design work. They consciously choose to apply norms and use standardized features.

As the global economy has emerged, transformation processes have become practically identical across the board. Best practices, norms and standards have revitalized markets. Here are some examples:

1. In the automotive industry, many suppliers now supply different vehicle manufacturers concurrently
2. In vehicle sales and after-sales, large distribution firms have emerged with enormous showrooms displaying various makes of car
3. In telecommunications, interfaces have been standardized

A substantial shift has occurred in the way people think about technical barriers. In the past, companies had a strategic mindset, which led to them specially engineering their own products. Today, the same companies have recognized the advantages of a market economy, and the market and its prices allow them to take up a financial mindset. In the past, strategy guided their decision-making; today, financial considerations support this process.

2.2.4 Specificity

The second reason we identified for resources being non-marketable is if they have a high level of specificity. Resources can be so firm-specific that they are of no value to anyone outside the company: they can only be used in internal company processes. In the case of firm-specific resources, no general market emerges even if the resource is produced by an external supplier controlled by the firm. For example, Audi has its own plant in Győr in Hungary that produces tools for its auto bodywork. This resource should be considered a purely private good, not one combined with a public good. Consequently it does not need to be hidden from the outside world, as it does not betray any corporate secrets.

What makes a resource specific? (Note that we are no longer talking about technical transaction costs and the things that led companies in the past to custom build parts as a barrier to market entry.) The first reason for specificity is *internal specialization* in the other transformation processes in the firm. There must be clear advantages from specialization that argue in favor of creating and using firm-specific resources internally.

A second reason for specificity – and a more important one in practice – is the speed of technical progress. A resource can be entirely marketable and possible to transfer between firms. It remains marketable as long as the speed of technical progress is the same for all the firms involved. When selecting suppliers, firms look at whether their potential partners are able to keep up in terms of technical progress, or can even set the pace. Marketability is lost if the external partners are unable to keep up with the firm's own speed of technical progress, and a situation arises in which the firm has internal resources that are not yet available on the external market due to their novelty. Such innovations can therefore not be brought from outside the firm, although the company would be able to sell them. No liquid market exists, and so the innovative resource is considered non-

marketable. The market barrier is the speed with which the firm develops new resources.

2.2.5 Synergies

The third reason for resources being non-marketable – beside transaction costs and resource specificity – relates to synergies. In this case, the resource in question has the mixed nature that we spoke of earlier. It has the nature of both a private and a public good. In other words, the resource demonstrates certain external effects. For this reason it must not be sold externally. Our example of this type of resource was the innovative knowledge that would be revealed to a buyer when an object was transferred. Naturally enough, companies do not wish to sell such resources to external parties.

Why, then, can't firms sell innovations *at a high price*? The reason could be that external parties are unable to afford a price that exceeds the value to the firm of using the resource internally. In other words, the resource may not be firm-specific, and could easily be transferred to other interested parties outside the firm. However, its external value is lower than its value within the firm in question. This is because of the resource's external impact. While its use within the company produces *above-average* synergies, its positive impact with competitors is *below average*. Consequently, competitors do not bid high enough for the resource. The cost structure can mean that the resource is produced and used within the firm, whereas competitors decide not to produce it at all. We will illustrate this phenomenon later with a quantitative example.

Synergies: The Whole Is Greater than the Sum of Its Parts

The term “synergy” is derived from the Ancient Greek *synergia*, meaning two or more agents working together to their mutual advantage.

Synergies play an important role in business. They are regarded as the driving force behind takeovers and mergers. Two types of synergy are distinguished in the literature: financial synergies and operational synergies. Financial synergies relate primarily to the management and financing of companies. Thus when two companies merge, it is possible to achieve tax advantages by offsetting losses, for example, or reduce the cost of financing by bundling the credit arrangements.

Operational synergies arise in the provision and marketing of the merged company's goods and services. For example, cost synergies are created where reduplicated corporate functions can be reduced down to a single department, or where infrastructure can be shared. Revenue synergies appear where one company's products can now be sold through another company's distribution channels following a merger.

It is important to note that synergy effects are not automatic – a fact often overlooked by managers of companies. Leveraging synergies takes time and money. Often the companies involved in a merger overestimate the positive synergy effects on the cost and revenue side, and underestimate the effort required to leverage them. This can lead to a situation in which the reality falls far behind expectations. There may even be negative synergies – the cost of the integration (harmonizing different corporate cultures, adjusting the product portfolio, coordinating activities, etc.) can be higher than the cost savings that can realistically be achieved.

Evaluating synergies is of great importance for assessing the value – and hence the price – of the target company in a merger or acquisition process. As part of the due diligence process prior to the acquisition, companies should thoroughly investigate the potential synergies, the speed with which they can be realized and the cost of doing so. This reduces the risk to the buyer of paying an exaggerated acquisition price.

2.2.6 The Problem of Hold-up

The fourth reason we identified for resources being non-marketable was a situation in which one of the parties involved in a transaction, at the very last moment, acts in a way that disrupts the normal market process.

Transactions, in addition to their explicit contractual elements – the quality, price, time and place of the transaction, etc. – also contain eventualities that are not clearly covered by the contract. For example, most contracts do not state explicitly what should happen if one party decides to withdraw at the last minute, just before signing the contract (when the other side may have already made preparations for fulfilling the contract). The annoyance and upset caused by last-minute cancellations will be familiar to us all.

By the same token, external developments can create a situation that neither party gave any thought to earlier, or one that is not covered in detail in the contract. For example, the economy may unexpectedly go into recession, making it "unfair" to expect one of the parties to meet its contractual obligations. Coming up with a contingency contract that covers all possible eventualities and every imaginable situation is too time-consuming, expensive and complex. As a result, all contracts have certain loop-holes that are covered by implicit elements in the contract – for instance the expectation that both sides will behave according to normal business practice.

Of course, the problem is that such expectations cannot be enforced. Implicit contractual elements are not formulated in a precise manner. In cases of doubt, the two parties can interpret them quite differently. Thus one side may unexpectedly find the other party behaving in a way that it considers "unfair", to which the latter may respond that it is not actually in

Dependency as a Potential for Conflict

ALCHIAN gives a well-known example of the problem of hold-up in the automotive industry. An automotive producer buys in certain parts (engines, chassis) from a supplier. This creates a conflict over pricing, as both parties consider that they are not in a market relationship where the price is set by the external world. If the supplier produces vehicles himself, the conflict is even stronger, as the two parties are also competitors. A situation may arise in which the supplier tries to disrupt production by his client and in this way exert pressure on him.

For example, some customers of the bus manufacturer Kässbohrer (when the company was still independent) wanted to have a Mercedes engine in their vehicles. Kässbohrer complained that it constantly suffered from delays in deliveries by its supplier. According to ALCHIAN, a situation of hold-up – where the supplier can exercise too much power – leads to integration.

breach of contract and so its actions are not in any way reprehensible. This is what the American economist ARMEN A. ALCHIAN calls the problem of hold-up.⁴

Situations where potential partners fear the problem of hold-up disrupt the functioning of the market. This happens even where the resource in question can be transferred and, if it is possible to draw up contingency

Three Business Thinkers, Two Questions

The three business thinkers WILLIAMSON, COASE and ALCHIAN studied the reasons for the existence of the firm. The two central questions they address in their work are (1) why does the firm exist? And (2) what is special about the firm?

In his economic contract theory, WILLIAMSON argues that asset specificity and ineffective external safeguards require the existence of hierarchies (i.e. the firm). COASE puts the emphasis on transaction costs and shows how they are lower in entities (companies) where there is lasting, trust-based cooperation than in market transactions. ALCHIAN states that complex and dynamic environments always harbor the risk of hold-up, which can only be overcome by acquiring ownership of the resource in question. This gives rise to entities that have ownership of resources.

WILLIAMSON: The firm is an entity for exploiting the enormous benefits of specialization. COASE: The firm is an entity for lasting, trust-based cooperation.

ALCHIAN: The firm is an entity for acquiring ownership over resources.

contracts, transactions via the market would be advantageous for both parties. ALCHIAN argues that, in situations where there is the possibility of hold-up, the affected party can only protect itself by acquiring *ownership* of the resource, meaning that it no longer needs to source via the market. The problem of hold-up is thus a further reason for a resource being non-marketable: the firm will prefer to produce or store it internally.

We can now summarize what we know about resources in category (2). We have discussed the range of reasons for a resource being *non-marketable* even where standardization is widespread and markets generally well developed. Companies must determine the internal value of such resources in the calculations underlying their decisions, presuming that this is feasible. They cannot determine their value from external markets.

Interestingly, the internal value of a resource can be both greater or smaller than its external value. A firm-specific resource, for example, has a high internal value but no external value to speak of. By contrast, an innovative resource would

⁴ 1. ARMEN A. ALCHIAN and SUSAN WOODWARD: *The Firm is Dead; Long Live the Firm*. Journal of Economic Literature 26 (1988), pp. 65-79. 2. ARMEN A. ALCHIAN and HARALD DEMSETZ: *Production, Information Costs and Economic Organization*. American Economic Review 62 (1972) 5, pp. 777-795.

probably have a considerable external value, if it were to become available on the market.

It is worth noting that transaction costs – COASE's explanation for the non-marketability of resources – are in fact often created by the contractual parties themselves. This, at least, was the case in the past. We have also seen that internal parties try to shield themselves from a market. Time and again, external providers give in to short-term self-interest and carry out hold-ups, thereby destroying the possibility of cooperating through the market in the long term.

2.3 Public Goods

2.3.1 Knowledge – Definition

Public goods form the core of category (3). Generally what we are referring to here is infrastructure, potential, enablers and knowledge. Resources that are the output of one phase in the business process and the input for a subsequent phase can, in fact, be tangible goods. However, very often they are intangibles. In this section we examine such intangibles in detail, referring to them under the umbrella term "knowledge".

We use the term *knowledge* to mean a body of information that is interconnected (and hence meaningful), coherent, and valid in a specific context.

Our definition implies that knowledge can be understood in a narrower (less information) or broader (more information) sense. Moreover, knowledge is defined by the *context* in which it is valid and where it can be of practical use. In a talk show, for example, the business knowledge expressed may be sufficient, convincing and valid. But in a different context – a seminar for Ph.D. students, say – the same knowledge may be considered poor.

Furthermore, our definition implies that knowledge, and the information it consists of, is tied to a specific medium. Physical signs or configurations are necessary for recording, processing and transferring the information. Knowledge has a tangible medium in which it is conveyed.

- This medium can be tailored exactly to its function as the bearer of information. For example, the information that constitutes the knowledge may be contained in a presentation or papers that can be locked up in a safe, or saved in the form of an electronic document
- The medium can be further developed and assume other functions beside being simply the bearer of information. For example, the information may reside in the memories of numerous individuals and relate to various discussions held by a research team

In the first case, transferring the knowledge is straightforward: you can simply sell the documents. In the second case, it might be necessary to transfer control over an entire research institute. However, the issue of whether the medium is narrow (paper) or broad (a team of people) need not concern us here. For the purposes of our discussion, we may treat knowledge, the information that constitutes it, and the medium that bears it as a single entity.

Knowledge is a resource. Just like any other resource, it must be created. It can subsequently be used in various combinations and transformations. Generating knowledge does not differ from generating other resources. Knowledge can be the product of direct endeavor, that is to say the output of combinations and transformations specially undertaken with the goal of generating knowledge. Examples include product development, building a brand, or nurturing a relationship with a client. Knowledge can also be a by-product of combinations and processes undertaken with a different goal. An example is *learning by doing* – improving processes by repeating them regularly. The knowledge generated can also be in a completely different field: Not infrequently, research in one field generates novel product ideas that are far removed from the actual area under investigation.

2.3.2 Knowledge – Use

We noted above that generating knowledge is no different from generating other resources. The same cannot be said of using knowledge. First of all, look at the use of knowledge in combinations and transformations *within* the firm. Within the firm, knowledge functions as a type of public good – what we have called an *intra-public* good. Using knowledge in a process neither eats into it nor exhausts it. It can still be used in other processes within the firm.

This has important implications for how internal resources are evaluated. The internal value (i.e. transfer price) of knowledge increases according to the number of different processes that make use of it. The more frequently and widespread knowledge can be used subsequently within the company, the more valuable it is as an internal resource.

Firms tend to put more effort into generating knowledge and broadening their knowledge base if the knowledge produced in this way can later be applied in *multiple* (income-generating) processes. Firms also tend to keep knowledge for themselves rather than selling it, if it has *multiple* applications within the firm (although it might only be used by a potential buyer in a single process).

The multiple use of knowledge works like a synergy. Or you could say that synergies indicate that knowledge has *multiple* uses. Companies shouldn't just look at what knowledge they need as an input to a specific process. Rather, they should look at *what else they can do* with their existing knowledge. One recommendation is therefore that companies try to identify investments where they can make use of the knowledge that they already possess. Of course, companies can also use their knowledge – as an intra-public good – within a partnership or network. One example of this is where a brand is developed by the members of a virtual company and then used to the advantage of all.

Another point about the use of knowledge is that companies risk losing out on their advantage if they sell their knowledge to third parties. In the relationship between what is internal to the company and what is external, knowledge functions as if it were a *private* good. If sold or stolen, the knowledge can be used by competitors and so loses its usefulness to the company. To capture this idea, we came up with the term "intra-public goods".

2.3.3 Knowledge and Investments

Three values are important when it comes to knowledge:

1. The cost involved in generating it
2. The internal value of the knowledge. This depends to a large degree on whether it can be applied in various revenue-generating processes – i.e. whether synergies exist

3. The external value of the knowledge – i.e. the value that could be generated by selling it

Internally, knowledge has the nature of a public good: it is not used up when applied in different processes. Its intra-public nature is often expressed as a synergy: knowledge has a direct positive impact on one process and at the same increases the productivity of another process. This endows knowledge with a greater internal value than if it had only a direct impact and could only be applied in a single process. Thus, to increase the internal value of resources with these characteristics, the resources should be used in *as many subsequent processes as possible*. Indeed, *numerous* processes may need to be run in parallel to make the best use of the intra-public good.

Knowledge is generated not only by research and development: it also appears as the by-product of economic activity. In other words, companies that invest and use their investments in the business process, create new knowledge. All activities, processes and investments that – in addition to their direct products – generate knowledge as a by-product have an additional value. The same applies to resources of a public nature that cannot be considered knowledge, such as potential, real options⁵ and opportunities.

Companies should use their knowledge and potential in as many activities, processes and investments as possible. They should also make as many investments as possible that in turn generate new knowledge and potential for the firm as a by-product. In a logical sequence of steps and phases, such investments feed back into the knowledge base.

⁵ Options generally give their holders the right to wait and see how a situation develops before committing themselves. Naturally, the holders then choose the alternative that is to their greatest advantage. In the case of real options, the holders enjoy flexibility. They do not have to fix their production structures in advance. Instead, they can wait and see what happens externally, and still react on time. Players without real options must commit themselves early on and then stick to their chosen structures. As a result, they are often hit more strongly by unforeseeable changes – particularly if they operate in an insecure environment.

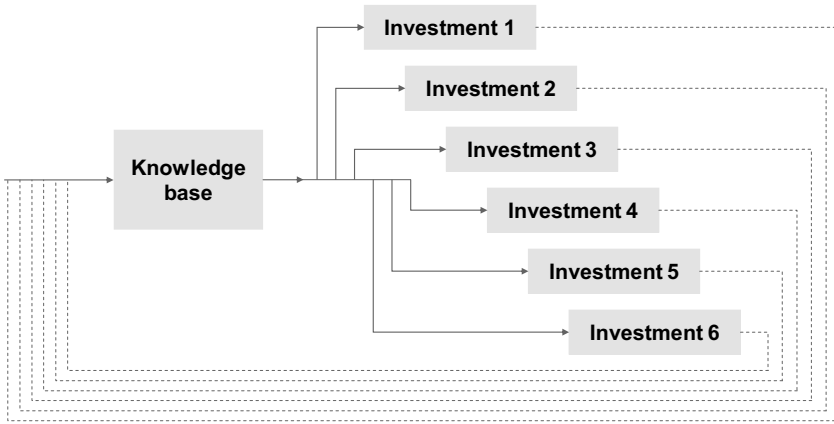


Figure 2-1: The closed cycle of knowledge and investment

Knowledge and investments thus form a closed cycle. Follow-up investments generate knowledge as a by-product of their business use. This adds to the knowledge and in turn facilitates the initial investment and its business use.

In this manner, groups of investments and different areas of knowledge align with each other. (i) An area of knowledge distinguishes a particular group of investments, which it produces, cultivates and tends. (ii) This knowledge forms the shared knowledge base of this particular group of investments, and can be used by them as a public good. Investments made on the basis of this shared knowledge base collectively define the knowledge base. The knowledge determines the investments that match it, and the investments determine the knowledge.

Note that individual investments do not correspond to individual pieces of information: rather, specific groups of investments correspond to specific areas of knowledge. The group of investments and the area of knowledge determine and define each other in a reciprocal relationship.

Group of investments = Knowledge base of the firm (3-1)

The business process gives rise to a knowledge base. The knowledge base determines what activities and investments it can be usefully applied in, and what activities and investments will support and expand the knowledge base itself.

Additional Advantages

The link between investments and knowledge has an impact on how investments are evaluated. The potential return on an investment cannot be calculated simply on the basis of its direct financial impact. If the investment fits into the group corresponding to the firm's knowledge base, it will generate additional advantages by producing or utilizing the relevant knowledge.

The mutual definition of the knowledge base and a group of investments can sometimes be very close-knit. In extreme cases, a single investment may even correspond to a single piece of information. Similarly, the group of investments and the knowledge base may be very broad, perhaps even extending across different firms. The different firms will then create a knowledge network that together they will nurture.⁶ In this way, the interdependency between knowledge and investments determines the optimum breadth and depth of the firm.

2.3.4 Types of Knowledge

Transferring knowledge outside the firm is a matter of particular interest to us. Two questions are key: Firstly, is the knowledge useful for external competitors, i.e. is it valuable or not? And secondly, does the knowledge continue to be of use internally once it has been transferred or released externally, i.e. does it retain or lose its value to the firm?

In this way we can identify different types of knowledge:

- General knowledge
- Firm-specific knowledge
- Standardization knowledge
- Commercial knowledge

General knowledge. General knowledge is not specific to the firm. Its use in a concrete process within the company is general in nature, and its usefulness is vague. General knowledge in itself has little value either internally or externally. As a rule, the firm that produces it makes it available for free use. Employees may publish this type of knowledge in specialist magazines and the CEO can use it in lectures and talks. This type of general knowledge is not the same as common knowledge – it is new

⁶ ROLF CASPERS, NILS Bickhoff and THOMAS BIEGER: *Interorganisatorische Wissensnetzwerke – Mit Kooperationen zum Erfolg*. Springer, Berlin 2004.

knowledge, not what you learn in school. But it is not the type of knowledge that is of immediate practical use to others.

Firm-specific knowledge. This type of knowledge is only useful for the firm itself. It is so firm-specific that it has no value for outsiders. For knowledge of this type, the question of whether it should be transferred outside the firm or not is irrelevant. It can be released to the public – no one outside the firm will be interested. If it is published, it produces rather boring specialist articles at best.

Standardization knowledge. This type of knowledge is useful for the firm producing it, if it is used purely internally. However, it becomes extremely useful to the firm if it is recognized and adopted by other companies and outsiders.

KNOWLEDGE	... IS A PUBLIC GOOD	... IS A PRIVATE GOOD
... has little value for external parties	General knowledge – often published	Firm-specific knowledge – of little interest outside the firm
... has positive or negative value for external parties	Standardization knowledge – made accessible outside the firm, others encouraged to use it	Commercial knowledge – protected by the firm

Summary 2-4: Types of knowledge and their characteristics

Often standardization knowledge is useful for other companies that adopt it, without losing any of its usefulness for the original company. This type of knowledge involves setting standards and norms, establishing types and fashions. Firms will try to introduce standardizations on technical committees and let others know about them early on, so they can follow their lead. Alternatively they will release the knowledge to the public and support any external transfer of it.

The important thing with standardization knowledge is how adept the firm is at positioning it and getting it accepted. Mercedes-Benz, for example, is currently trying to establish a new type of vehicle with its R-Class, something between a station wagon and a sports utility vehicle. How successful it will be depends very much on whether its competitors also adopt this type of crossover vehicle.

Perhaps the most important type of standardization knowledge is the firm's familiarity rating and its *brand*. This type of knowledge can even put other companies at a disadvantage. Thus we would argue that standardization knowledge has an impact on the value of external companies – usually a positive impact, but in the case of brand formation a negative impact.

Commercial knowledge. Typically firms utilize commercial knowledge in a practical manner, potentially in a number of different areas. However, the different ways the knowledge can be used are not bound specifically to the firm producing the knowledge; it can also be adopted by external parties. Knowledge of this type therefore has a commercial value. The firm has to choose whether to use the commercial knowledge itself or make a conscious decision to sell it to external parties. This means that commercial knowledge has the nature of an external-private good. If the firm transfers it externally, it can no longer make use of it itself. Moreover, because of its commercial value, others may attempt to steal it. So the firm has to protect it from early on by keeping it secret. If the firm decides not to sell it, but rather to use it itself, it must preserve its value by patenting it or implementing it as quickly as possible. There can be no doubt that commercial knowledge has an effect on the value of competitors. If competitors can get hold of the knowledge and make use of it, its effect is positive. If it is used solely by the firm that produced it, competitors may find themselves at a disadvantage.

We can now summarize the key characteristics of different types of knowledge:

- General knowledge has a positive value for the firm, but in most cases this value is small. It has the nature of a public good and so can be released publicly without causing damage or creating value for the firm. This type of knowledge need not detain us further here
- Firm-specific knowledge has an internal value, but is of little interest to outsiders. As with general knowledge, the firm can release it to the public. However, its firm-specific nature means that it has little value outside the firm, so no one is very interested in it. Ultimately it remains a private good within the firm. Nevertheless, firm-specific knowledge is not a physical resource that can be used up when applied in a process. It can be applied in various transformations and these various applications will not be mutually exclusive. Firm-specific knowledge is an intra-public good. Its internal value is the sum of the values of all the internal transformations that make use of it. Firm-specific knowledge clearly demonstrates the dual nature of knowledge: In its relationship with the outside world it is a private good, while internally is a public good

- Standardization knowledge is very important. It produces a certain positive internal effect that is amplified if the knowledge is also used or acknowledged externally. However, for this additional impact to occur, certain processes must take place outside the firm. Accordingly, firms strive not just to create standardization knowledge, but also to promote it and stimulate the external processes
- Commercial knowledge can be of great value both internally and externally. If it is transferred to external parties, it loses its value for the original firm, like an external-private good. So firms first try to ensure their ownership rights over commercial knowledge (by keeping it secret), then weigh up whether they should sell it or use it themselves

In their decisions, companies should bear one important factor in mind: Not every type of knowledge has to be produced and utilized within the firm. Commercial knowledge especially is marketable in many cases. This is not true for firm-specific knowledge and standardization knowledge. These types of knowledge must be produced internally or under the firm's control, and utilized within the firm.

2.4 Summary

In this section we have attempted to provide a fuller answer to the question of strategy versus finance. By examining two specific features that characterize resources – their marketability and whether they are private or public goods – we have distinguished eight different types of resources. We also identified three distinct mindsets underlying decision-making: pure finance-based thinking, mixed strategic and financial thinking, and pure strategy-based thinking. We then correlated these three mindsets to three groups of resource types (see Summary 2-2).

We then turned our attention to the question of which mindset is the most appropriate in the different stages of the different transformation processes performed by the firm. To shed some light on this, we added two further insights. Firstly the connection between the different groups of resources and the strength of the externalities, and secondly the connection between the magnitude of the externalities and where they occur in the transformation processes. Putting these two insights together gives us the following picture: In the early phases and inner layers of the company's transformation processes, it is strategy that does the trick. In the middle phases, a

mixture of strategy and finance is what is needed. And in the late phase and in external layers, finance-led thinking is the order of the day.

We also investigated the various types of knowledge and their different characteristics. Knowledge facilitates investment, and investments nurture existing knowledge or give rise to new knowledge. We saw that *individual* investments do not correspond to *individual* pieces of information – specific *groups of investments* correspond to specific *areas of knowledge*. The group of investments and the area of knowledge determine and define each other in a reciprocal relationship. This provides us with valuable information regarding the optimum size and scope of the firm.

2.5 Recommended Reading

For a comprehensive treatment of externalities: RICHARD CORNES: *The Theory of Externalities, Public Goods, and Club Goods*. 2nd ed., Cambridge University Press, Cambridge 1996.

3 Transfer Pricing

In brief:

The business process consists of stages or phases that follow on from each other in a logical order or specific time sequence. Investments in production in later stages are based upon input from parts of the firm further upstream. The individual stages are linked together by these inputs. But how can firms align the different stages? How can they plan requirements and ensure efficiency from one stage to the next? And what incentives are there for the different stages to work together in an optimum fashion? The answer to these questions is to be found in transfer prices.

3.1 Internal Services

3.1.1 The Story so Far

Various interlinked processes of transformation occur within the firm, with resources representing both the input and outputs of these processes. As we saw in the previous section, resources can differ in terms of certain characteristics, such as the extent to which they are marketable and the magnitude of their external effects. These characteristics ultimately determine whether decisions relating to the resource in question should be based on purely financial considerations, a mixture of strategic and financial considerations or purely strategic considerations – the three different mindsets that we discussed.

We also saw that it is the level of the externalities that is crucial in deciding which mindset is the most appropriate. Purely private goods show few or no external effects, while other resources have perceptible or even strong externalities. Resources that have the nature of a public good, for example, have the maximum level of externalities.

How does the level of externalities relate to the choice of mindset? For purely private goods, a financial mindset is possible. Resources with strong externalities and those that represent a public good demand strategic thinking. Resources that fall in between the two extremes – i.e. private goods with perceptible externalities – require a mixture of strategic and financial thinking.

The simplest decisions are those concerning resources that are marketable and can be bought or sold outside the firm. These resources have market prices; their optimum disposition and allocation can be calculated easily. In the case of non-marketable resources – resources produced and used internally – the question of which mindset is best depends on whether internal values or transfer prices can be found (to stand in for the non-existent market prices). The internal value or transfer price of a resource is determined by the results that points further down the transformation chain can achieve with the resource. The impact on the company's internal costs will also play a role in decisions.

- If the non-marketable resource is a private good and there is a clearly defined process in the chain leading up to the sale of the refined product, deriving the internal value of the resource should not present any particular problems. The technique of "backward recursion" can be used: the income that can be generated with the resource by points further down the chain determines the internal value of the resource irrespective of its own costs. In this case, a financial approach will work.
- If, on the other hand, the good has external effects or has the nature of a public or intra-public good, then the internal value as determined by the backward recursion depends greatly on which (and how many) of the subsequent processes benefit from the external effects or make use of the public good. As this cannot be determined precisely, the resulting internal values are vague or even undefined. Additional considerations must be taken into account to deal with the fuzziness of the financial approach. In this case, strategic thinking can be brought to bear.

In this section, we look at how firms can derive internal values or transfer prices for non-marketable resources, and how exact (or vague) the resulting values are.

3.1.2 Decentralized Decision-Making

The question of how to derive internal values or transfer prices has received much attention within studies of decentralized decision-making. The situation is usually described as follows: The output of one transformation process within a firm is at the same time the input for another part of the firm. It represents an intermediate product. In our terminology, it is a non-marketable resource. At this stage we know nothing about the resource's externalities, and it is best to begin by imagining it as a private

good, i.e. with no externalities. The question now is: Can the different parts of the firm decide about the intermediate product *independently* of each other? Is it possible to arrive at the best decision for the company through local decisions in the different divisions and sections of the organization? In other words:

- Should the firm's management optimize all the decisions to be taken in the different divisions and implement a centrally determined optimum overall plan through top-down directives?
- Or can the management do without central planning and use a more decentralized decision-making process instead, allowing the different divisions to make their own decisions in line with their own divisional objectives?

Where the latter option is possible, the company can employ what is known as *decentralized decision-making* or *price-based* (or "pretial") *management*.

This leads to the next question: What basic conditions should the corporate center set for the different divisions of the company? In particular, what parameters should it lay down for their decision-making? The objective is to end up with the optimum plan for the company as a whole, despite the fact that the decisions in each department are not optimized centrally. The parameters that need to be set are the transfer prices that each division or phase of the process receives from the following division or phase, and it itself must pay for any input. If the firm can find the correct internal charges for these inputs, it can break down the overall financial objective (in terms of profit or value creation) to the level of individual divisions and phases, and the decisions to be made there can be based on purely mathematical, financial criteria.

Where this is possible, the financial thinking at the level of the overall organization can be broken down to the level of the divisions or stages further down the organization. The result is a finance-based system of management that reaches right down to the lower levels of the organization and the early stages of the overall process. However, if the correct transfer prices cannot be determined, the company must develop other aids to decision-making, otherwise everything will be pushed back to the corporate center. Here, a strategic approach can step in to fill the gap left by the financial approach.

In the past, price-based management was discussed only with respect to manufacturing processes. The parts, components and semi-finished goods

that passed between the different divisions of the company were valued on the basis of internal transfer prices. The principle was to set the transfer prices in such a way that the individual divisions in their independent cost calculations ultimately chose production volumes – the key decision for any established business – that led to an overall optimum for the firm.

Companies today can no longer be reduced to manufacturing businesses. Although modern companies still consist of various sub-units linked together by internal inputs, the difference is that these inputs are no longer physical parts, components and semi-finished goods that are moved about between units. Before we attempt to adapt this approach to modern-day companies, however, let us stick with our example of manufacturing businesses and delve a little further into the issue of central versus decentralized decision-making.

3.1.3 A Simplified Example

A simplified example of the type of calculation involved will show the relative importance of marginal costs and full costs in setting transfer prices. Imagine a firm consisting of two parts: division A and division B.

- Division A buys input on the factor market and uses this input to produce quantity x of an intermediate product. The production costs for producing quantity x of the intermediate product in division A are $C_A(x)$, including the cost of procuring the factors required
- Division B takes the intermediate product, refines it and sells it on the product market at price p . Division B's costs are $C_B(x)$

The corporate center wishes to define quantity x such that the profit function

$$f(x) = p \cdot x - C_A(x) - C_B(x) \quad (3-1)$$

achieves a maximum. Here, of course, the cost function is critical. Typically, both division A and division B have fixed costs. The variable costs are usually constant at the outset and gradually increase as the quantity approaches the limits of capacity. Figure 3-1 exemplifies this sort of cost behavior pattern. It shows how costs develop for division A and for division B, the two patterns being very similar; this pattern thus also occurs for total costs.

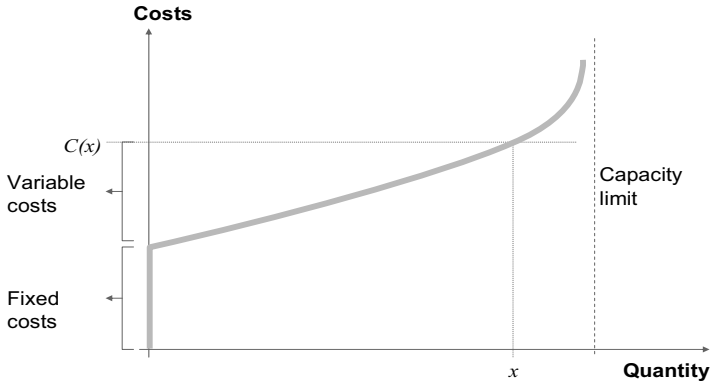


Figure 3-1: A typical cost function

The condition for achieving an optimum is that the first derivative of the profit function (3-1) is zero. In addition, both cost functions must be derived to determine the optimum quantity. This gives rise to the *marginal cost functions* $C_A'(x)$ and $C_B'(x)$. The derivative of the profit function (3-1) is thus $f'(x) = p - C_A'(x) - C_B'(x)$. Thus the condition for the profit optimum $f'(x) = 0$ is:

$$p = C_A'(x) + C_B'(x) \quad (3-2)$$

This means that quantity x is set such that the price p equals the total marginal costs $C_A'(x) + C_B'(x)$. We have thus derived the well-known rule that *price equals marginal costs*. This rule describes the optimum behavior of a price-taker who, unlike a monopolist, sees no opportunity for influencing price.

We may call the optimum quantity as defined by (3-2) x^* , thus $p = C_A'(x^*) + C_B'(x^*)$. The marginal costs arising for both divisions are now actual numbers and not functions. We may call them MC_A and MC_B , thus $MC_A = C_A'(x^*)$ and $MC_B = C_B'(x^*)$. MC_A is the alteration in division A's costs in euros when the quantity is varied by one unit of volume; MC_B is the alteration in division B's costs when the quantity is varied by one unit of volume. Applying these terms, rule (3-2) can be expressed as follows:

$$p = MC_A + MC_B \quad (3-3)$$

This is how the sales price p is split up. In principle, it would be possible – on the assumption that the corporate center itself does not incur any

additional costs – to split total revenue ($p \cdot x$) between the two divisions. Division A would receive $MC_A \cdot x$ and division B would receive $MC_B \cdot x$, as an amount in euros. We will not examine here the question of whether this distribution of revenue would be enough to cover the costs. Typically, the marginal costs are slightly higher than the variable unit costs, but whether this difference covers the fixed costs or not depends on the particular circumstances of the case. In any event, the decision is not whether to shut down the whole division: what interests us is the decision about quantity.

The allocation in (3-2) results in an internal transfer price being set for the intermediate product. Division A is paid its marginal costs MC_A for each unit of volume that it delivers, and division B has to pay this transfer price.

3.1.4 Interpretations

Once the transfer price MC_A has been announced, each division checks for itself whether the corporate center's instructions to produce quantity x^* can also be endorsed from its own, self-interested point of view.

- From its own perspective, division A would like to maximize its revenue $g(x) = MC_A \cdot x - C_A(x)$. By setting $g'(x) = 0$, division A itself arrives at the condition $MC_A = C_A'(x)$. It would thus choose quantity x such that $MC_A = C_A'(x)$ was upheld. Since $MC_A = C_A'(x^*)$, this means that it would choose quantity x such that $C_A'(x^*) = C_A'(x)$ was upheld. It would therefore choose $x = x^*$. It would thus select exactly the quantity necessary for achieving the overall optimum for the firm
- Division B would behave similarly. From its own, self-interested perspective it would like to maximize its revenue $h(x) = p \cdot x - MCA \cdot x - CB(x)$. Since $p = MC_A + MC_B$, this is equivalent to $h(x) = MC_B \cdot x - C_B(x)$. Division B arrives at the condition $h'(x) = 0$. This means that $MC_B = C_B'(x)$. Since MC_B was defined as $MC_B = C_B'(x^*)$, $MC_B = C_B'(x)$ is met by the quantity for which $C_B'(x^*) = C_B'(x)$ is true. This is the production volume $x = x^*$. Division B will therefore, from its own self-interested perspective, likewise decide on quantity x^* , as wished by the corporate center

Therefore the transfer price MC_A – set at the level of the supplying division's marginal costs – achieves the desired aim of price-based management.

A number of points should be noted on the precise interpretation of the results:

1. The marginal costs MC_A refer to the value of the marginal cost function $C_A'(\cdot)$ at the point x^* , so $MC_A = C_A'(x^*)$. Quantity x^* is that at which the overall optimum for the company is achieved. To determine the transfer price MC_A , the entire problem must in fact already have been solved. In order to break up the problem into decentralized decision issues that are easier to solve, one must know in advance the solution to the entire problem. Countless experts have struggled with this circularity problem. In practice, the Gordian Knot can be solved through an iterative procedure.
2. The transfer price set at the level of the marginal costs $-MC_A = C_A'(x^*)$ – is not the same as the full costs as long as the supplying division's costs are not simply proportional to the volume. The full costs are $C_A(x^*) / x^*$. With decentralized decision-making, therefore, transfer prices set at the level of full costs do not generally lead to the overall optimum.
3. Variation in the quantity in the supplying division (division A) does not alter the profit situation in the receiving division (division B). If division B is forced to make a slight divergence from quantity x^* , it receives additional revenue equivalent to $p - MC_A$ (sales price less transfer price for inputs). However, it also experiences an alteration in its costs, which is described by its marginal costs MC_B . Because of (3-3), this alteration in its costs in turn agrees with $p - MC_A$. Thus if division A calls up division B and asks "what will your additional profit be if we supply you with a few extra units of volume?", division B's will answer "zero". Hence no imputed extra profit for division B affects the valuation of the intermediate product.
4. The situation is different if division A is already working at the limits of its capacity. In this case, $p > MC_A + MC_B$ generally applies, rather than (3-3). Increasing the quantity by one unit of volume – if this were possible – would lead to an additional increase in total profit of

$$\lambda = p - (MC_A + MC_B) > 0 \quad (3-4)$$

Lambda here represents what are known as opportunity costs. Division B thus has revenue p . If we deduct from this revenue its marginal costs MC_B and the price for its input MC_A , it could receive an additional λ for every increase in volume. This potential extra profit – purely hypothetical, due to the capacity limits – can be added back to division

A. It would be possible to give division A up to λ in addition to its marginal costs MC_A , if it were able to overcome its capacity limits. The intermediate product would thus be valued internally as $MC_A + \lambda$. This is the sum of the marginal costs and the opportunity costs. The opportunity costs represent the extra profit that subsequent points in the organization can achieve. It should be noted, however, that calculating opportunity costs – a procedure well known from operations research – is only feasible in situations of great simplicity compared to what we find in reality.

There are also problems of motivation. The divisions soon find that the company increases the transfer price (up to the level of the opportunity costs) as soon as they start mentioning capacity limits and delivery problems. If local information cannot be checked by the corporate center, the "cooperation" soon takes the form of each sub-unit ensuring the volume it controls is in short supply so that it can enjoy higher transfer prices.

3.1.5 Transfer Prices Equal to Marginal Costs

As early as 1909, EUGEN SCHMALENBACH (1873-1955) noted that "marginal costs lead automatically to sub-units behaving in a way that benefits the business as a whole". The interesting thing about this insight is that it is *not full costs* that lead to this desirable behavior. If the sub-units demand full costs for their intercompany services, total output of the overall business is lower.

As we have seen, SCHMALENBACH's finding still holds true. However, it is based on assumptions that were correct for manufacturing businesses, but are less true for the decisions made by today's companies. In particular, the structure of manufacturing businesses is determined by earlier investment decisions that are not further examined in this model. In the example we looked at, the cost functions were fixed. The investment decisions in the sub-units – decisions that determine the cost functions – were not considered in early investigations; early researchers were only interested in variations in the output quantity.

Moreover, it would be wrong to think that every sub-unit can set its own marginal costs itself. If this were possible, the whole complex overall planning process really would disintegrate into small planning processes functioning fully independently of one another. In fact, as we have seen, if *capacity restrictions* come into play, then the marginal costs must be

increased by the resulting *opportunity costs*. Opportunity costs cannot be determined by individual sub-units because they depend on the opportunities for profit in the following sub-units, which buy the resource. So calculating the opportunity costs again relies on knowing the overall optimal plan in advance – and that puts us back on square one (unless we have an iterative calculation procedure at our disposal).

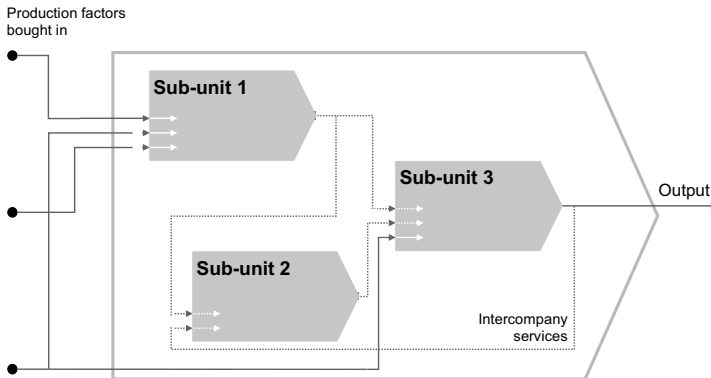


Figure 3-2: SCHMALENBACH considers a business whose structure is already established due to investment decisions. Each sub-unit should be able to purchase products or services from other sub-units at marginal cost, while market prices are paid for input sourced externally. If every sub-unit maximizes the difference between products/services and costs for itself, the business as a whole achieves its optimum

3.1.6 How It Works in Practice

The recommendation of price-based management is that each sub-unit should be allowed to buy and sell internal resources at set transfer prices. However, the idea that resources should be valued on the basis of marginal costs rather than full costs, as shown by our theoretical analysis, is often rejected in practice.

To illustrate this, let's look at a linear cost function. The product of quantity and marginal price corresponds to the difference between total costs and fixed costs. If transfer prices are set at the level of the marginal costs, the fixed costs are not covered. The supplying division will prefer to halt production entirely or deliver to external parties – which it is not permitted to do. This undermines the motivation in the division and

destroys the basis of trust. When transfer prices are low like this, the divisions further downstream in the company appear "profitable", and the divisions upstream appear "unprofitable" by comparison.

Modern production procedures involve fixed costs almost exclusively. There are hardly any marginal costs worth mentioning. If the resource is a public good, the marginal costs for producing and selling one additional unit are practically zero. The supplying division only has its fixed costs. However, it must also supply the public good that it produces to all other parts of the company free. In practice, units that produce such resources appear unprofitable in internal calculations. Everyone values the input supplied by these units, but they pay very little for it – and in theory, they are quite right to do so.

GUTENBERG's Functions of the Firm

Every textbook on management divides the business process up according to functions. Typically – following ERICH GUTENBERG (1897-1984) – these works distinguish between "procurement", "production" and "sales". These stages are not presented in chronological order, but as different *functions*.

This approach does not reflect today's reality. Nowadays, before firms produce and sell, they have to take many steps that form part of their complex web of decisions: decisions about innovations, prototype design, organization, etc.

These areas are not covered by either "production" or "sales".

Why is this so? Saying that transfer prices should be set at the level of the marginal costs means that we optimize the equation on the basis of quantity, which is regarded as variable. Our analysis ignores the fact that where there is decentralized decision-making, one division might simply choose to shut down its operations entirely.

At the same time, opportunity costs can be very high. Under certain circumstances, compensation on the basis of opportunity costs can destroy the receiving division's entire profit. When this happens, the divisions downstream appear unprofitable, while the divisions

upstream appear highly profitable. We also mentioned that points early on in the transformation process can start talking about their capacity limits in order to push up the transfer price. Opportunity costs are a bone of contention when it comes to the proposal – a theoretically valid one – that they should be taken into account in transfer prices.

Another important point to note: In the past, international and multi-divisional corporations used transfer prices to shift profit. Nowadays, such practices are restricted by the guidelines issued by the Organization for Economic Cooperation and Development (OECD). These guidelines state that companies should operate according to the "arm's length principle". Transfer prices should be set at a level defined by independent parties. For

this reason, decentralized planning is not always implemented in practice – local units that follow their own financial rationale do not act in a way that is optimal for the firm as a whole.

We can summarize the situation as follows: If sub-units make their own decisions based on financial considerations, they potentially bring about an optimum for the whole company only if the goods they produce are private and do not involve any capacity restrictions or external effects. In all other cases, more complicated models are needed – the results of which, however, cannot be estimated even in qualitative terms.

3.2 Chronological and Logical Connections

3.2.1 Phases of the Business Process

It is in the nature of the firm that its different parts follow on from each other in a logical order or specific time sequence. The parts (or divisions) of the firm can be considered different stages or phases in the business process. Each phase supplies the following phase with a specific input.

The firm carries out investments in all phases, and undertakes specific combinations and transformations of resources. All of these activities – investments, combinations and transformations – require decisions. If the firm uses a central decision-making process, it must keep track of all the different parts of the organization simultaneously. This in itself can represent an enormous logistical challenge. Furthermore, it must make optimum decisions for all areas and phases of the business in line with the overall business objective of the company, while at the same time taking into account the different connections between the segments. This involves a mammoth planning task. It is also doomed to failure – probably for the same reasons that the Soviet Union's system of central economic planning was also doomed to failure and ultimately led to the collapse of the Soviet economy.

Which brings us back to our question:

- Does the corporate center really have to simultaneously optimize all the decisions to be taken in the different interconnected phases of the business and implement an optimum overall plan through top-down directives to the individual phases?

- Or can the corporate center do without central planning and instead opt for a more decentralized decision-making process, allowing the different phases to make their own decisions in line with their own objectives and employing decentralized decision-making or price-based management?

In other words, what basic conditions should the corporate center set? In particular, what parameters should it lay down to influence the objectives of the individual phases so that it ends up with the optimum plan for the company as a whole, despite the fact that the decisions in each phase are not optimized centrally?

The parameters that need to be set are the transfer prices that each part of the firm receives from the following part, and which each part has to pay for any input it itself receives. If the firm can calculate the correct internal charges for these inputs, it can then break down overall financial objective (in terms of profit or value creation) to the level of individual phases. The decisions to be made there can be based upon purely mathematical, financial criteria, e.g. net present value. In this case, the financial thinking at the level of the overall organization is broken down to the level of individual phases and a finance-led system of management created that reaches right down to the lower levels of the organization and the early stages of the overall process. If, however, the correct transfer prices cannot be determined, the company must develop other aids to decision-making in their place. Here, a strategic approach may be able to step in to fill the gap left by the finance-based system of management.

In the following sections, we take a closer look at methods of decision-making in the business process, and at how transfer prices can be determined under more difficult circumstances.

3.2.2 Building a Decision-Tree

The business process involves multistage decision processes. Note that we are not talking about a cybernetic model of the firm, or a neural approach or anything like that. We are simply looking at the *logical sequence* in which decisions, combinations of resources and transformation processes take place. Together they form the business process. To underline the fact that they occur in a particular sequence, we speak of a *multistage process* and of *sections* or *phases*.

In principle, the optimum overall decision – a combination of all the decisions to be taken in the different stages – can be investigated using a mathematical model. In order to do this, however, one would need an exact overview of all the different options, conditions and effects. This, alas, is only possible in an idealized situation.

Were this idealized situation possible in reality, the firm could then draw up an overall plan that accounted for all possible eventualities. The overall plan would show how the business process would develop for every possible combination of decisions taken in the different stages. It could even have branches for different eventualities where the external influences impacted on the development in various different ways.

Drawing up such a plan would be an enormously complex task. However, once the plan was complete, the firm could determine which development in the business process would bring the greatest success to the company overall in terms of creating economic value, subject to any possible constraints. This is what we mean by the optimization procedure.

STAGES	REQUIRED TASK
Create an overview	Draw up a logical order and time sequence for all options, conditions and effects
Establish an optimization procedure	Determine which development in the business process will bring the greatest success to the firm overall in terms of creating economic value, subject to any possible constraints
Break down the overall financial objective	Set the accounting parameters (transfer prices for internal resources) for each individual stage in the business process
Make decisions in individual stages	Local optimizations in the individual stages together create the overall optimum

Summary 3-1: Breaking down an overall financial objective to the level of the individual stages in the business process

As soon as it was clear what decisions should be taken for the benefit of the firm as a whole, the firm could set the accounting parameters for the individual stages. It would set them in such a way that the individual decisions in the different stages, based on these parameters, would lead to the overall optimum for the firm as a whole. This is what we mean by

breaking down the finance-based system of management to the level of the different sections.

First of all, then, the firm needs an overview of all the possible options, conditions and effects. Next it needs an overall optimization process, so it can determine what decisions should be made in the individual stages. After this it can then start setting the accounting parameters and transfer prices for the individual stages so that local optimizations in the individual stages can in turn create the overall optimum.

Attractive as it may be, this approach is sadly unrealistic in practice. Planners cannot know all the possible options, conditions and effects at the beginning of the business process. The process of optimization outlined above can get so complicated that it becomes unmanageable even with the help of powerful modern computers.

We should remember that such an approach is possible in principle, as long as other complications do not arise. The overall financial goal can be broken down to the level of the individual phases in such a way that, with the help of financial calculations and local information, the firm can arrive at decisions that lead to an overall optimum. The right decisions in the different phases can be achieved by means of a finance-led system of management that sets transfer prices for internal resources in the local units. If this all worked perfectly in practice, and not just in theory, strategic management would be irrelevant.

Let us pursue this line of thought for a moment. Usually, companies represent the different possible courses of events and developments that depend on the decisions made in the various stages in the form of a *decision tree*:

- The roots of the tree represent the beginning of the multistage business process
- Different branches represent the different choices at decision points
- The leaves on the end of the branches represent the ultimate results of the process that began at the roots of the tree

A tree diagram of this type is called *extensive form* as it shows all the different possible paths and results. The path with the best financial result at the end is clearly the one to choose. The individual decisions that need to be made in the various stages in order for the business process to stick to this path represent the best overall plan.

In reality it is not possible to know all the details and conditions involved in the business process. Moreover it is not always the case that firms can choose between various paths. But let's continue with this train of thought for a moment.

The task now is to optimize the decisions in the different phases on their own, i.e. from an "isolated" or "separated" point of view. We therefore assume that the decision tree has been drawn up and various paths are possible. The question now is can the best path overall be found by making those individual decisions in the different branches that are optimal from the local perspective? If the answer is yes, then finance-based thinking – i.e. using net present value and capital budgeting – can be broken down to the level of the different phases. We would have no further need for strategic considerations.

The investments in the different stages of the business process form a chain, the investments in later stages building on those in earlier stages. How come?

In the early stages, certain *outputs* arise as a result of the investments made there that are then used as *inputs* for the investments in the following stages. These *internal resources* are what bind the different phases of the business process together.

In the next section we look at whether the internal resources binding the different stages and phases together – whereby the output of phase k is also the input for phase $k + 1$ – make it impossible to generate an overall optimum on the basis of individual optima in each phase. In other words, do internal resources make it impossible to break down financial considerations and capital budgeting to the level of the individual phase and use them independently on each occasion?

The Difficult Search for the Right Path

Companies often find that in practice there are no paths leading from the roots of the tree to a particular leaf – it is not the case that many paths exist and the entrepreneur simply has to make his choice. So many conditions are imposed by different parties that no one sequence of decisions meets all the constraints. The entrepreneur has to negotiate with the various groups and try to get them to reduce their requirements, at least until a navigable path opens up. Choosing between different paths and then optimizing is something of a utopian situation given the demands of external groups.

3.2.3 The Nature of Inputs

Decentralized management is an important issue, and one which has provoked a large amount of research. An issue that has received much attention is the suggestion that when a sub-unit acting as supplier only receives its marginal costs in recompense, it may be tempted to cheat somehow. This is particularly likely in the case of public goods, where the marginal costs are zero. The sub-unit acting as supplier has its fixed costs. The question is, who will pay for them? A number of studies looked at the different *motivations* that appear as a result of information differences between sub-units. Some behavioral studies also examined the actual behavior of units within a company.¹

This brings us back to our starting-point. Sub-units, in this case different stages or phases, are connected to each other in a specific sequence through the resources they deliver to each other. At first glance, one might assume that the decisions to be taken in the different stages or phases are therefore *no longer independent* of each other (as required by FISHER). Later phases are based on the principles laid down in earlier phases. However, this assumption would be premature.

If all these internal resources – the output of phase k and the input for phase $k+1$ – are *marketable* goods, the chain can be broken down mathematically without creating disadvantages for anyone. The individual stages or phases can make their own decisions, carry out their own calculations and run their own operations independently of each another. Each stage can supply the external market with its own output, as this output is marketable. It can also buy in the input it requires from an

¹ A number of later studies appeared in the 1970s and 80s as manufacturing companies grew bigger and bigger and the need for decentralized management became clear. Mathematical programming also made a formal treatment possible for the first time: 1. JOEL DEAN: *Decentralization and Intra-company Pricing*. Harvard Business Review 33 (1955), pp. 65-74. 2. JACK HIRSHLEIFER: *On the Economics of Transfer Pricing*. Journal of Business 29 (1956), pp. 172-184. 3. THEODORE GROVES: *Incentives in Teams*. Econometrica 41 (1973), pp. 617-631. 4. HORST ALBACH: *Innerbetriebliche Lenkpreise als Instrument dezentraler Unternehmensführung*. Zeitschrift für betriebswirtschaftliche Forschung 26 (1974), pp. 216-242. 5. LARS PETER JENNERGREN: *Entscheidungsprozesse und Schummeln in einem Planungsproblem von Hirshleifer: Eine Übersicht*. Zeitschrift für Betriebswirtschaft 52 (1982) 4, pp. 370-380.

appropriate external market. The opportunity costs are known. If a unit is not supplied to the external market, its market price is lost.

If the intermediate products are marketable, then, it is no longer necessary for the entire chain of different phases to be located within a single company. Each link in the chain can form a separate company operating independently in its own market environment. In this situation, where all the resources are marketable, each phase can calculate its own profit and loss using the prices on relevant markets. The condition of independence required by the Fisher Separation is met.

In practice, one may often observe a value chain being broken down in this manner. Take outsourcing, for example. Well-known major pharmaceutical companies such as Novartis or Merck buy new developments for drugs from smaller bio-tech firms through an intermediate market. The bio-tech firms are happy to sell their output, that is to say the new product, as they cannot manage the *growth* phase themselves with its clinical tests, licensing, customer acquisition, marketing and market penetration. The big pharmaceutical companies have the strength to manage the growth phase and are interested in buying new developments. They also have their own research and development divisions, but it is never certain what exactly these divisions will come up with, so the big companies are always on the lookout for new products.

3.2.4 Backward Recursion

So far, so good. However, it is in the nature of the firm that some or all of its resources – the output of phase k and the input for phase $k + 1$ – are *not marketable*. The reasons for this are many. A suitable market for the resources may not have developed perhaps. Or the firm may prefer to keep the resources for itself, even where an external market would exist. Indeed, this is probably what happens most of the time. As a result the internal resources cannot (or may not) be sold externally by the upstream phase k or bought in from outside by the downstream phase $k + 1$. They have no market price. Yet the company must value them somehow so it can calculate the profit and loss for each phase.

In the past, a good example of such internal resources would have been intermediate products. Intermediate products were not traded externally in anything one could properly call a market process. However, over time markets for intermediate products have developed. Today quite a high

level of standardization prevails. Intermediate products in the sense of parts and semi-finished goods are now all marketable. Yet the same cannot be said for internal resources – by which we mean potentials, products (prototypes) and customers.

Here's an example. The internal resources found in the early stages of the business process are "potentials" – areas of technology, opportunities and real options. They are firm-specific and can only be used within the firm. Their specificity makes them non-marketable. For example, Allianz is investigating different possible sites, partnerships and acquisitions in the new EU member states. The results of its investigations are specific to the company and therefore non-marketable.

Now, in addition to non-marketable resources, other input and output may also occur between the phases that *is* marketable. These marketable resources do not present a problem for the calculations used in the decisions. They can normally be valued on the basis of their price on the external market and so need not detain us further here. However, the internal non-marketable resources do create a valuation problem. And unless we can find a solution, it will not be possible to break down the chain mathematically into different stages.

- In the later phases – phases of growth and earning – the output of the processes of combination and transformation is mainly products that can be sold on the market. These products can be valued on the basis of their market price. In the later phases it is mainly the conditions in external markets that determine the potential value of actions, assets and investments
- In the earlier phases of the business process, the situation is different. To establish its profit and loss situation, each phase must consider positive output what can be used as input in subsequent stages. This is mainly non-marketable internal resources, such as potentials and innovative products that are about to be launched on the market. The value of actions in these early phases depends mainly on these non-marketable resources – resources that can be used in the subsequent phases. These resources, because they are non-marketable, can only be used within the firm: they cannot be valued on the basis of their price on external markets. For the decision in the individual phases, their value must be determined internally on the basis of their usefulness in subsequent phases

So, the way in which each investment relies on a previous investment is determined by *non-marketable resources*. However, this does not in itself

make it impossible to establish the value contributed by the individual stages. As long as the relationships can be modeled, it can be resolved by what is known as "dynamic optimization". This is a technique which – to use the language of SCHMALENBACH – determines the marginal costs and the opportunity costs for the general case.

Dynamic optimization is used to identify the best possible sequences of individual decisions whose effects are connected in a logical order or time sequence. For each stage, dynamic optimization takes into account not just the result of the stage itself but also the internal value of that which this stage supplies to the following stage. In dynamic optimization, the things that one stage supplies to the next – in our case, non-marketable internal resources – are called "conditions". If there are several resources, the conditions are multi-dimensional variables. The decision made in each individual stage thus generates two types of output:

- Output that can be valued directly. In our case, these are resources that can be sold on various markets and valued on the basis of their market price
- A change in conditions. In our case, this refers to the creation of a non-marketable resource. The value of these conditions can be calculated on the basis of the results that can be achieved with them in the following stage or stages

Only in the final stage are there no more changes in conditions that must be assessed. The optimum decisions for the final stage can only be determined by the results achieved on the market. By means of a backward recursion, the internal value of conditions for the earlier stages can be calculated. In the last stage but one, the resources can be valued on the basis of their profitability in the final stage. This profitability then determines the transfer prices. The decisions in the last stage but one can now be determined on the basis of a financial optimization calculation. This calculation involves the output, that is to say the resources, and is based on the transfer prices that have just been determined.

Let's look at it another way. The backward recursion in the technique of dynamic optimization is rather like a generous inheritance system. The financial results achieved in stage k are attributed in full to the resources or conditions created by stage $k - 1$ as the input for stage k . In the final step in the backward recursion, the output or results of the initial stages in the overall process are valued and this valuation taken as the basis for making the optimum decision in the first stage.

The reason for this is as follows. If a bit too little is done in early stages, this limits any opportunities for profit later on. The opportunity costs are correspondingly high. In other words, the input from early stages is of value for the overall organization. Indeed, it is of undreamed-of value. And the company will deliver a sub-optimal performance if it tries to save money here.

The technique of dynamic optimization was mainly developed by the mathematician RICHARD BELLMAN (1920-1984), although it is largely based on the calculus of variations.²

Let's take stock. The business process must be viewed as a longer process of transformation, occurring over numerous stages or phases. These phases are interconnected, the output from one phase serving as the input for later phases. In a simple scenario, the internal resources – the output of phase k and the input for phase $k + 1$ – are *marketable*. The company can be broken down into different parts – both in the mathematical model and in the real world. Each phase can then form an independent company. However, applying the criterion of net present value to each individual phase can be difficult if the internal resources are non-marketable. In this case, the value of the output cannot be determined by looking at market prices. Even so, it is still possible to apply finance-based thinking in the individual phases, as long as we factor out the practical difficulties of designing a complex tree of all possible paths. The internal values of the resources, which are needed for the decisions in the individual stages, can therefore be determined in principle by means of dynamic optimization.

3.2.5 Theory into Practice

Let's recap. In theory, the fact that the different phases of the business process follow a logical order and specific time sequence does not in itself make it impossible to make decisions in the different phases in an isolated fashion on the base of financial calculations.

The chain of different stages, each following on from the other, can even break down as long as the resources that connect the different stages are purely private and marketable goods. Things get tricky if the resources –

² DAVID G. LUENBERGER: *Introduction to Dynamic Systems: Theory, Models, and Applications*. Wiley & Sons, New York 1979.

the output of an earlier stage and the input of a later one – are non-marketable. In this scenario the firm must draw on the technique of dynamic optimization in order to value the resources internally. The internal valuations then function as the transfer prices, and isolated decisions in the different stages once again become possible. The local optima form an overall optimum for the firm.

In fact, this is only possible in theory. Three reasons:

1. It requires complete knowledge of all contexts
2. To determine the necessary internal transfer prices for resources, dynamic optimization uses a backward recursion across the entire decision tree and all of its branches. Decisions in individual stages are only possible after the entire dynamic optimization has been completed. Once this has happened, the individual decisions are known in any case – clearly a dilemma
3. A further complication is where the internal resource exhibits characteristics associated with public goods or synergies. The backward recursion produces a value for the resource that is the sum of the results of all the processes that make use of the resources. (They can do so because the resource is not used up in the process.) The value of this intra-public resource depends particularly on the number of processes that make use of it. This involves not just one decision within the tree, but the structure of the tree itself. In this scenario, groups of investments and groups of resources that benefit each other would have to be taken into account – for example, a knowledge base that is generated and used collectively. However, capturing this level of complexity is beyond the ability of formal modeling

Even in a purely hypothetical situation, then, there are limits to when the financial criterion can be broken down to the level of the individual stages. Alternatively, one could argue that it is still possible to determine the correct transfer prices in theory, but errors occur due to the theory being applied incorrectly in practice.³

Resources of an intra-public nature are particularly common in the early phases. In later phases, financial considerations can serve as a basis for

³ This is essentially the position taken by PATRICK BARWISE, PAUL R. MARSH and ROBIN WENSLEY: *Must Finance and Strategy Clash?* Harvard Business Review, September 1989.

decisions. In decisions located further upstream, however, financial considerations are no help even in theory, due to the intra-public nature of the resources involved – knowledge, potentials and real options. In practice, the attempt to break down the financial criterion to the different individual stages hits a dead-end even sooner.

In the first place, it would be pointless even trying to draw up a full decision tree as the basis for a dynamic optimization. Describing the decisions to be taken in later phases should be more straightforward, but the developments following on from earlier phases are too long-term and vague to be captured properly. Even if a reasonably accurate tree could be built, errors would arise in the valuation of internal resources (conditions) during the dynamic optimization. Not errors in calculation, but errors due to incomplete data and faulty cost and revenue forecasts, or cash flows for short. These errors could be small, but they add up during a backward recursion. The valuation errors in the initial stages for internal resources are therefore greater than in the later phases.

It is therefore important to distinguish a number of different phases – as we do in greater detail in the next section. While it is quite possible to employ decision-making techniques, capital budgeting and a finance-based system of management in later phases, this is not feasible in earlier phases. We gave three reasons for this. First, the internal resources have externalities, synergies, or are intra-public goods. Second, the full range of possible developments is not known at the beginning of the business process. And third, errors in the projected cash flows can undermine the backward recursion.

3.2.6 Four Phases

In this section, we have looked in some detail at the problem of how to set transfer prices. Our conclusion? A purely finance-led system of management as the basis for decentralized decision-making is not practicable in the early phases of the business process. Consequently, strategic thinking must fill the vacuum left by financial thinking.

Where does the boundary between strategic and financial thinking lie? To answer this question, a four-phase view of the business process proves to be particularly useful. The phases are as follows:⁴

1. The company tries to find the correct positioning and align itself accordingly. This positioning generates potentials that serve as the input for the following phase.
2. The company strives to realize these potentials, making investments and developing products and prototypes. This phase creates prototypes for products and services that serve as the input for the following phase.
3. The company launches the prototypes on the market as products, scales up production and achieves growth. This phase develops the market and at the same time creates a customer base that serves as the input for the following phase.
4. The company earns profits through its sales, and at the same time optimizes the various factors that impact its revenue and cashflow from sales.

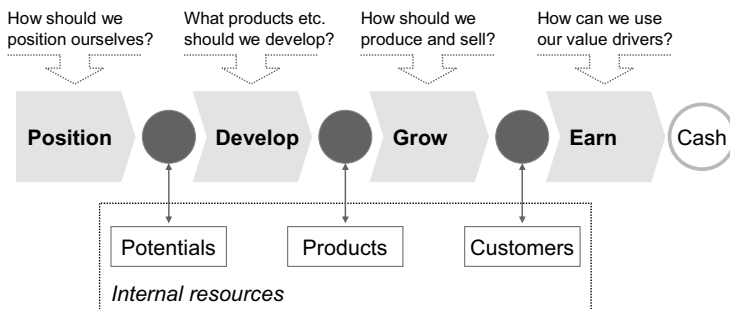


Figure 3-3: The four phases (left to right) with the relevant decisions (above) and the internal resources connecting the phases (below)

⁴ Naturally, a large corporation may carry out more than one of these multistage processes at the same time.

3.3 Summary

How can we resolve the sequential planning problem? By establishing values for the resources passed between the different stages of the business process. Values based on the market price of the resources, for example. If the resources are non-marketable, we must try to define internal values or transfer prices. In a simple model – one in which the resources are private goods and the operational reliability of the divisions is not called into question – we can set the transfer prices at the level of the marginal costs. If there are capacity restrictions, we should add opportunity costs. In this way, we can break down the central decision-making process into decentralized decisions.

However, setting transfer prices at the level of marginal costs is a matter of contention. Practitioners consider full costs to be more relevant than marginal costs. What is more, in many modern transformational structures, fixed costs are high and marginal costs low. Also, many people consider the elusive opportunity cost to be artificial and hence irrelevant. On top of this, it is impossible to calculate opportunity costs in many key situations in practice, especially if the resource has external effects, for example. And if there is a significant time lapse between the different steps or phases, then it will be unclear in the early phases where the resource produced will be used later on, or how often it will be used, or indeed how profitable its use will be. In this case, the idea of breaking down a finance-based system to its decisions in different phases reaches the limits of its practicability.

3.4 Recommended Reading

DAVID G. LUENBERGER: *Introduction to Dynamic Systems: Theory, Models, and Applications*. Wiley & Sons, New York 1979. A book that requires a certain amount of mathematical knowledge, but is clearly written and hence easy to follow. The methodological discussion is accompanied by outlines of how the mathematical theory can be applied in business.

4 Think Strategically

In brief:

The strategic approach is one of the main currents in business thinking. We outline the history and development of strategic management, recapping on the market-based view, resource-based view, relational view and the St. Gallen Management Model. But we don't just give a historical picture of the different approaches. We also look in detail at the challenges facing corporate strategy today. Technological progress, globalization, deregulation and the growing importance of capital markets have forged a new environment for companies and so too for strategic management.

4.1 History and Tools of Strategic Management

4.1.1 What Is Strategy?

In Ancient Greece, the word *strategia* meant "the art of military command". Indeed the term was used in a military context for centuries before it spread to other areas of the language. It was the Prussian general and military theorist CARL VON CLAUSEWITZ (1780-1831), in his main work "On War" (original title: "Vom Kriege"), who established a basis on which elements of strategy such as "flexible leadership" and "battle tactics" could later be transferred to the world of business.

Strategy-based thinking has a number of typical characteristics that come to the fore regardless of the specific context in which it is applied. Thus it usually sets out with a *concrete goal* – to defeat the enemy, win over customers, make a breakthrough or achieve a transformation, for example. The strategy then answers the question of how best to reach that goal – what steps and actions the firm should take and how it should react to incidental factors or actions taken by other players, including the firm's "opponents".

- The strategy is a contingency plan that outlines what approach the firm should follow in different situations, i.e. in response to changes in the environment or action taken by other people. It is not a single strategic "move", but a series of sequences and actions.

- The strategy indicates the provisional approach that the firm will follow depending on the particular situation, without going into full details. It has to be fine-tuned before it is actually implemented.
- The strategy is based on an analysis of the situation, the environment and possible impacts on the firm. It offers a *differentiated* perspective, allowing for complexity and uncertainties.

4.1.2 The Beginnings of Strategic Management

The concept of strategy first entered the field of economics in the 1940s (see box feature). In the decades that followed, the business world only gradually warmed to the idea of strategy-based thinking. Indeed, the concept of "strategic management" did not become firmly established in business thinking until the early 1970s. This was a time when, after years of economic growth and worldwide sales of mass-market products, there was clear evidence that markets were becoming saturated.¹ At the same time, people were waking up to the fact that natural resources were not infinite and realizing that they had long been treating them in a wasteful manner (founding of the *Club of Rome* in 1968).

Faced with these changes in the global situation and new demand behavior from consumers, companies found that they could no longer use their traditional microeconomic calculation methods. These models were geared toward optimizing factor combinations and calculating profit and loss on the basis of a given price-demand function for certain types of production functions. In the face of the increasing complexity and new realities, this approach was now too one-dimensional and mechanical.

¹ 1. HANS H. HINTERHUBER: *Strategische Unternehmensführung – Strategisches Denken: Vision, Unternehmenspolitik, Strategie*. 7th ed., Berlin 2004. 2. GÜNTER MÜLLER-STEWENS and CHRISTOPH LECHNER: *Strategisches Management – Wie strategische Initiativen zum Wandel führen*. 3rd ed. Schäffer-Poeschel Verlag, Stuttgart 2005. 3. HENRY MINTZBERG: *Strategy formation: Schools of thought*; in: J. FREDERICKSON (ed.): *Perspectives on strategic management*. Boston 1990, pp. 105-235. 4. CYNTHIA A. MONTGOMERY and MICHAEL E. PORTER (eds): *Strategy. Seeking and Securing Competitive Advantage*. Harvard Business Press, Boston 1991. 5. MICHAEL E. PORTER: *How competitive forces shape strategy*. Harvard Business Review 57 (1979), pp. 137-156.

The Concept of Strategy in Business – An Overview

1. JOHN VON NEUMANN and OSKAR MORGENSTERN (1944) use the term strategy to describe the complex and dependent sequences of individual actions within the framework of Game Theory, founded in 1944.
2. Many thinkers have examined the connection between strategy and organization. For the Chinese philosopher SUN TZU (544-496 B.C.), strategy is the product of an organization's work. By contrast, ALFRED D. CHANDLER (1962) claims that the organization must be subordinate to strategy: "structure follows strategy". So if the strategy changes, the setup of the company must also change.
3. ANSOFF (1965) changes the focus of strategy. For him it is no longer the creative product of some great intellect, but the result of workmanlike planning by middle management.
4. KIRSCH (1977) characterizes a company's strategy as follows: First, it must consist of material guidelines for action. Second, it must have the nature of principles. Third, it must relate to capabilities. Fourth, it must be implemented by the entire company – inasmuch as the dominant leadership groups agree to, and share, the first three of its characteristics.
5. MINTZBERG describes strategy in terms of what it does. He provides five definitions – the 5 Ps. Thus strategy is a *plan*, a *ploy*, a *pattern*, a *position* and a *perspective*.

In the 1970s it became clear that the earlier planning approaches – long-term forecasting based on extrapolations from the status quo – were still being used by managers. Systems of quantitative indicators referring to the past were center stage in such methods. But this type of long-term planning only functioned as long as the environment in which businesses operated was continuously moving forward. By the beginning of the 1970s at the latest, this premise no longer held true. The oil crisis and resulting shock over oil prices, plus new competition as Japan entered world markets, made it clear to firms in Western industrialized countries that the stability of the post-war boom period was well and truly over. The new environment forced companies to rethink their traditional management and planning approach. The concept of strategy began to appear more frequently in both management literature and company boardrooms.

In the quest to find the basis of sustainable corporate success, the focus gradually changed. Firms now looked less to the past and more to the future. They began to see that the opportunities and risks that lay ahead of them should receive just as much attention as their own strengths and weaknesses. This automatically shifted the spotlight somewhat onto the

environment. Strategic planning worked on the basic assumption that analyzing a firm's environment allowed one to determine the chances of its success. A number of different instruments were developed at this time to help with such analysis: the best-known instruments are described below.

SWOT Analysis

SWOT analysis is a way of looking at the firm and its environment at the same time. "SWOT" stands for *strengths*, *weaknesses*, *opportunities* and *threats* (i.e. the risks faced by the company). The *strengths* and *weaknesses* refer to areas that the firm itself can actively manage and control, while the *opportunities* and *threats* refer to external factors which the firm can at best influence indirectly.

The main idea behind SWOT analysis is that it gives the firm a detailed picture of its external situation by analyzing the environment in which it operates. This allows the firm to exploit its opportunities and overcome its threats. In so doing, it should make the most of its strengths and keep an eye out for its weaknesses. However, for SWOT analysis to be motivating for the firm, it must be carried out in the right order. You start with the strengths and accentuate the opportunities. If you pay too much attention to the weaknesses and threats, the result can easily be frustration and stagnation.

External analysis	OPPORTUNITIES	THREATS
Internal analysis		
STRENGTHS	SO strategies Use strengths to exploit external opportunities	ST strategies Use strengths to deal with external threats
WEAKNESSES	WO strategies Exploit opportunities and thereby overcome weaknesses	WT strategies Overcome internal weaknesses and thereby reduce threats

Figure 4-1: SWOT analysis as shown in MÜLLER-STEWENS/LECHNER (2005)

The Learning Curve

The learning curve was developed by the Boston Consulting Group (BCG) at the end of the 1970s and marketed as a planning and controlling tool. It shows the connection between experience and efficiency. The more often a task is carried out, the further the costs fall (see figure 4-2). The decline in costs as production volumes increase is not automatic, however. It rests on the assumption that the firm benefits from learning effects and accompanying increases in productivity, and can realize economies of scale. The learning curve has implications for the choice of strategy, as it shows that increasing market share can bring lower production costs.

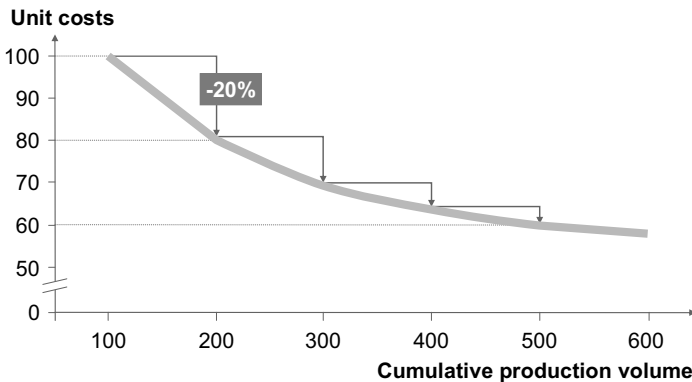


Figure 4-2: The learning curve

Portfolio Analysis

Portfolio analysis enables the firm to be viewed together with its environment in a two-dimensional matrix. The basic idea is that this produces a more realistic description of the situation than simply looking at the microeconomic factors volume and price.

The simplest and most popular version of portfolio analysis is the growth-share matrix, based on the ideas in the learning curve and the concepts of product lifecycle and cashflow. This tool was also developed by the Boston Consulting Group. The current state of a firm is analyzed by describing the position of its products in the market. The company's

products are positioned on a two-dimensional matrix with the axes *relative market share* and *market growth rate*.

Relative market share is defined as the firm's market share divided by that of its strongest competitor. Four typical positions are identified, for example *cash cows* – products with a high market share but stagnant market growth.

Firms can then develop a basic strategy for each product depending on where it is in the matrix (see figure 4-3). For instance, promising *question marks* and *stars* should be invested in, *dogs* should be disposed of and *cash cows* should be milked. Clearly, these basic strategies include recommendations for financial management: they represent a sort of bridge between strategy-based and finance-based management. The BCG matrix also reveals that the mix of product positions is of prime importance. It can be seen as the forerunner of a whole series of portfolio methods that focus on balancing different features within the portfolio.

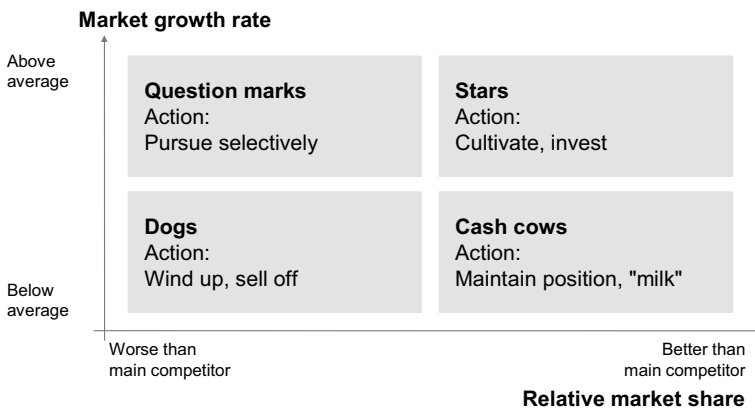


Figure 4-3: The BCG matrix, with its two dimensions *relative market share* and *market growth rate*, indicates how a firm's products are positioned in the market (based on HEDLEY 1977)

4.1.3 Later Developments: The Market-Based View

The 1980s witnessed a strengthening of the tendencies already seen in the 1970s. The internationalization of business continued apace. Structural change had taken hold of industrial nations and the tertiary sector became

increasingly important for economic growth, as countries moved faster and faster toward becoming service economies. The environment in which businesses operated became ever more complex, and firms were subject to increasing competitive pressure. Now, more than ever, focusing on the customer was vital.

In line with these developments, strategic management also shifted its focus. The firm began to be viewed from the "outside in", i.e. from the perspective of the market. After all, it was the market that wrote the rulebook determining the firm's ultimate success or failure.

This "market-based view" was based on the structure-conduct-performance paradigm. In this approach, competitive advantage (performance) is explained by the industry setup (structure) and the strategic behavior of the firm (conduct).

Porter

MICHAEL PORTER, Professor at the Harvard Business School, is perhaps the best-known proponent of the market-based view. PORTER identifies five factors that determine competitive intensity:

- The threat to existing firms of new firms entering the market
- Pressure on prices from substitute products
- The bargaining power of customers
- The bargaining powers of suppliers
- The intensity of the rivalry and aggression between existing firms

Today these so-called *five forces* are a standard tool in strategic management. They are used to make prediction about a company's future market position.

PORTER argues that companies should try to differentiate themselves from other players in the market. It is this differentiation that prevents the market from moving toward perfect competition. It helps preserve some degree of monopolistic competition and allows firms a certain amount of room for maneuver – particularly over price.

Now, as we know, in a perfect market, all market participants are price-takers. No one can influence the price. PORTER identifies two alternative ways of generating competitive advantage:

- Aiming for lower costs, i.e. cost leadership
- Aiming for better-quality product features, i.e. product differentiation

Companies should make a clear decision to pursue one avenue or the other. The worst option, according to PORTER, is to be stuck in the middle. (Today, of course, we know that a firm can't simply opt for product differentiation without working on the cost side at the same time.)

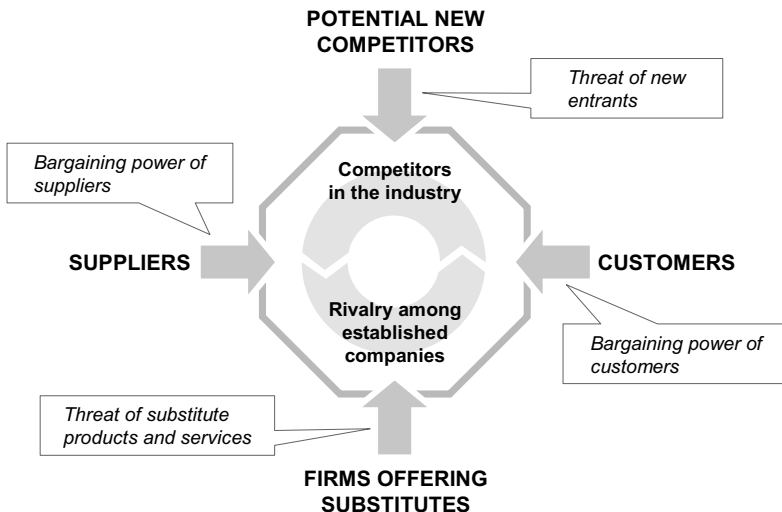


Figure 4-4: The drivers of competition, based on PORTER (1999)

4.1.4 The Resource-Based View (RBV)

It soon became clear that market-oriented strategies had a number of problems. First of all, they offered a one-sided perspective that focused purely on the market. Next, the idea that firms should adjust to whatever situation they find themselves in was increasingly seen as fatalistic. Moreover, market-oriented strategies were criticized for being oriented toward established sectors and so running the risk of ignoring newly emerging markets. It was argued that the firm should look for competitive advantage not just outside – i.e. in the market – but also within. Companies needed to encourage their creative potential, actively nurture it and use it to their economic advantage. In the resource-based view, the focus shifts from "outside in" to "inside out", although this doesn't mean that the firm

should indulge in navel-gazing. Rather it must keep the demands of the market in mind while concentrating on its own resources.

Inevitably this raises a number of further questions. What does a firm's creative potential consist of? What factors create competitive advantage? And how can companies stimulate these factors?

Penrose

As early as 1959, EDITH PENROSE (1914-1996) explained the success of a firm in terms of the quality of its internal *resources*. She shifts the focus onto production and the supply markets for production factors. To be successful on the marketplace, the roots of the firm's competitive advantage must lie in stages located further upstream.

PENROSE states that the resource base differs from firm to firm. It is this *heterogeneity* of resources that makes each firm unique. Firms must be aware of the specific nature of their resources, as only with this knowledge can they develop them and transform them into competitive advantage.

This is the essence of the "resource-based view" (RBV). In simple terms, the RBV states that every firm has different, special resources. In the course of the ensuing transformations and transactions, these resources generate advantages for the firm.

This perspective is closely related to DAVID RICARDO's (1772-1823) theory of comparative advantage. Ricardo explains how countries specialize in certain resources in their trade with other nations. He recognizes that *relative* productivity is more important than absolute productivity. For this reason, a firm will focus on the particular resources and transformation processes for which it finds itself in a better position than its competitors in relation to other resources and transformation processes.

JAY BARNEY was responsible for reviving this view in 1991. His advice to management was that companies should not only recognize their special nature, but also develop an appropriate plan for how and where they could make best financial use of their resources.

As stated above, the RBV sees resources as *heterogeneous*. It is not the case, as is assumed in neoclassical economics, that only a few different types of resource exist (e.g. land, capital, labor) and firms merely differ in

terms of the quantities of these homogenous resources they have. For instance, BMW doesn't differ from Fiat simply in terms of the size of its workforce. The workforces of BMW and Fiat also differ in terms of their skills and motivation levels. Moreover, companies differ in terms of their history, their standing in the labor market and their image with customers. Every brand is different.

This heterogeneity is clearest when it comes to the knowledge resources enjoyed by companies. Often this knowledge is hidden or implicit (i.e. tacit knowledge). Examples are firm-specific values and corporate culture. In this way, the resource-based view immediately draws our attention to the important role played by management, motivation and skills.

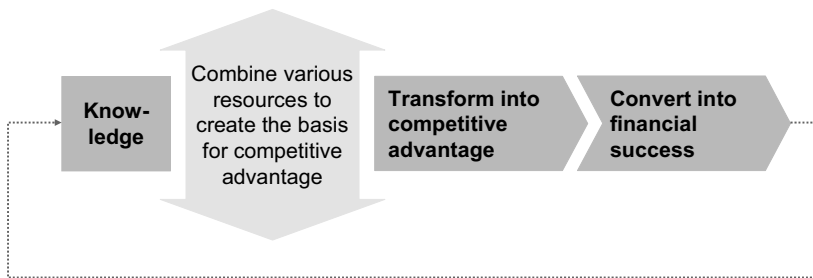


Figure 4-5: According to the RBV, the firm must first combine various rare, firm-specific resources that cannot be easily transferred by means of market transactions. This establishes the roots for later competitive advantage. Next comes a two-stage process of transformation, first creating competitive advantage (from the perspective of clients and consumers) and then realizing financial objectives

The RBV addresses three central questions:

1. What resources generate lasting competitive advantage?
2. Where (i.e. for which products) and how can these resources be used to the best economic advantage?
3. How can these resources be maintained, cultivated, protected and further developed?

The answers provided by the RBV can be summarized as follows:

- The resources must be rare and should not be found in the same form in other firms. Often this means that the resources are not marketable, but

firm-specific. They must be developed within the firm in a sustainable manner

- Various different resources must be combined. The roots of competitive advantage are not found in a single resource, but in the combination of different resources. In particular, this means combining concrete resources (tangibles) with knowledge and abilities (intangibles)
- To be effective, the firm must create competitive advantage (from the point of view of customers) from these roots in a transformation process (Kirsch 1991)
- To preserve the resources, the firm must protect, cultivate and further develop them. This requires what are known as *dynamic capabilities*

In short, the RBV states that the firm must ask itself the following three questions:

1. What is our treasure trove – the unique resources that can be combined with each other? A single resource is of little use. But when resources are joined together they acquire a value that derives from combining them in the transformation processes
2. What can we do with our treasure? Combining the resources in the transformation process must result in competitive advantage
3. How can we protect it? The key here is to strive to renew it at the same time as developing dynamic capabilities

As we can see, the RBV goes beyond recommending that firms recognize, combine, transform and apply their existing unique characteristics. It also says that such resources can and should be developed. Yet buying them on the market is not simple. It often requires buying the context along with the resources, because the two are typically intertwined in a complex series of dependencies. In other words, it's not easy to lift them out of their context without them losing some of their value for the combination and transformation process.

Drucker

PETER DRUCKER (1909-2005) argues that knowledge is the key resource of the modern firm. In so doing, he paves the way for what is known as the "core competency approach". This is derived from the RBV and stresses

competence as the critical resource. In the core competency approach, resources are concentrated on particular capabilities within the company.

- These capabilities or competencies should serve a majority of the firm's production and performance processes, in the capacity of a firm-internal public good
- The capabilities should be unique to the firm

The firm's goal is then to develop the specific knowledge that gives it a lasting, unique capability. Naturally this should be a competency that will be economically profitable for the firm – a *unique selling proposition* or USP.

To summarize, the resource-based view overcomes the strategic perspective's narrow focus on markets by shifting our attention to the potentials that lead to competitive advantage. These potentials are created by combining different *resources*.

What are resources? Some definitions

1. For WERNERFELT (1984), resources are everything that is "semi-permanently" *tied* to the firm. It is postulated that the resources in the RBV cannot be separated from their environment.
2. BARNEY (1991) distinguishes between physical capital resources, human capital resources and organizational capital resources. GRANT (1991) refers to financial resources, technological resources and reputational resources. While HALL (1993) differentiates between tangible and intangible resources.
3. AMIT and SHOEMAKER (1993) view resources as stocks of available factors that are *controlled* by the firm – they don't actually have to belong to them.
4. SANCHEZ, HEENE and THOMAS (1996) define resources as everything that helps the firm react to external opportunities and threats.
5. PISANO and SHUEN (1997) see resources as firm-specific assets that are not easy to imitate.
6. We would add to these views that the key issue is whether the resource is of a *private* or *public* nature within the firm. If it is a private good, then the store of the resource is reduced each time it is used for the business. If it has the nature of a public good, it is not reduced through usage. Many different processes or investments can make use of it without eating into it. In section 2.1.4 we presented a typology of eight different types of resources, representing different combinations of the qualities "public", "not public", "marketable" and "non-marketable".

4.1.5 Networks

The Relational View (RV)

In the resource-based view, the resources needed for the combinations and transformations that give rise to competitive advantage are only available to the specific firm in question. The characteristics that make the firm unique are contained in these resources. The RBV covers firms that carry out all the combinations and transformations themselves. The firm operates on its own, trading with external market participants on the various markets – the labor market, capital market and the market for production factors. In the RBV, if the firm cooperates with other firms it does so through the market. Even if such transactions repeat themselves, they can be terminated at any point. No further *connection* is established between the firms.

In addition to this sort of trading, more lasting relationships between firms have become increasingly important in recent years. This is based on the idea of a consortium. The overall goal of the consortium is broken down into partial goals. Each member of the consortium then fulfils one of the partial goals. This gives rise to partnerships that extend beyond individual projects. Within such partnerships, the firms develop joint goals and even invest in the connection between them. The consortium grows into a network or virtual firm.²

Firms involved in such relationships are not necessarily bound to each other forever. They avoid going down the path of a merger or subordination agreement. Naturally the relationships between the firms should not be seen independently of the resources – particularly if the different partners bring their own resources into the network for common use, and investments ensue. But the key element of competitive advantage

² 1. RUTH STOCK-HOMBURG and MICHAEL GAITANIDES: *Einflussgrößen des Teamerfolgs: Analyse der Interorganisationalität als Moderator*. Die Unternehmung 60 (2006) 4, pp. 265-279. 2. URBAN LAUPPER: *Wertorientierte Netzwerksteuerung: Neue Werttreiber für Unternehmen in Wertschöpfungsnetzen*. Bank- und finanzwirtschaftliche Forschungen 360. Verlag Haupt, Bern 2005. 3. NILS BICKHOFF, CHRISTIANE BÖHMER, GUIDO EILENBERGER, KARL-WERNER HANSMANN, MARKUS NIGGEMANN, CHRISTIAN RINGLE, KLAUS SPREMANN, GREGOR TJADEN: *Mit Virtuellen Unternehmen zum Erfolg*. Springer, Berlin 2003.

is the network of relationships. This new perspective on cooperative relationships is known as the *relational view* (RV), and is an extension of the resource-based view.

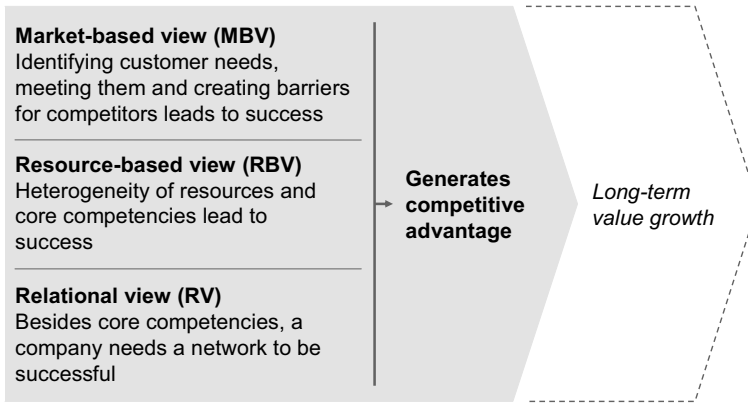


Figure 4-6: Three strategic perspectives on how firms can achieve competitive advantage. Competitive advantage then leads to long-term value growth

Two themes lie at the heart of the relational view:

- The resources specific to the relationship
- The contractual rules under which the resources are brought into the network and may be used by the other partners

The resources specific to the relationship are not considered private goods. The resources are public in nature within the network – or at least they show positive externalities. Otherwise they could clearly be considered private goods and would not require any cooperative effort beyond market transactions. In their capacity as public good, the resources specific to the relationship represent an infrastructure that can be used by everyone within the network. Thus a shared knowledge base – the creation of a brand, for example – is an attribute of the entire network and can no longer be considered as belonging to any one partner.

The St. Gallen Management Model

Today's strategic approaches have left the narrow, abstract perspective of the 1960s far behind them. In the old days, the firm was described

primarily in terms of its production and sales function and analyzed in microeconomic terms. Such traditional models have now been replaced with the more holistic perspectives proposed by different centers of research.

Strategic approaches set out by defining the problem and describing the situation in a differentiated way. Using this as a basis, they then derive a possible course of action for reaching a specific goal, such as gaining competitive advantage, overcoming a crisis or transforming the company. These courses of action are intuitively correct. By contrast, holistic research models increase our general understanding of the factors, goals and stakeholder groups involved. These holistic models of the firm and its environment help to build students' understanding. Perhaps the most important example of this approach is the St. Gallen Management Model.

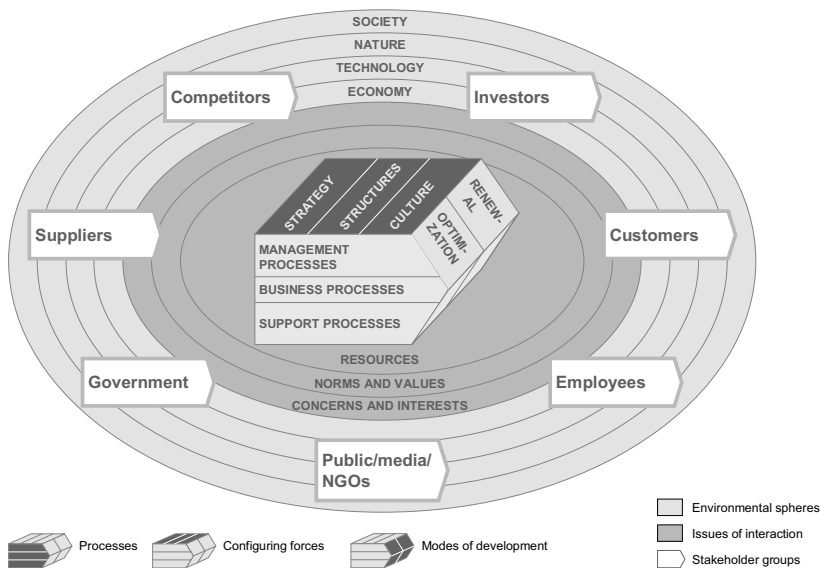


Figure 4-7: The St. Gallen Management Model: Core processes, modes of development, configuring forces and environmental spheres (source: Universität St. Gallen 2006)

The St. Gallen Management Model is a holistic perspective on the firm, its environment and its dynamic aspects. It was developed at the University of St. Gallen and derives from the integrated view of the firm proposed by HANS ULRICH (1919-1997). At its heart lies the idea of the firm as a system. The formation of networks between different elements of the

system, and the dynamic aspects of these elements, give rise to the complexity found in practice.

The St. Gallen Management Model proposes six central conceptual categories for describing the system:

1. Environmental spheres
2. Stakeholder groups
3. Issues of interaction
4. Configuring forces
5. Processes
6. Modes of development

These conceptual categories represent the different components of the system.

The model considers "strategic management" to mean the *systematic examination of a firm's basis for long-term success*. The firm's strategy must give answers to the following five questions:

1. What do we offer?
2. What is the focus of our value creation?
3. What are our core competencies?
4. What fields do we cooperate in?
5. What stakeholder groups must we consider (concerns, needs, forms of communication)?

By looking at this range of different issues, the St. Gallen Management Model takes a much more comprehensive view of strategy than earlier approaches. Strategy is no longer about how to act in a concrete situation in order to achieve a specific improvement that can be described in terms of its content. It is not just a one-off treatment for a specific situation viewed in an isolated way. In the St. Gallen Management Model, strategy is a comprehensive approach to all areas.

Strategy in this more comprehensive sense is also known as the firm's *configuration*. The configuration must be internally consistent; the individual answers it provides must together form a harmonious whole. As a comprehensive strategy, the configuration must bring together the

answers to the five questions listed above and the goals and capabilities of the firm in a *coherent* form.³

STRATEGIC MANAGEMENT

A collection of various approaches grouped into categories such as MBV, RBV and RV

Every strategy that involves taking intuitively correct action in a concrete situation so as to achieve a specific improvement that can be described in terms of its content (transformation, market penetration, differentiation)

ST. GALLEN MANAGEMENT MODEL

A holistic perspective on the firm as an overall system, its environment and its dynamic aspects

The firm's configuration provides comprehensive and coherent answers to the questions of what the firm offers, the focus of its value creation, its core competencies, its fields of cooperation and its stakeholder groups

Summary 4-1: Strategic thinking versus holistic thinking

The St. Gallen Management Model connects the various issues covered by the market-based view (sales performance), the resource-based view (core competencies) and the relational view (fields of cooperation), and even integrates considerations about shareholder and stakeholder groups. Its overarching terminology provides a general theoretical framework that ensures that students do not miss any influential factor or interdependency.

4.2 Challenges for Strategic Management

4.2.1 Change Drivers

The environment for firms has changed radically in recent years. Four factors influence and reinforce each other, driving the pace of change and making strategic orientation more difficult – and yet more necessary – than ever. These "change drivers" are as follows:

- Technological advance

³ 1. ROLF DUBS, DIETER EULER, JOHANNES RÜEGG-STÜRM and CHRISTINA E. WYSS: *Einführung in die Managementlehre 1*, Verlag Haupt, Bern 2004, pp. 83-85. 2. JOHANNES RÜEGG-STÜRM: *Das neue St. Galler Management-Modell*. Verlag Haupt, Bern 2002.

- Globalization
- Deregulation and liberalization of markets
- The growing importance of international capital markets

Technological Advance

Progress in communication and information technology (CIT) has acted as a catalyst for technological progress in many sectors in recent years. It was, and is, the basis for many product and process innovations. It has also created the necessary conditions for the emergence of new business models. The costs of communication and information have fallen substantially, while the performance of hardware and software has increased enormously, as has their penetration. For example, the number of DSL customers has grown more than five times over since the year 2000. In the same period, connection prices almost halved.

These developments have made a significant contribution to lower transaction costs, which substantially improves firms' growth potential. Companies can now expand and begin exploiting economies of scale without suffering high transaction costs. In fact, powerful CIT does more than just improve firms' internal growth possibilities. Thanks to new management models, they can now optimize their value creation process by working with external partners while retaining control of the overall process.

The rapid development of CIT has led many analysts to speak of the "death of distance" or a "space-time compression". The possibility of unlimited fast communication has made geographical distance largely irrelevant today. In this sense, powerful CIT is a prerequisite for the functioning of global markets and transnational corporations.

Globalization

Economic relations across the borders of countries and even continents have existed for centuries. But today's global economic relations have moved into a new dimension in terms of their expansion and intensity. We live in an age of globalization. International economic interdependency has grown massively over the last two decades. GDP worldwide has gone up by an average of 3% each year since 1985. Firms that want to grow faster

and at above-average rates have had no option but to expand internationally – exports increased by 8.6% per year. Foreign direct investment promises to show even stronger growth in future; it has averaged growth of 12.1% per year since 1985.

A number of different factors have contributed to globalization. One major influence has been political change. The collapse of the Soviet Union and other socialist countries marked the end of the Cold War and the bipolar global economic system. Transition states in the CIS and Central and Eastern Europe integrated themselves into the global trade network. The People's Republic of China is making a similar U-turn by moving in the direction of a free market economy – in so doing becoming a heavyweight in the global economy. Dynamic economic development is found elsewhere in the world, too, with some countries in Latin and South America and the newly industrialized nations of South and East Asia showing above-average growth rates.

Combined with these changes in the geo-political map, the removal of trade barriers and progress in information and communication technology have forged entirely new conditions for businesses. Today, internationalizing your business means much more than expanding into new markets. It affects your whole value chain, from sourcing to production and sales – all areas that have long since transcended national boundaries. Firms can create a value chain that stretches right around the globe. This creates great potential for reducing factor costs, for example through global sourcing of materials or production in low wage countries.

Generally speaking, companies view this greater room for maneuver as one of the positive effects of globalization. However, it has a flipside. Companies from other regions around the world can also exploit the new opportunities. They are now potential competitors on traditional markets. That's why every company today, whether major corporation or small business, must respond to the challenge of globalization – "proactively" by expanding beyond its national borders, or "reactively" when foreign competitors enter their domestic markets. The more the world economy coalesces, the greater the number of competitors. This inevitably means more pressure on prices and greater erosion of margins. Indeed, profit margins have shrunk considerably in some sectors over the last ten years.

In short, globalization means greater competitive pressure – and hence price pressure – on companies. Yet at the same time it opens up new opportunities, such as better sales opportunities or the potential to reduce factor costs by optimizing the configuration of the value chain.

Liberalization/Deregulation

Closely related to the increasing globalization of markets is a third change driver that has had a serious impact on the business environment in the last two decades: liberalization and deregulation. Starting in the 1980s, US Presidents Jimmy Carter and Ronald Reagan and the UK Prime Minister Margaret Thatcher embarked on a mass privatization of the telecommunications, transportation and power industries. This led to a wave of deregulation and liberalization that gradually swept across most of Europe. The withdrawal of the state as the owner of public utilities such as the postal service and public transportation aimed to promote innovation and effectiveness in the newly competitive environment.

The liberalization of national markets formerly run as monopolies signaled a revolution in the service sector. As one might expect, the opportunities for growth were immense – as were the risks for the companies formerly enjoying a monopoly position. But the opportunities were there for both new, home-grown competitors and foreign companies entering the market.

The effect of liberalization on competition in certain sectors is enormous. This can be seen from the chart below. The changes in the structure of cell phone operators are reflected in falling prices; this, in turn, leads to diminishing transaction costs.

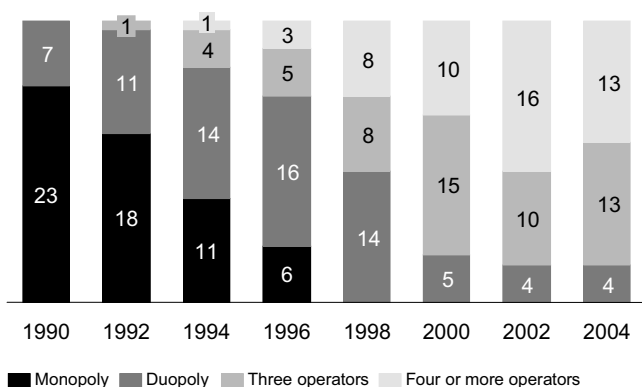


Figure 4-8: Competition in the cell phone industry [number of OECD countries with the competitive structure indicated] (Source: OECD)

Growing Importance of International Capital Markets

Deregulation and globalization have not only had major consequences for the real economy: they have also caused lasting changes in the capital markets. It will help us to understand this if we first take a brief look at the historical relationship between the real economy and the financial markets. Up until round about the 1960s, the financial economy played a supportive role toward the real economy. Its purpose was to ensure the smooth running of business (Phase I). Companies relied heavily on internal financing to enable them to grow.

However, with the beginnings of globalization, this source of financing became inadequate as companies now required more capital. The level of trading on stock-markets increased and the financial markets shifted up a gear. The financial markets were no longer servants of the real economy (Phase II).

JOSEPH SCHUMPETER describes this stage of development as being like a man taking his dog for a walk. The man (the real economy) walks steadily in a certain direction. The dog (the financial economy) sometimes falls behind and sometimes runs on ahead. However, both man and dog ultimately reach the goal together.

In Phase III, this partnership breaks down. The real economy follows the signals coming from the financial economy. The financial economy has now assumed the dominant role.⁴

An indicator of how far capital markets have developed in recent decades is the enormous growth in market capitalization. This is shown in figure 4-9.

Investors with Influence

The German cable company Kabel Deutschland aims to turn itself from an infrastructure supplier into the leading provider of triple-play services (TV, radio, Internet connection and telephone services via the television cable). This is the stated goal of the investment company Providence Equity Partners, who own roughly 88% of the shares in Kabel Deutschland. However, the financial investors were unhappy with the pace at which the firm was pursuing its aims – and in May 2007 there was a change of management, with Adrian von Hammerstein replacing the former Speaker of the Management Board.

Similarly, when René Obermann was appointed CEO of Deutsche Telekom in November 2006, the investment company Blackstone was not completely uninvolved. Unhappy with falling profits, representatives of Blackstone were among the members of the Supervisory

⁴ KLAUS SPREMANN and PASCAL GANTENBEIN: *Kapitalmärkte*. Lucius & Lucius, Stuttgart 2005.

When the real economy begins to follow the signals coming from the financial economy, the consequences for businesses are clear. Their level of performance must match the market rates of return. In other words, no company today – not even a family-run business – can pursue a strategy that ignores the capital markets. The firm's actions and the decisions of its top management must be oriented primarily toward increasing value.

The role of the providers of capital has also changed. This is an important development. In the past, investors by and large simply provided the capital that allowed managers to realize their plans. Today they have a much more powerful influence on the policies and strategies of the companies they invest in, whether directly or indirectly. This is especially true of the major capital market investors and private equity firms, who play an increasingly important role on the financial markets. In 2002, for example, Germany was home to 59 private equity transactions with a total volume of EUR 6.9 billion; by 2006 this had grown to 186 transactions with a total volume of EUR 186 billion.

Activity by private equity companies has been a powerful driver in the merger and acquisition business. This, in turn, has led to significant growth in the price-tags put on companies and sky-rocketing acquisition premiums. Favorable credit terms have contributed to this process. As a rule, investors finance about 70% of the purchase price through bank loans. In recent years, banks have been generous with such loans. However, the mood may now have changed – which will put the brakes on the exorbitant growth in prices seen in the past in the acquisitions market.

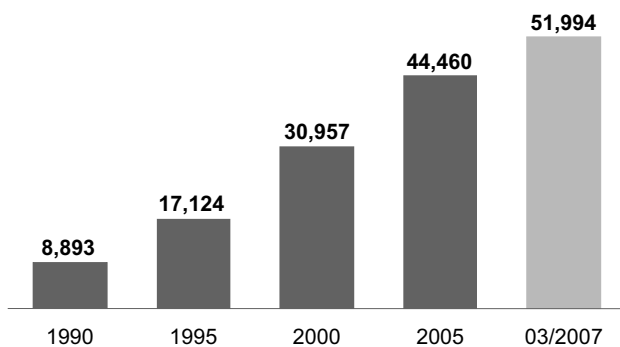


Figure 4-9: Growth in worldwide market capitalization [USD billion] (Source: World Federation of Exchanges, 2007)

4.2.2 Limitations of Traditional Strategic Tools

Technological advance, globalization, deregulation and the growing importance of capital markets – together these four drivers have created a new level of competition that is growing faster than ever before. The environment in which businesses operate is becoming increasingly dynamic and complex. Moreover, the speed of reaction demanded of companies has multiplied many times over. These factors make strategic orientation a difficult undertaking for today's firms. And the problem is not only finding the right strategy: it is also that successful strategies reach their sell-by date faster these days. In former times, ten-year strategies were common; today, three to five years is more like the norm.

And it doesn't stop there. The traditional toolbox of strategy instruments has also lost much of its relevance today. It is based on premises that have to a large extent been overtaken by economic reality. Many traditional strategic tools are based on the assumption of dynamic markets with good growth rates. In reality, there is a high level of market saturation in industrial nations. This is particularly evident in the area of consumer goods. In Germany, for example, there are 98.5 computers and 126.5 cell phones for every 100 inhabitants, according to figures published by the German Federal Statistical Office. The result? Sinking profit margins (see figure 4-10).

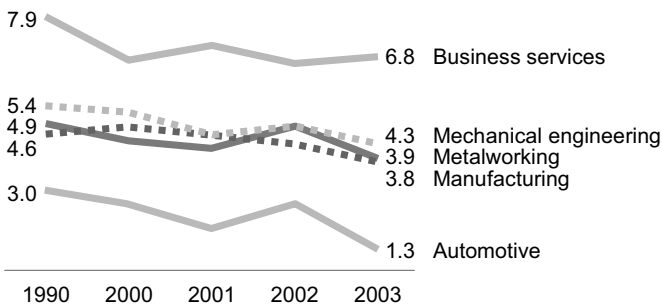


Figure 4-10: Profit margins in German companies [%] (Source: Deutsche Bundesbank)

Traditional strategic instruments should be used and interpreted with caution in today's circumstances. The learning curve is a good example. The key insight provided by the learning curve is that the more often a task is carried out, the more costs fall. However, this applies mainly to

homogenous mass-market products that can be manufactured in large quantities. Today, what we see is a high level of demand for products that meet individual customer requirements. The age of homogenous mass-market products is over – at least in Western industrial states. At the same time, product lifecycles are getting shorter by the day. The upshot? The cost reduction potential indicated by the learning curve is now purely theoretical. In practice, the product often passes its sell-by date before the manufacturer can realize any cost reductions.

The majority of the strategic planning approaches used by companies in the past relied on a useful fiction. This was the idea that the environment was relatively stable and gradually evolving. This belief has long since become untenable. The present – to say nothing of the future – is full of surprises and discontinuities. The increasingly complex environment in which companies operate means that they have to take many more factors into account when defining strategy than in the past. They can't simply work on the assumption that current trends will continue unaltered, and make this the basis for their corporate strategy. The classical planning periods – one year for operational planning, two to five years for medium-term planning, five to ten years for strategic planning – no longer pass muster. The environment is too complex and the changes too rapid. Moreover, in such conditions it is impossible to come up with fully quantified corporate goals.

For many people, accepting that traditional strategic tools have reached the limits of their applicability is an uncomfortable and difficult process. Traditional planning tools and philosophies offered the psychological advantage of allowing precise figures and deadlines to be put to corporate goals. This created a feeling of security – for managers, employees and investors alike. True, the feeling was often illusory, but it gave them a sense of orientation for the future. Today we have a paradoxical situation. Growing complexity creates a greater need for orientation and security, while at the same time creating greater uncertainty and hence insecurity for firms and capital markets. Dealing with this paradox is probably one of the greatest challenges facing managers today.

The answer? Well, it's not to develop more sophisticated planning tools so as to maintain the illusion of certainty. This wouldn't help companies out of their dilemma. The solution is for companies to mold their structures and corporate culture in such a way that the organization can internalize the ability to change and the readiness to do so. This requires a mentality that can deal with uncertainty. A crucial factor in this is having shared values that apply to everyone in the organization. Such values can serve

the company as a form of compass. Management serves as a role model and must live out the values. This requires trust and courage – the two key qualities that make a difference when facing decisions in an environment of uncertainty.

4.3 Summary

The concept of strategic management established itself in the business world in the early 1970s. After years of economic growth and worldwide sales of mass-market products in industrialized countries, there was clear evidence of markets becoming saturated. Demand behavior had changed. This change in the business environment soon revealed the limitations of microeconomic modeling as an approach to solving the practical problems associated with production and sales. In its place, the idea of strategic thinking was developed in the management literature and the field of consulting.

- Early techniques, such as SWOT analysis and the BCG matrix, helped firms identify their market positioning and bring it into line with market prospects
- PORTER recommended that firms should pursue a path of either differentiation (more valuable product characteristics) or cost leadership (lower costs)
- Strategic marketing added to the four Ps paradigm the idea that firms should target a large number of customers. Today, the focus is on valuable customers

The strategic perspective initially had a narrow focus on markets. This changed with the arrival of the resource-based view (RBV), which looks more at what resources within the company can generate lasting competitive advantage.

DRUCKER argues that knowledge is the key resource of the modern firm. This paves the way for the core competency approach, based on the RBV. In this approach, resources are concentrated on particular capabilities within the company – its core competencies. The core competencies of the firm should serve a majority of its production and performance processes, in the capacity of a firm-internal public good. If the firm is the only one with these competencies, it will enjoy a *unique selling proposition* (UPS). In recent approaches, the firm's relationships are seen as a further source of

competitive advantage. Thus the *relational view* (RV) focuses on useful relationships, virtual companies and networks.

The *St. Gallen Management Model* (ULRICH 1984 and later revisions) is a comprehensive and holistic basis for understanding the business process that has received wide recognition. According to this model, strategy should provide the answers to five questions: What does the firm offer? What is the focus of its value creation? What are its core competencies? What fields does it cooperate in? And what are its stakeholder groups (concerns, needs and forms of communication)? The answers to these five questions give the firm its *configuration*, which brings the *goals* and *capabilities* of the firm together in a coherent form.

Over the last two decades, the environment for firms has changed almost beyond recognition. Four factors influence and reinforce each other, driving the pace of change in the environment and raising its complexity. These factors are technological advance, globalization, deregulation and the growing importance of international capital markets. Together these drivers of change have made strategic orientation for companies more difficult – and yet more essential – than ever before.

The joint effect of these drivers has been to create a new level of competition that is growing faster than ever before. The remarkable pace of change and the complexity of the environment have meant that the speed of reaction demanded of companies has multiplied many times over. The traditional strategic toolbox has lost much of its relevance. The assumptions underlying it – dynamic markets with high growth rates, a relatively stable and gradually evolving environment, and so on – simply no longer hold water.

4.4 Recommended Reading

PORTER's work is well-known and his books probably already feature on every manager's bookshelf. So here are three recommended books by other authors (in German):

1. For a comprehensive study of strategic thinking, we recommend the award-winning *Strategisches Management* by GÜNTER MÜLLER-STEWENS and CHRISTOPH LECHNER. The third edition appeared with Schäffer-Poeschel Verlag in 2005.

2. Those interested in marketing strategies will find the following work highly informative: ALFRED KUß and TORSTEN TOMCZAK: *Marketingplanung – Einführung in die marktorientierte Unternehmens- und Geschäftsfeldplanung*. 3rd ed., Gabler, Wiesbaden 2002.
3. A concise treatment of integrated management theory – just 92 pages long – is the highly accessible JOHANNES RÜEGG-STÜRM. *Das neue St. Galler Management-Modell*. Verlag Haupt, Bern 2002.

5 Think Financially

In brief:

In the last chapter we gave an outline of what is meant by strategic management. Now it's the turn of financial thinking. At the heart of financial thinking lies the present-value criterion – the idea of assessing the attractiveness of a project on the basis of its value. Present value also forms the basis for measuring a firm's value. The value of the firm is – assuming the intention to continue its operations as a going concern – equal to the sum of all the discounted future net cash inflows the firm generates. Financial thinking means looking for ways to increase value and taking appropriate action. Only the financial value of the future net cash inflows actually generated counts. The details of the projects – the focus of attention in strategic approaches – take a back seat.

5.1 Some Basic Finance

Let's start with *discounting*.

When money can be invested at a rate of interest or rate of return r , we can restate today's amount X_0 as the amount $X_1 = X_0 + r \cdot X_0 = X_0 \cdot (1 + r)$ due in one year's time. The amount X_1 due in one year's time can therefore be restated as today's amount $X_0 = X_1 / (1 + r)$. If return $r = 10\%$, the amount $X_1 = \text{EUR } 400$ due in a year's time is equivalent to today's amount $X_0 = 400 / 1.1 = \text{EUR } 364$.

This restatement allows us to determine the current value of a sum due in the future. The mathematical operation involved is called *discounting*.

We can use a similar method for money that is due in two or more years' time. Today's amount X_0 can be restated as the amount X_2 due in two year's time on the basis of $X_1 = X_0 \cdot (1 + r)$ and $X_2 = X_1 \cdot (1 + r)$, together giving $X_2 = X_0 \cdot (1 + r)^2$.

Thus the amount X_2 due in two year's time can be restated as today's amount $X_0 = X_2 / (1 + r)^2$. Again, with a discount rate of $r = 10\%$, the amount $X_2 = \text{EUR } 500$ due in two years' time is equivalent to today's value $X_0 = 500 / 1.21 = \text{EUR } 413$.

The Pizza Seller and the Value Additivity Principle

The possibility of dividing a cashflow into two parts and the fact that the value of the cashflow equals the sum of the values of both parts – known as the "value additivity principle" – is often illustrated with the following example. A pizza seller asks a customer how many slices he would like his pizza cut into. The customer is very hungry and wants more slices than usual. But this doesn't affect the total amount of pizza. The same goes for finance. Dividing up cashflows doesn't change the total value.

We now know how to determine the current value of a sum due at some point in the future. But how can we determine the current value of an entire cashflow?

Properly functioning markets follow the principle of *value additivity*. This means that the total price of a bundle of goods is equal to the *sum* of the prices of its individual components. Just like at the supermarket checkout. Financial markets have no volume discounts or synergies. The bundle of goods is no more and no less valuable than the sum of the values of its components. This is an important point. The components of a portfolio may show diversification effects that make it desirable to have a portfolio. But the value of the portfolio remains equal to the sum of the values of its components, and not greater.

Let's now look at a simple cashflow consisting of two payments. One payment is due in one year's time, and the other in two years' time. Because of the value additivity principle, the value of the cashflow available as cash in one year's time (X_1) and in two years' time (X_2) will be as follows:

$$X_0 = \frac{X_1}{1+r} + \frac{X_2}{(1+r)^2} \quad (5-1)$$

In a well-functioning market, then, the value of a cashflow is equal to the sum of the values of the individual payments (whereby these values – or "present values" – are determined by discounting). For instance, a cashflow that in one year generates the amount $X_1 = \text{EUR } 400$ and in two years generates the amount $X_2 = \text{EUR } 500$, has, at discount rate $r = 10\%$, the value $X_0 = 364 + 413 = \text{EUR } 777$.

Discounting and the value additivity principle provide us with a simple formula for determining the value of series of sums due in the future.

Here, we are talking about *present value* (PV). The *net present value* (NPV) is equal to PV less any cash outflows that may be required today to generate cash inflows later on. An important convention is used in the notation of NPV. Cash outflows appear as negative values, and cash

inflows appear as positive values. We use P_1, P_2, \dots, P_N to show the cash inflows in the coming years 1, 2, ..., N . P_0 is the initial outflow. Using this notational convention, the inflows received appear as positive values, and the payments and cash outflows appear as negative values.

Because of the notational convention, no minus sign appears; all the discounted sums are added together. r is the discount rate. The discount rate equals the rate of return that could be achieved if the money were invested in the capital markets. Thus $P_t / (1 + r)^t$ is the present value of sum P_t due in t years' time. We can therefore define present value (PV) and net present value (NPV) as follows:

$$PV = \frac{P_1}{1+r} + \frac{P_2}{(1+r)^2} + \dots + \frac{P_N}{(1+r)^N} \quad (5-2)$$

$$NPV = P_0 + \frac{P_1}{1+r} + \frac{P_2}{(1+r)^2} + \dots + \frac{P_N}{(1+r)^N}$$

5.2 Focus on Cashflows

As you might imagine, financial thinking concentrates on the immediate and future sums generated by projects, undertakings and actions. After all, the company is pursuing an economic or financial objective. In a system based on the division of labor, the success of any business activity is shown by the amounts of money generated in the form of surpluses, i.e. net cash inflows. This money can either then be withdrawn or used to fund further investments. Financial thinking focuses on the cashflows involved. Unlike strategic thinking, it pays less attention to the actual project contents. The financial approach tries to look one step ahead – at the ultimate financial impact in cash terms.

The question is how to choose potential projects, undertakings and actions using a financial approach. How do the projects and their different combinations appear from a financial perspective? This decision process is also known as capital budgeting. Its natural focus is on projects, undertakings and actions that last for a certain amount of time, whose effects stretching over a number of years.

In the strategic approach, projects are first evaluated in terms of their content and then in terms of their impact – particularly their impact on specific resources. The choice of projects and how to combine them

focuses squarely on the strategic fit. Projects are selected that offer a promising combination in terms of their targets, impact on resources and "fit".

By contrast, the financial approach focuses solely on the cashflows generated. As mentioned, in a system based on the division of labor, the point is to make money. Capital budgeting – the choice and combination of potential projects – is based on what sums are generated, now and in the future.

The prerequisite of the financial approach is that the projects up for selection can be described in terms of their cashflows. Now, future cashflows are not always easy to predict. Yet the difficulties involved are not an argument against financial thinking, as the problem is inherent to all decision-making approaches. Estimates and forecasts are also necessary, for example, in the strategy-based approach – by and large, decision-makers have to formulate their expectations in terms of impacts. We therefore work on the assumption that all the projects, undertakings and actions under consideration can be described in terms of their cashflows.

We also need to define the projects under consideration in such a way that their cashflows are not dependent on each other. The sums generated by Project A and Project B should be exactly equal to the total sum generated by Projects A and B. In some cases this is not so. Projects A and B may be "technically" dependent on each other. In this case, we need to redefine the options available. For example, we could split the project into three different potential projects: the first project generating A but not B, the second generating B but not A, and the third generating both A and B.

Having defined the projects properly, we are now ready to look at how their cashflows should be combined. As stated before, their "fit" in terms of contents and impact on resources is of less importance in the financial approach. Instead, we concentrate on the net cash inflows. What we do is to simply combine the positive and negative sums generated in various years. "Money does not smell", as the Roman Emperor VESPASIAN stated on introducing a tax on public toilets. He combined the various sources of state income and did not further differentiate between them. This is exactly what we do in the financial approach. The only thing that matters is the total sum generated by the projects at various points in time.

This sum, viewed across the years, also forms a cashflow. For each point in time, the cashflow describes the sums due – both negative and positive – at that specific point in time. In the financial approach, we base our

decision about which projects to select and combine purely on the shape of the total cashflows generated, and nothing else. The total cashflow consists of the sums generated in each year of the proposed project.

5.3 Choosing the Best Total Cashflow

Different combinations of projects generate different total cashflows. The question is: Which combination is best?

Once we have the answer to this question, we will know which projects to select. In other words, we will have solved the capital budgeting question. Evidently, we will want to choose the total cashflow (i.e. selection and combination of projects) that promises to produce the best results for the beneficiaries – the equity investors, i.e. the firm's shareholders or owners. These beneficiaries have a right to any cash surpluses generated, as described by the total cashflows. They should therefore state their preferences, as which total cashflows lead to the maximum utility for them depends on what their preferences are.

For this reason, we need to know whether the beneficiaries prefer a smaller net cash inflow as soon as possible, or are prepared to wait for a bigger one later on. This will affect what projects we select and combine. In other words, we must address the personal time preferences of the beneficiaries. We also need to know whether the beneficiaries want a safe but potentially smaller net cash inflow, or prefer an unsafe one that will probably be bigger. In other words, we must also address their risk preferences.

As we have seen, the sums generated by different projects can be added together to create a total cashflow. The total cashflow indicates the overall net cash inflow. This is straightforward enough. But deciding which potential total cashflows (generated by selecting and combining projects) create the maximum utility for the beneficiaries depends on the beneficiaries' personal preferences. And this makes the financial approach a tad more complicated.

Fortunately, help is at hand. The American economist IRVING FISHER argues that a great simplification is possible at this stage – as long as there is a capital market. FISHER states:

1. Where a capital market exists, we don't need to know the exact preferences of the beneficiaries in order to determine which of the total

cashflows – the total payments involved in the projects – leads to the maximum utility for them.¹ It will be the potential total cashflow that has the greatest value on the capital market. Thus a manager can make the decision that maximizes the utility for the beneficiaries without knowing their exact utility function. All he needs to know is the conditions on the capital market, in particular the rates of return to be used for discounting future sums generated.

2. Moreover, no complicated combinations are necessary to determine which total cashflow has the greatest value. We can find out by looking at whether the cashflow is positive or negative for each project under consideration. This is the net present value discussed above. Thus the complex task of deciding which projects, undertakings and actions to select and combine breaks down into a series of simple individual checks.

Let's summarize. The financial approach provides a very simple rule for making decisions, as long as there is a capital market. Whatever the beneficiaries' utility function, and whatever other projects and actions occur, potential projects are desirable if their value – i.e. the net present value of their cashflows – is positive.

FISHER's finding provides the rationale for considering present value significant and thinking in terms of financial values. It also makes individual isolated decisions possible. Complicated combinations and a simultaneous evaluation of all the different projects are unnecessary. The key question is whether a new project has a positive value in itself, i.e. taking all its cashflows into account. If it does, it should be accepted and included with the other projects and actions. If, however, the net present value of the cashflow is negative, the project should be rejected. The cashflows of the other projects and actions are irrelevant. The only thing that matters is the net present value of the project in question. The contents of the project, its strategic impact and "fit" are also irrelevant. And the same goes, ultimately, for the preferences of the beneficiaries. In the financial approach, we simply don't need to know what they are.²

¹ It may appear paradoxical that we can determine the maximum utility without knowing the utility function. Remember, though, that you increase people's utility when you give them more money. This is true even if we do not know the exact shape of the utility function.

² KLAUS SPREMANN: *Finance*. 3rd ed., Oldenbourg Verlag, Munich 2007, Chapter 4.

5.4 Fisher Separation and Net Present Value

FISHER establishes a general basis for decision-making. For *every* project one should check whether the net present value of the cashflow is positive ($NPC > 0$). These individual checks, simple to perform, create a budget made up of those investment projects, plans and financing actions that, taken together, have the highest total value, i.e. lead to total cashflows of the greatest value.

Furthermore, FISHER demonstrates that this selection rule leads to maximum utility for the beneficiaries (i.e. the shareholders and owners). His argument is as follows. The beneficiaries can change the total cashflows generated by the company through transactions on the capital market, such as investments or loans. By so doing, they can increase the utility of the cash inflow that is generated. They can do this on a private basis, without the support of the manager. So the manager can make decisions about potential investment projects, undertakings and actions without knowing the utility function of the beneficiaries.

This insight, and the capital budgeting approach it leads to – in which companies take on the projects and actions for which individual checks show positive net present values – is known as Fisher Separation.

FISHER brought about a revolution in capital budgeting. Previously, managers had generally followed an approach based on JOEL DEAN (Capital Budgeting, New York 1951). According to this approach, the managers had to examine and select all potential investments and actions at the same time – rather than separately, as is possible with the Fisher Separation. Naturally, they also had to take the investors' preferences into account.

To this end, DEAN's approach looks at the internal rate of return for projects and actions. This is an intuitive approach. Investors who want to withdraw money quickly will not be interested in making major investments, as such investments require cash outflows. And investors who don't want to withdraw money now are in a good position to make long-term investments.

But our intuition turns out to be wrong. At least, as long as the investors can invest their money at market interest rates or take out loans whenever they want. In the first place, if they want to withdraw money quickly, they do not have to refrain from making investments too. They can simply

finance them externally. In the second place, if they do not need to withdraw the money in the near future, that does not in itself mean that they have to make long-term investments. After all, if the investments are unprofitable, i.e. $NPV < 0$, they would be better off investing the surplus cash in the capital markets. This means that FISHER's approach to capital budgeting is ultimately the more convincing one – at least today, where capital markets right around the globe.

The Fisher Separation Theorem

The economist IRVING FISHER (1867-1947) argued that the entrepreneur – irrespective of his personal preferences and utility function – should undertake those investment projects for which the present value of future cash inflow exceeds the initial cash outflow (i.e. the net present value is positive). Projects with a negative net present value should be rejected on principle.

So, *net present value is the sole factor* in deciding whether to make an investment or not. Positive and negative cashflows can be balanced on the capital markets. The investor can withdraw from the business as much cashflow as he wants in the form of outflows or dividends.

FISHER's approach also reveals that it is not just individual projects whose value is based on their cashflows. Entire companies can be valued on the basis of

the net cash inflows that they will generate in coming years – irrespective of whether the shareholders or owners withdraw the money, or let the management reinvest it on their behalf.³ The value of a firm, or any division of a firm that can be treated as independent or delimited for the sake of calculation, depends on the time and scale of its net cash inflows and the risks associated with them. Other considerations, even the actual nature of the business carried out, are irrelevant for the valuation. Unless, that is, they actually impact on the scale of the net cash inflows and the risks associated with them.

5.5 Summary

FISHER's finding establishes the importance of present value as a *general criterion* for assessing potential benefits and carrying out valuations. If the interest rates (or rates of return commensurate with the risk) available on

³ This is also the view of the Institute of German Certified Chartered Accountants' (IDW) standard for performing company valuations dated December 9, 2004 (IDW ES 1 new series). See also SVEN BEYER and ANDREAS GAAR in *Finanz Betrieb* (2005) 4, pp. 240-251.

the capital markets are known, then the best investments for entrepreneurs – whatever their utility function – are those investments whose present value is positive. Investments with a negative net present value should be rejected.

This means that it is no longer necessary to investigate a number of different investment opportunities simultaneously. Isolated decisions lead to the overall optimum. The net present value should be calculated for each individual project. Other investment options are irrelevant. Moreover, the entrepreneurs' utility function does not have to be known in order for the manager to choose the most advantageous investments for them.

Today, thanks to FISHER's theory, investments are almost universally evaluated on the basis of the net present value of their cashflows. This method is applied to all the projects, actions and undertakings in a firm. Each project is subjected to an individual check. This check establishes whether the net present value is positive or not. The overall success of a firm is considered to be the sum of the value contributions made by its individual investments. For this reason, it is vital to apply net present value *consistently*.

This approach requires neither budgeting (the simultaneous examination of various projects) nor juggling all the different variables. The investment decisions become simple calculations that managers can carry out without even knowing much about the firm's owners. The key conditions required for a Fisher Separation are as follows:

1. A capital market must exist. In other words, the entrepreneur must be able to invest as much money as he wants, at market rates, any time he wants.
2. It must be possible to describe the results of the investments in the form of cashflows. For this to happen, we must be able to predict what the results will be. We must also be able to express them in monetary form. The same goes for the inputs required for the project.
3. The investments must be independent of each other. Carrying out one investment should not have a knock-on effect on the cashflows of other investments.

What FISHER's analysis does not take into account is *risk*. FISHER considers the sums generated to be certain, and bases his discounting on the *market interest rate*. The Modern Portfolio Theory of HARRY MARKOWITZ, JAMES TOBIN and WILLIAM SHARPE, which dates from around 1960, tells us whether (and how many) investments should be included in the

portfolio. Here risk does play a role, along with the rates of return and the market interest rate. In this light, discounting in the manner described above is generally used to evaluate even projects that are subject to risk, with the difference that, in this case, the discount rate is set higher than the interest rate for secure investments. In other words, the calculation includes a risk premium.

5.6 Free Cashflows

Various versions of net present value based on the Fisher Separation are applied in company valuations. Perhaps the most widespread is the discounted cashflow approach (DCF). In the DCF approach, the sums to be discounted are considered free cashflows. In this section, we take a closer look at the basic version of the DCF approach. This deals with the valuation of the firm for the equity investors, i.e. its equity value. To keep the discussion simple, we will ignore questions relating to capital structuring and the use of debt, for example, the tax advantage from using debt. The DCF approach discussed here forms the basis for various extensions of the theory, such as the formulas used to determine the total value of the firm (i.e. the entity value) for the equity investors and debt financiers.

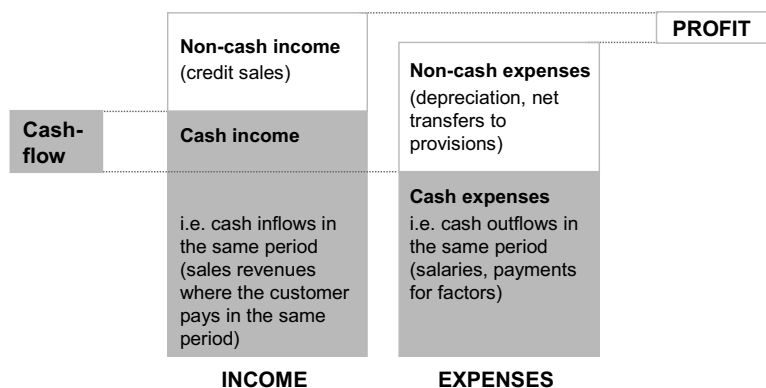


Figure 5-1: To calculate cashflow directly, all the cash outflows are subtracted from the cash inflows. To calculate cashflow indirectly, non-cash expenses (primarily depreciation and net transfers to provisions) are added to profits, and non-cash income (credit sales to customers) are subtracted

The cashflows are defined in terms of accounting values. This makes the DCF approach a good valuation method for an entire firm or a division of the firm that functions separately for accounting purposes, but less appropriate for individual projects. The cashflow for a year consists of cash inflows (such as from sales revenues) minus cash outflows (salaries, advance payments) for the period. Non-cash income (such as capitalized expenses or credit sales to customers) do not increase cashflow. Non-cash expenses (such as depreciation and net transfers to provisions) do not reduce cashflow.

Cashflow therefore differs from profits where the latter include non-cash components in the accounting period in question. As a rule of thumb, cashflow equals profit plus depreciation/amortization.

Sums generated in future years – i.e. the cashflows – are forecast on the basis of the firm's (or division's) business plan. This plan describes the activities of the firm. From this it derives the inflows that will be generated by the sales of services and the outflows for production factors. As a rule, the business plan also indicates certain planned investments, such as plant and equipment replacements.

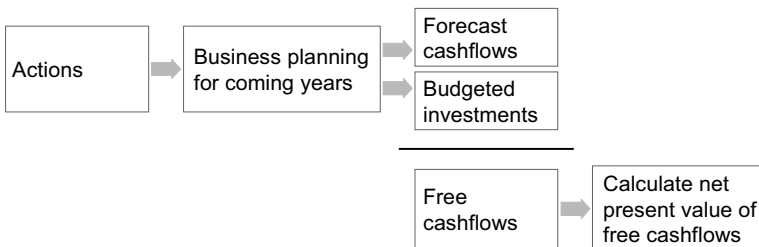


Figure 5-2: Free cashflows are cash inflows less cash outflows for budgeted investments, plus any income from divestments

In forecasting the cashflows, we make the assumption that the planned or budgeted investments will actually take place. By subtracting the cash outflows for planned investments from the forecast cashflows, we arrive at the *free cashflows*.

The free cashflows are thus no longer needed to carry out the plan. They can be distributed and the firm or entity will continue to develop as described in the business plan.

The free cashflows are thus the future net cash inflows generated by the company. They constitute the value of the firm or entity. The question now is: What happens to the free cashflows and the firm next?

Free cashflow of a debt-free firm

Cash income		
	Sales revenues	Sales
	Income from securities and shareholdings	+ F
Cash expenses		
	Salaries	- Salaries
	Interest	- Interest
	Advance payments: Payments to suppliers, purchase of materials, rent, energy, insurance, licenses, consulting services	- Adv. p.
Gross cashflow		= GCF
	Tax: VAT, CIT, etc.	- Tax
Cashflow		= CF
Budgeted investments	Budgeted cash outflows relating to machinery and equipment and acquisitions, and the inflows they generate later Divestments, e.g. sales of real estate, shareholdings, assets or investments	- I
Free cashflow		= FCF

Summary 5-1: Free cashflow of a debt-free firm

If the free cashflows are distributed – as is quite possible – the firm will continue to exist and can carry out all the investments foreseen in the business plan. Whether it grows or shrinks depends on just how many investments are envisaged in the plan.

- If the business plan envisages a large number of investments, the firm will grow even if it distributes the full amount of the free cashflows. However, the free cashflows in this case will be very small, as the money for the investments comes out of the cashflow
- If, on the other hand, the business plan envisages just a few investments, the firm could even shrink according to the plan – especially if the budgeted investments don't compensate for the ageing process. In this case, the firm will shrink in reality, presuming it distributes the full amount of the free cashflows. The free cashflows will be relatively large, thanks to the few investments budgeted for in the plan

The owners could also leave the free cashflows in the firm or entity. The management can then carry out additional investments on their behalf,

over and above those budgeted for in the business plan and underlying the forecast cashflows.

5.7 The Capital Asset Pricing Model

In the DCF approach, free cashflows are discounted at a cost of capital rate. This is set at the level of the *expected* rate of return in the external financial market.

Of course, no one knows exactly what that future rate of return will be. Here, as is normal in such cases, we make the assumption that things will stay more or less as they were in the past. We can then estimate the future rate of return by extrapolating from historical data. The arithmetic mean of historical rates is what is known as an *unbiased* estimate, so we use this rather than the geometric mean to estimate what future rates of return will be.

Data is available on different financial markets going back some decades. Some countries show peculiarities. In Germany, for example, the average rate of return on shares was unusually high between 1956 and 1961 compared to other countries. This was due to post-war boom – Germany's "economic miracle". Experts consider a nominal annual rate of return of 10% to be a valid assumption for the future rate of return on shares in the market as a whole.

In reality, individual companies vary either side of the expected 10% rate. The fact that the forecast rate is not 100% certain is reflected in the fluctuations in market prices and rates of return occurring over the years. Indeed, this uncertainty is what constitutes the risk for shareholders (ignoring for the moment their option to diversify). Investors naturally demand compensation for this risk – otherwise they would simply put their hard-earned money in safe capital investments. Thus companies with an *above-average* level of risk (i.e. above-average fluctuations in market price and rate of return) expect to produce returns of over 10%, while companies with *below-average* levels of risk are expect lower return rates.

The exact mathematical relationship between the forecast rate of return for a specific company and the market rate (i.e. 10%) is the subject of much research. The *Capital Asset Pricing Model* (CAPM), developed by WILLIAM F. SHARPE and others, offers a simple description of this relationship. It describes the relation between the expected rates of return

and the risk. Although some have questioned its validity in practice, it is accurate enough for most purposes. Indeed, many people consider the CAPM "best practice".

	Arithmetic mean of nominal annual rates of return	Geometric mean of nominal annual rates of return	Standard deviation	Variance
Shares – World	10.2%	8.8%	16.9%	0.029
Bonds – World	5.0%	4.7%	8.7%	0.008
Shares – USA	11.7%	9.7%	20.1%	0.040
Bonds – USA	5.2%	4.9%	8.2%	0.007
Shares – UK	11.4%	9.6%	21.9%	0.048
Bonds – UK	6.0%	5.4%	12.4%	0.015
Shares – CH	8.3%	6.7%	19.0%	0.036
Bonds – CH	5.1%	5.0%	4.8%	0.002
Shares – D	14.5%	9.0%	36.4%	0.132
Bonds – D	4.9%	3.0%	13.5%	0.018

Summary 5-2: The table shows the *arithmetic* and *geometric* means of historical rates of return, plus the standard deviation and variance for shares and bonds in various countries in the period 1900-2003. The data for Germany excludes the years 1922 and 1923, a period of hyperinflation. Germany also shows peculiarities relating to the two world wars (1914-1918 and 1939-1945) and the post-war economic boom (1956-1961). Rates of return in Switzerland are slightly below those of the UK and the US. However, Swiss rates of inflation were also much lower than in other countries in the period 1900-2003, so the real rates of return in Switzerland are almost as high as the real rates of return in the UK and the US. Why do they still remain slightly lower? Most likely because Switzerland has experienced no economic crises (Source: ELROY DIMSON, PAUL MARSH and MIKE STAUNTON: *Global Investment Returns Yearbook 2004*, London Business School)

The CAPM focuses on the difference in return between the expected rate of return and the interest rate. This is the *risk premium*. The CAPM seeks to explain the differences between different firms' risk premiums. It also looks at diversification options and shows how the "risk" should be measured in situations where the expected rate of return is commensurate with the risk. According to the CAPM, the risk premium of each individual firm is in proportion to its *beta*. The *beta* expresses the level of risk of the firm that must be taken into account by players on the capital market.

COMPANY	1992-2005	2002-2005
Adidas	0.51	0.33
Allianz	1.17	1.76
Altana	0.36	0.38
BASF	0.75	0.74
BMW	0.84	0.66
Continental	0.77	0.75
DaimlerChrysler	1.03	0.82
Deutsche Bank	0.98	0.90
Deutsche Telekom	0.94	0.79
E.ON	0.51	0.47
Henkel	0.56	0.36
Infineon	1.96	1.69
Linde	0.67	0.79
Münchener Rück	1.06	1.71
RWE	0.60	0.67
SAP	1.25	1.68
Siemens	1.21	1.25
ThyssenKrupp	1.02	1.13
TUI	1.02	1.43
Volkswagen	0.91	0.83

Summary 5-3: Betas relative to the DAX as market index based on monthly rates of return from January 1992 to February 2006 and January 2002 to February 2006 (Source: Datastream)

The beta is not identical with the fluctuation risk. This is because part of the fluctuation in the market price or returns of the firm in question can be diversified by creating a portfolio. The beta measures the risk that cannot be further diversified away, i.e. that part of the fluctuations in market prices and returns that remains, even in a well-diversified portfolio. This is known as the *systematic risk* of the investment or firm. The beta is the relationship between the systematic risk of the firm or investment in question and the risk of the whole portfolio. This well-diversified portfolio is called a "market portfolio", as all market participants are involved in the portfolio as part of its diversification. So, as we said above, the beta expresses the relationship between the systematic risk of a firm or investment and the risk of the market portfolio. A beta of greater than 1 indicates above-average risk in the firm in question. A beta of less than 1 indicates that the firm enjoys below-average risk.

The proportionality constant, which is the same for all firms, is the same as the risk premium of the market portfolio. Thus a firm with a beta of 1 has the same risk premium as the overall market. The CAPM can be expressed in the form of the following equation:

$$R_k - \text{interest rate} = \beta_k \cdot (r_M - \text{interest rate}) \quad (5-3)$$

Here, r_K is the expected rate of return in the capital market for company k and accordingly $r_k - \text{interest rate}$ is its risk premium.

β_k is the beta of the firm.

r_M is the rate of return expected for the market as a whole, which we estimate at 10%. The risk premium of the market is $r_M - \text{interest rate}$.

If we specify an interest rate of 5%, the CAPM can be expressed as $r_k - \text{interest rate} = \beta_k \cdot 5\%$. Empirical research in capital markets demonstrates that the risk premium of the market as a whole is around 5%. Reformulating the equation somewhat, we can give the following formula for the expected rate of return or the capital cost r_k :

$$\text{Capital cost} = \text{interest rate} + \text{beta} \cdot 5\% \quad (5-4)$$

Here's an example. For the whole of BASF, $\beta_{\text{BASF}} \approx 0.75$ would give a capital cost of $r_{\text{BASF}} = 5\% + 0.75 \cdot 5\% = 8.75\%$. But if BASF plans project P with a level of risk comparable to that of SAP, i.e. $\beta_P \approx 1.5$, then the capital cost of this project would be $r_P = 5\% + 1.5 \cdot 5\% = 12.5\%$.

Formally, the beta is defined by the standard deviations of the rates of return and the coefficients of the correlation. In practice, the beta – say, of an incorporated company – is estimated empirically. This can be done on the basis of the rates of return for the last 52 weeks relating to the shares and the market index, for example. However, experience shows us that betas can vary over the time period in question. So, we make adjustments.⁴ Occasionally expert opinions are also used to determine the beta ultimately used to calculate the capital cost (5-4). In some situations, analogy with similar cases is the only way to do it.

Note: The (overall) beta of a firm may differ substantially from the beta of one of its areas of business or projects. Every investment and project has its own capital cost, depending on its degree of risk.

⁴ 1. MARSHALL E. BLUME: *On the Assessment of Risk*. Journal of Finance 26 (1971) 1, pp. 1-10. 2. G. J. ALEXANDER and N. L. CHERVANY: *On the Estimation and Stability of Beta*. Journal of Financial and Quantitative Analysis 15 (1980) 1, pp. 123-137.

The CAPM is a theoretical model derived mathematically on the basis of the assumptions of *Modern Portfolio Theory* (MPT). It is correct and valid within the framework of deductions based on these assumptions. But the CAPM and the assumptions of MPT are not necessarily a good description of the functioning of actual capital markets.

Many empirical studies have investigated precisely this question: how well the CAPM actually reflects the reality, if at all. These investigations have unearthed a number of contradictions and logical inconsistencies. For instance, everyone's heard of "calendar effects". But for decades no one really knew whether these and other contradictions in the CAPM were simply the result of errors in specifying the market portfolio or the market index. It was thought that, maybe, despite the contradictions, the CAPM was absolutely valid empirically, and the problem was just that it was really tricky trying to determine the right market index. So, until recently, it was unclear whether or not we should see the CAPM as giving a true account of the relation between the expected rate of return (or capital cost of an investment) and its risk.

This all changed in 1992, with the publication of a highly thought-of study by FAMA and FRENCH. This study shows that the CAPM does not describe the reality of capital markets accurately enough.⁵ In particular, it investigates the fact that a higher rate of return can be forecast for small firms on the basis of their historical rates, than is predicted by the CAPM on the basis of their beta.

So, where does that leave us? Basically with the realization that investors in the capital markets studied do not act exactly as assumed in the Modern Portfolio Theory (MPT). Two reasons for this are possible:

- The first explanation stems from the field of behavioral finance. Here it is argued that financial investors don't behave as predicted by the MPT because people are only rational up to a certain point. Human behavior – including group behavior – is better explained by the study of psychology than of economics
- An alternative explanation accepts the argument of economic theory that investors act sensibly, or at least try to make rational decisions. However, it believes that the assumptions in the MPT are too simple. In reality, investors don't just look at the risk indicated by the fluctuations

⁵ EUGENE F. FAMA and KENNETH R. FRENCH: *The cross-section of expected stock returns*. *Journal of Finance* 47 (1992) 4, pp. 427-465.

in the market index and the beta. Investors recognize that there are other issues at stake that they ought to be aware of – issues such as the additional risk in the real economy. As a result, market rates, rates of return and, ultimately, forecast rates of return occur in the capital market that cannot be described perfectly by looking at the beta and nothing else⁶

The resulting attempts to refine the MPT do not, however, detract from the fact that the CAPM is a "good enough" description of the relation between capital cost and risk. At least for most practical purposes.

5.8 Company Valuation

5.8.1 The Formulas for DCF

On the basis of the foregoing discussion, we can now state that the value V of a firm is equal to the sum of the free cashflows adjusted via discounting to their present value, as expected in coming years:

$$V = \frac{FCF_1}{1+r} + \frac{FCF_2}{(1+r)^2} + \dots = \sum_{t=1}^{\infty} \frac{FCF_t}{(1+r)^t} \quad (5-5)$$

Note that the business plan must assume that free cashflows really will be withdrawn from the firm. For example, the free cashflow FCF_2 should not be planned as if FCF_1 were going to be retained. This is a common source of error in practice.

To make calculation (5-5) a bit simpler, we might decide to forecast the free cashflows in detail for the next five years only. The free cashflow for the sixth year, FCF_6 , is also derived from the business plan. After that, we presume that the free cashflows will develop steadily at a growth rate g , also derived from the business plan. This growth rate is likewise based on the premise that all the free cashflows are actually withdrawn from the firm. The simplified growth assumption is as follows:

$$FCF_7 = FCF_6 \cdot (1 + g), FCF_8 = FCF_7 \cdot (1 + g), \dots \quad (5-6)$$

⁶ 1. JOHN H. COCHRANE: *New Facts in Finance. Economic Perspectives XXIII* (1999), pp. 36-58.

Thus the firm will be worth the following amount in five years' time, seen from the perspective of today:

$$\begin{aligned}
 V_5 &= \frac{FCF_6}{1+r} + \frac{FCF_7}{(1+r)^2} + \frac{FCF_8}{(1+r)^3} \dots \\
 &= \frac{FCF_6}{1+r} + \frac{FCF_6 \cdot (1+g)}{(1+r)^2} + \frac{FCF_6 \cdot (1+g)^3}{(1+r)^3} + \dots \\
 &= \frac{FCF_6}{r-g}
 \end{aligned} \tag{5-7}$$

The value V_5 is known as the *continuing value*. So the total value of the company, as defined by (5-5), is equal to the sum of the present values of the first five free cashflows, plus the present value of the continuing value:

$$\begin{aligned}
 V &= \frac{FCF_1}{1+r} + \frac{FCF_2}{(1+r)^2} + \dots + \frac{FCF_5}{(1+r)^5} + \frac{W_5}{(1+r)^5} = \\
 &= \frac{FCF_1}{1+r} + \frac{FCF_2}{(1+r)^2} + \dots + \frac{FCF_5}{(1+r)^5} + \frac{1}{(1+r)^5} \cdot \frac{FCF_6}{r-g}
 \end{aligned} \tag{5-8}$$

An example will help here. A manufacturer is planning to take over another company. The basis for the valuation is the company's business plan. But there are differences of opinion between the purchaser and the vendor over how to interpret the figures.

The purchaser interprets the business plan as follows. In a year's time, EUR 400,000 will be generated as a free cashflow (let's call this 400 for short, counting in thousands of euros). Assuming that the full amount is withdrawn from the company, in two years' time 500 (i.e. EUR 500,000) will be available, and in three years' time, 600. After this the free cashflow – again, assuming it is withdrawn from the company each time – will remain at 600. The cost of capital rate for discounting is 10%. The present value of the first free cashflow is 364, and that of the second 413. The continuing value $V_2 = FCF_3 / (r - g) = 600 / 0.1 = 6,000$. The present value of the continuing value is $V_2 / (1+r)^2 = 4,959$ and the value of the firm thus $V = 364 + 413 + 4,959 = 5,736$.

No, no, says the vendor. You've got it all wrong. No one is actually going to withdraw the full amount of the free cashflow from the company. So, in fact, the company is going to grow quicker. The free cashflow in a year's time is 400 – agreed. But in two year's time it's already 530, and in three year's time it's 650, as the firm is going to pay dividends at a normal rate and retain a certain amount of the earnings. After that, the free cashflows will grow at a rate of 6% per year. On the basis of this data, the present

value of the cashflow is $V = 364 + 438 + 13,430 = 14,232$. However, this does not represent the true value of the firm.

5.8.2 EBIT, "Equity Value" vs. "Entity Value"

Often the free cashflows are used as the basis for planning *earnings before interest and taxes*, or *EBIT*. *EBIT* is widely used in business plans. So let's now look at the relationship between *FCF* and *EBIT*. We can state as follows:

$$\text{Profit} = \text{EBIT} - \text{interest} - \text{taxes} \quad (5-9)$$

and turn to the difference between profit and cashflow. If we take the profit, add non-cash expenses and subtract non-cash income, we are left with the cashflow. We assume depreciation/amortization to be the major element in these corrections. This gives us the following rule of thumb:

$$\text{Profit} + \text{depreciation/amortization} = \text{cashflow} \quad (5-10)$$

(5-10) is in fact correct, as long as we take depreciation/amortization to include all non-cash expenses less all non-cash income. Combining this with (5-9) gives us the following:

$$\text{Cashflow} - \text{depreciation/amortization} = \text{EBIT} - \text{interest} - \text{taxes} \quad (5-11)$$

This formula assumes that investments are budgeted at the same level as the depreciation/amortization or, more precisely, at the level of the non-cash expenses less all non-cash income. This is normal practice. In this case:

$$\text{Depreciation/amortization} = \text{investments} \quad (5-12)$$

and because $\text{FCF} = \text{cashflow} - \text{investments}$, (5-11) gives us the following relationship:

$$\text{FCF} = \text{EBIT} - \text{interest} - \text{taxes} \quad (5-13)$$

On occasion it may be necessary to evaluate more than just the demands of the equity investors, i.e. the *equity value* of the firm. We may want to ascertain the enterprise or *entity value*, calculated for the benefit of all providers of capital, both equity investors and debt financiers. The procedure is the same as before. However, this time we replace the free cashflow *FCF* as the "net cash inflow" with the sum of the free cashflow and the interest payments. We do this because the equity providers and

debt financiers together now receive, as net cash inflow, free cashflows at a level of $FCF + interest$. We call this amount FCF^* , i.e. $FCF^* = FCF + interest$. (Note that in some textbooks, especially those produced in the US, the term "free cashflows" is also used to refer to these expanded free cashflows for short.)

To calculate the entity value, we must discount the expanded free cashflows FCF^* with a cost of capital rate representing the weighted average cost of the equity and debt. This is known as the *weighted average cost of capital*, or *WACC*. We can now use (5-13) to write as follows:

$$Enterprise\ value = \frac{EBIT_1 - taxes_1}{(1+WACC)^1} + \frac{EBIT_2 - taxes_2}{(1+WACC)^2} + \dots \quad (5-14)$$

In the literature, T is often used as the symbol for the tax rate. We write as follows: $EBIT - taxes = EBIT(1-T)$. Note that, in this case, the tax to be paid by the firm must relate to the $EBIT$. However, unlike profit, the earnings apportioned to debt financiers as interest are not subject to corporate income tax.

If T is the rate of tax on the profit, then $EBIT(1-T)$ in future years is *lower* than $BIT - taxes$ actually needed in (5-14). We compensate for this difference by also setting the capital cost in the denominator in (5-14) lower than the actual average capital cost. In 1980, MILES and EZZELL suggested an adjustment for this. If we call the Miles Ezzell cost of capital $MECC$, we can write:

$$Enterprise\ value = \frac{EBIT_1 \cdot (1-T)}{(1+MECC)^1} + \frac{EBIT_2 \cdot (1-T)}{(1+MECC)^2} + \dots \quad (5-15)$$

The formula for the Miles Ezzell cost of capital is as follows:

$$MECC = r_E - \frac{D}{E+D} \cdot T \cdot r_{FK} = \frac{E}{E+D} \cdot r_{FK} + (1-T) \cdot \frac{D}{E+D} \cdot r_{FK} \quad (5-16)$$

What Is EBITDA?

For the purposes of calculating EBITDA, in practice profit is limited to the profit arising from the regular operations of the company. In other words, financial results and extraordinary items are ignored. In particular, non-operating financing costs and depreciation/ amortization are excluded from EBITDA. Profit is adjusted in this way to disguise certain losses. So, a positive EBITDA in fact means that *if* everything had gone as planned, this *would* have been our profit. In reality, due to financial processes or extraordinary events, the company may actually have experienced losses.

In (5-16), r_{EK} is the equity cost and r_{FK} the debt cost. (Again, note that some textbooks also use "WACC" to refer to the Miles Ezzell cost of capital.)

Sometimes the business plans also indicate *net operating profits after taxes*, or *NOPAT*. Naturally a valuation can concentrate on a firm's operations. In this case, $NOPAT = EBIT - taxes$. This means that $FCF = NOPAT$. However, this formula for free cashflows (from operations) is generally then adjusted.

Instead of EBIT, *earnings before interest, taxes, depreciation and amortization*, or EBITDA, is often used to express the earning power of the firm's operations.

5.8.3 Development of Capital Markets

The first assumption of the Fisher Separation is clearly upheld in reality. Capital markets have developed strongly over the past decades. Entrepreneurs have a wide range of options for borrowing or investing cash. This is particularly true for large corporations. Today they can issue bonds on the capital market and make financial investments pretty much without involving banks. Consequently the operation of the capital markets has a strong knock-on effect on the valuation of both companies and company units.

This is part of a larger picture. The financial markets are having an increasingly strong influence on the evaluation of *all* the economic activity in society. As in the Fisher Separation, the life of society can be broken down into isolated individual activities. This is what is happening today. Rather than taking an overall perspective, we increasingly tend to see society as representing a series individual opportunities.

Many people bemoan the fact that social cohesion is being lost in the process. But before we condemn the way society is developing, we should understand that the development and differentiation of capital markets is ultimately driven by market participants – which is to say, all of us. The primary force behind the development of capital markets is our desire for liquid assets and higher rates of return.

No wonder, then, that news programs include reports on securities, along with the latest updates on politics, culture and sport. Indeed reports from

the real economy often take a backseat to reports on events on the stock exchange.

This new emphasis in society also has an impact on the business process. Today's managers of publicly owned firms attempt to balance out the various interests at stake. Jack WELCH, former CEO of General Electric, speaks of "customers, staff and capital". In the same vein, public discourse refers to a coalition model.

In recent decades managers have realized that, at the end of the day, many people judge how a firm is doing purely on the basis of its financial performance. The company's rate of return must bear direct comparison with that of the capital market. Capital is globally mobile, and investors have the option of voting with their feet. Portfolio investors are increasingly ready to make use of this freedom of movement – either directly or through investment funds. Shareholders are much more up front today about the rates of return they want than a few decades ago. The corporate charter lays out responsibilities. Shareholders are happy to pay top managers top wages to keep their companies squarely focused on creating financial value. Today's top managers represent a new group of intermediaries – between the firm and its investors.

In light of shareholders' freedom to move, companies are compelled to satisfy their demands for market rates of return. One way of looking at this is to say that the global economy provides us all with our daily bread and our work – but also enforces a certain discipline on us. NIETZSCHE, who was no economist, spoke of the carrot and the stick. States cannot finagle their way past the strictures of finance. They might get away with it for a year, but not in the long term. The market imposes discipline. And firms must offer their financial investors market rates of return. Otherwise they will find themselves on the shelf and wilting.

But are firms really so dependent on their shareholders?

- In the short term, falling share prices do no particular damage. In the medium term, however, they restrict the firm's opportunities

Shares, not Bonds

Around 1970, as the end of the economic boom came into sight, Americans realized that their state pensions would leave a considerable gap in their income following retirement. They needed to fill this with private sources of income – but what was the best place to invest? The experts turned to history. Over the long term, shares had always performed better than bonds. So Americans started buying shares – not because they were particularly fond of companies, but because they figured that shares would continue to provide better returns than bonds. In this way, stock market rates became the foundation for people's retirement planning in the States.

- Firms that repeatedly underperform in terms of their rates of return will find it impossible to increase their share capital. Soon they can no longer raise loans either because their leverage ratio is pushed too high if they cannot increase their equity. The only way they can grow is to draw on their retained earnings – but that's not enough. A declining share price is a sure sign of ongoing low profits. Over time, such firms find that they can no longer match the growth of their sector. They shrink compared to their competitors, sink into oblivion or their assets are stripped following takeovers

Critics of the economy sometimes lament the fact that one can't simply maintain the status quo. Yet growth means increasing quality in many areas and ultimately a better life. Quantity-based growth – the subject of much of the condemnation – is only found these days where a population is suffering privations..

Today's financial markets are populated by shareholders who demand market rates. Up until recently, these shareholders were *investors* who took a longer-term perspective. Typically they were people who earned good salaries and who wanted to make use of their money in ten or twenty years' time perhaps, as a supplement to their pensions or retirement benefit. Their longer-term focus meant that they didn't want to destroy the social environment for short-term egotistical ends. Shareholders and stakeholders always managed to reach a consensus somehow.

The high level of mobility enjoyed by today's financial investors, and new constructions in the financial markets, have put an end to all that. Consideration for others belongs to yesterday. Today's world is one of long/short positions and hedge funds. Financial investors' desire for good rates of return and immediate liquidity has led to the emergence of corporate raiders who intervene directly and emphatically in company politics and investment decisions. The financial markets are characterized by new aggressive postures. Compared to them, the demand of shareholders for market rates of return seem well-mannered and almost demure.

Such developments place entrepreneurs in a tug of war between different markets. They show that the functioning of the market can be overlaid to differing degrees with implicit contracts. These include social contracts whose roots lie in the culture of a specific country. However, as globalization continues its onward march, these social contracts are gradually being rolled back.

Using regulation to try to stop this process is a dangerous game. All too easily, the baby gets thrown out with the bathwater. Excessively regulated financial markets hemorrhage capital, in the same way that countries that fail to limit government intervention soon realize that their best people have packed their cases and gone. We live in world of open doors, a world of new opportunities that everyone can appreciate. To meet its challenges, we need discipline.

It is hardly surprising, then, that other groups of stakeholders have also started articulating their demands more clearly. These demands are having an impact on companies' objectives. The breakdown of former structures is also seen at the level of the individual. Today employees complain to their unions, shareholders clamor for better returns at their annual general meetings, individuals demand more support from the state, and taxpayers attempt to keep their tax burden to the barest minimum.

5.9 Summary

5.9.1 Principles of Financial Thinking

The model of capital budgeting based on FISHER considers an entrepreneur who can make various investments and take various actions that are independent of each other, including investing his money in an external capital market at a market rate of return. FISHER's analysis shows that this entrepreneur – irrespective of his time preferences – should make those investments that show positive net present values. This fact, known as the Fisher Separation, forms the basis of the present-value criterion and underlies modern finance-based management. Financial thinking means evaluating every project and every action in terms of its financial value.

The Fisher Separation is grounded in certain assumptions. One assumption is that the firm is able to invest its money in a capital market. This is the case everywhere today, but it should be noted that major corporations come closest to the ideal described by the model. Small and medium-sized businesses face certain hurdles when it comes to raising equity, and getting hold of initial capital is never child's play.

In a finance-based system of management, all the potential projects available to a firm are described in terms of their cashflows. A cost of capital rate is then determined for each project on the basis of its risks, and

the net present value is calculated. This is the value contribution of the project. If necessary, projects are divided up or redefined in such a way that they can be considered as independent investments.

According to theory, the firm then applies the present-value criterion consistently and universally.

So much for defining the strategic and financial perspectives. We have now established what these opposing views consist of. Their troops are ranged against each other – but the battle has yet to begin.

In FISHER's analysis, net present value is used primarily to decide about investments *within* the firm. The total value creation for the entrepreneur (or shareholders) is equal to the sum of the net present values of the actions taken within the firm, and the investments made there. By carrying out precisely those actions and investments that have a positive net present value, the firm achieves the maximum total value from actions, projects and investments.

In a nutshell, this is the procedure:

- Calculate the net present value for each project. If it's positive, accept the project. If it's negative, reject it. (Projects with a net present value of zero have no impact on the financial status of the stakeholders)
- Remember that the total value contribution will not be maximized if from time to time, for whatever reason, you accept a project with a negative net present value. The Fisher Separation is quite clear about this: You should never accept a project with a negative NPV. Always reject projects with negative value contributions. Break this rule and you destroy value
- Financial considerations must be the sole criterion in every case. They are not just for "long-term" decisions

5.9.2 Finance-Based Management

In a finance-based system of management, we calculate the net present value of each project and make this the basis for deciding whether or not to pursue the project. For this, we must answer the following questions:

1. How can we best describe the project in terms of its contents and its scope? The main way to define the scope of a project is to look at what areas are left unaffected. This is never entirely straightforward. Often

there are positive as well as negative side-effects on the immediate context of the project (other areas within the firm). The same goes for inputs. These are sometimes taken for granted within the company – they seem so vital to the project that they end up being overlooked. But resources must also be taken into account when defining the scope of the project, for the sake of transfer pricing

2. What direct and indirect cashflows do the project and its side-effects generate?
3. How risky is the project? What rate of return will an external investor expect if he invests in the project on an isolated basis, then incorporates this investment into his portfolio? Generally we have to determine the beta by analogy with similar cases, or by using expert opinions
4. What is the net present value of the project?

A finance-based system of management breaks down the idea of the Fisher Separation to the lower decision levels. But one thing should be borne in mind. The Fisher Separation works on the assumption that the projects and investments under discussion can be treated as separate and mutually independent financial investments. No technical dependencies between them or interdependence relating to resources used jointly or not included in the cashflow are allowed. This is an important reservation, and one that is by and large understood. Finance-based systems of management avoid potential problems by delimiting projects carefully and capturing interdependences over resources by means of internal transfer prices.

Managers often find it hard to determine the betas of projects. Here it is useful to look at analogous cases and, if necessary, commission expert opinions. Managers also complain that it is difficult to estimate the value of the real options connected with individual projects. There can be no doubt that creating potentials, flexibility, opportunities and options is a real challenge for any capital budgeting process. But despite the sometimes severe practical difficulties of implementing a finance-based system of management, its proponents insist that the basic principle always holds true: The total value contribution is the *sum* of the value contributions of the individual projects. This sum can only be maximized if the present-value criterion is applied in *every* case, and not just in "long-term" decisions.

5.10 Recommended Reading

1. For a comprehensive explanation of basic terminology, see the much-loved ROBERT C. HIGGINS: *Analysis for Financial Management*. 6th ed., McGraw-Hill, New York 2001.
2. The financial approach, Fisher Separation, DCF, CAPM and the concepts used in EVA, RIM and the weighted average cost of capital (WACC) are discussed in *Finance* by KLAUS SPREMANN, 3rd ed., Oldenbourg Verlag, Munich 2007.
3. Three key textbooks in English on the subject of corporate finance:
 1. RICHARD A. BREALEY and STEWART C. MYERS: *Principles of Corporate Finance*. 7th ed., McGraw-Hill, New York 2002.
 2. ZVI BODIE, ALEX KANE and ALAN J. MARCUS: *Investments*. 6th ed., McGraw-Hill, New York 2004.
 3. MARK GRINBLATT and SHERIDAN TITMAN: *Financial Markets & Corporate Strategy*. McGraw-Hill, New York 2001.
4. Capital market data and historical rates of return for shares and bonds for various countries from the last one hundred years are presented and analyzed in ELROY DIMSON, PAUL MARSH and MIKE STAUNTON: *Triumph of the Optimists – 101 Years of Global Investment Returns*. Princeton University Press, Princeton 2002.

Part 3: The Four Seasons of Business

1 Establish the Basics and Choose a Position

In brief:

In this chapter we deal with the first of the four seasons of business. Where does the company want to operate? Choosing a geographical location is only one element in a firm's positioning. It must also decide where to position itself with regard to innovation, technology, product market and customer perception – a complex mixture. The factors companies need to take into account when positioning themselves have changed fundamentally over recent years. Location factors are dynamic in nature, not static. Companies need to be highly flexible and capable of redefining their position as and when necessary. We therefore take a detailed look at key aspects of finding a new positioning, such as corporate transformation and how it is financed.

1.1 Selecting a Location

1.1.1 The Basics

Everyone knows that before you start producing and selling goods, you have to come up with some good product ideas and develop some innovative prototypes first. What most people forget, however, is that this initial phase of building and developing a business is itself based on certain preconditions. In particular, the company's *positioning*. Where does the company want to operate?

The question is not as straightforward as it might seem. Choosing a geographical location is only one element in a firm's positioning. Just as important for the firm is deciding where to position itself with regard to innovation, technology, product market and customer perception – a complex mixture indeed. These decisions must be made in the first phase of developing a business. In the same way, in the first season of the agricultural cycle, the farmer chooses which fields to plow and what seeds to sow. The early decisions create later potential.

The forerunner of today's positioning decisions was business location planning. The first widely-known economic location theory was that of

A Short History of Location Theories

VON THÜNEN, with his theory of rings, recognized that the value of a location depends on how far it is from the center. In 1909, ALFRED WEBER argued that the choice of a location for a factory was an important decision. He found that the best site for an industrial plant was where the transportation costs for material sourcing were at a minimum.

WEBER's approach is based exclusively on this factor – a hundred years ago, factories needed coal and iron ore as their raw materials and water for cooling. These were the critical ingredients. WEBER deliberately ignores other factors such as the availability of a workforce and knowledge or the location of the markets. Local availability of knowledge was only later included in location theory.

In 1967, ALLAN PRED recognized that the factors determining location strategy are multidimensional. His arguments are based on behavioral theory. He also draws attention to the mental and cultural influences on the choice of a location.

JOHANN HEINRICH VON THÜNEN, one of the most important nineteenth-century economists in Germany. Below we present the "Thünen Rings" model that bears his name.

Another key strand in location theory is rooted in game theory. It is associated with the name of HARALD HOTELLING, an American statistician and economist. His analysis of location strategy is still valid today. We discuss the practical implications of his findings with reference to positioning by political parties in the second section below.

One of the key aims of this chapter is to show that the factors companies need to take into account when positioning themselves have changed fundamentally over recent years. The major drivers of change – technological advance, globalization, liberalization and deregulation of markets, and the growing importance of capital markets – also have an impact on company positioning. Location factors and the location decisions they lead to are dynamic in nature, not static. Companies need to be highly flexible when it comes to positioning themselves. And this includes being ready and able to change or redefine their position entirely.

1.1.2 Von Thünen

The first economic location theory was developed by JOHANN HEINRICH VON THÜNEN (1783-1850). In his work *The Isolated State*, he posits a city in which the demand for goods is concentrated. Various agricultural firms produce the goods required by the citizens – fruit, grain, meat, fuel, and so on. The producers of these goods can decide freely where to locate their business. Naturally, they would all like to position themselves within the city, or very close to its center, in order to save on transport costs. Because all producers find it advantageous to have a central location, the prices for

land in the center of the city are high. The further one moves away from the center, the cheaper land becomes. The companies therefore weigh up their transport costs against the amount of space they need, i.e. the cost of being close to the center.

VON THÜNEN now concentrates on producers of grain. The closer they are to the city center, the lower their transport costs and the higher their land costs. The further they are from the center, the higher their transport costs and the lower their land costs. Defining these variables exactly reveals that there is an optimum distance from the center for agricultural producers. This is the point at which the difference between their revenue and the sum of their costs for land and for transport reaches a maximum. This optimum distance depends on their level of revenue per hectare. Assuming that all producers of grain have the same level of revenue per hectare, they will all set up their businesses at this optimum distance from the center in a ring formation.

The producers of fruit, meat and fuel will make similar calculations. Their rings – the *Thünen rings* – will be at different distances from the center, as different sectors enjoy different levels of revenue per hectare. As a result, each ring will be home to a *homogenous* economic structure.

1.1.3 Hotelling

Another well-known approach to positioning has its roots in game theory and is associated with the name of HARALD HOTELLING (1895-1973). This approach also stresses the attractiveness of the center for producers – even if this leads to a sub-optimal situation for consumers.¹ In one of his models, HOTELLING asks where a political party will position itself on the spectrum from left to right if it is the first party to assume a position and aims to be as close to as many voters as possible. HOTELLING assumes that the voters themselves are evenly distributed across the spectrum. The answer is clear: the ideal position for the political party in question is slap bang in the middle. In this position, the sum of the distances between the party's position and that of all the voters – or rather the square differences, which are considered a better measure – will be at its lowest.

¹ HARALD HOTELLING: *Stability in Competition*. Economic Journal 39 (1929) 392, pp. 41-57.

Now, if a second political party wants to position itself on the spectrum from left to right, the first party having already taken up the center position, it will choose a position just next to the first party. It will either go slightly to the left of the first party, thereby putting itself closer than its rival to around half of the voters, or it will go slightly to the right, putting itself closer to the other half of the voters.

The result? Both parties end up positioned cheek by jowl in the center. If we add together the distances between voter positions and their parties, the total distance is no less than if there were only one party. Now, in terms of the total distance – i.e. how close the parties are to voters overall – it would be better if the parties moved slightly further left or right. But if one of the parties moves away from the center in order to draw closer to its more extreme voters, the other party also shifts along and so captures more voters for itself. For this reason, both parties prefer to stay in the center. This is in line with game theory: the result is stability and equilibrium. However, it does not represent the best positioning for the two parties in terms of the total distance between voters and their respective parties.

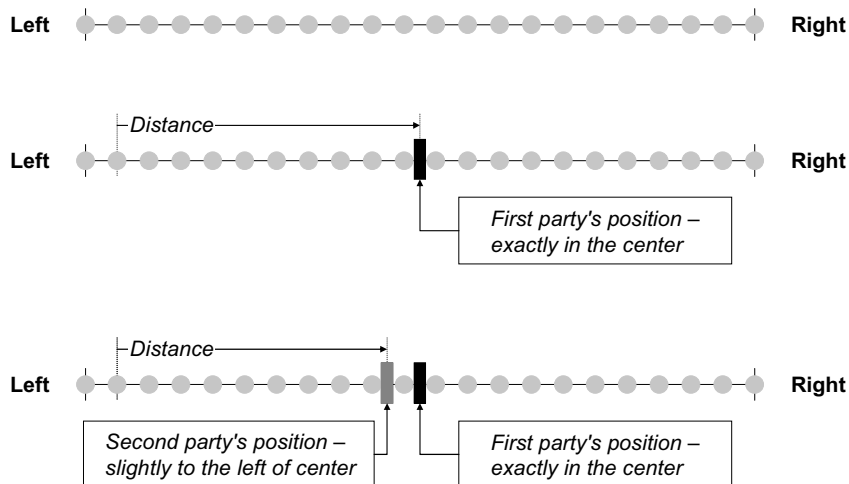


Figure 1-1: In the top figure, the political spectrum is shown as a line running from left to right. Voters, represented by dots, are evenly distributed along the spectrum. In the middle figure, one party chooses a position in the center, thereby minimizing the total distance between itself and voters as a whole. In the bottom figure, a second party subsequently also positions itself in the center. As shown in the figure, the second voter from the left-hand end of the spectrum now feels closer to the second party

In a nutshell, HOTELLING looks at all the different possible positions that a political party can occupy on a straight line between left and right extremes. Voters are distributed evenly along this line. The first political party positions itself dead center. The second party also takes up a position in the center, just to the left or right of the first party. In other words, both parties position themselves in the center.²

1.1.4 Location Theory Today

Location theories seek to explain the distribution of companies. They examine the factors that affect or determine this distribution. Of course, major changes have taken place in the geopolitical and economic situation worldwide since the days of Thünen rings. Location theory has moved on too. Instead of looking at companies' closeness to consumers, investigators now pay more attention to their closeness to the source of inputs. This means the availability and transportation costs of production factors and workers with various levels of qualification. Today's location theories give equal weight to the distance to the supply market and the distance to the sales market. To evaluate a location, they examine features such as proximity to (or distance from) customers, suppliers and competitors, infrastructure, taxes and contributions, and the level of qualification and availability of the workforce. Companies use these features – also known as "location factors" – to choose a location. At least in theory.

At a fundamental level, this model still holds today. But the mega-trends discussed in the chapter *Think strategically* – decentralization and globalization, for instance – have introduced new elements into the process of choosing a location and shifted the balance in favor of particular factors. Thus modern communication and information technology (CIT) has made geographical distance less important. The Internet and global data networks create a feeling of closeness and immediacy even across continents. The development of transport networks has also led to the perception that the world is getting smaller. And the clear drop in transaction costs also contributes to this trend.

This development has led to much fiercer global competition. But at the same time it has given companies new freedom when it comes to choosing

² WILHELM PFÄHLER and HARALD WIESE: *Unternehmensstrategien im Wettbewerb – Eine spieltheoretische Analyse*. 2nd ed., Springer, Heidelberg 2005.

a location for their business. A key issue here is the deconstruction of value chains. Today's companies can configure their value chains nationally or even internationally in such a way as to increase their competitiveness. Their decision what parts of the value chain to carry out themselves (and where) and what parts to entrust to their business or cooperation partners has become one of strategy.

The increasing speed of change in markets inevitably means that such decisions – choices about location and the configuration of the value chain – must be made more and more often, leaving less time for companies to catch their breath. In an environment of increasing competition, companies simply cannot afford to ignore potential cost advantages, such as those arising from outsourcing parts of their value chain to low-wage countries. Companies have become more mobile. They are more prepared than in the past to switch their location for one that offers better conditions such as lower taxes, reduced labor costs or the availability of a qualified workforce.

Identifying and Exploiting Opportunities

Identifying opportunities is a key element in a firm's positioning. In his book "Innovation and entrepreneurship", PETER DRUCKER describes three types of opportunity:

- Inefficiencies in existing markets
- Significant social, political or demographic change
- Inventions that create new knowledge

Another important element of location strategy, besides the optimization of cost structures, is the increasing shortage of resources. Strategic competition for access to raw materials is becoming more and more important. China's growing involvement in Africa makes this

crystal clear. Its trade with African countries grew from USD 29.4 billion to USD 40 billion between 2000 and 2006, making China the continent's third biggest trading partner, after the United States and France.

China's motivation for stepping up its involvement in Africa is no mystery. For the Chinese economy to continue expanding, it needs imports of raw materials. The majority of Chinese investments in African countries relate to oil-mining projects. In Nigeria, Sudan and Angola, Chinese partners have secured the right to exploit local oil fields. In return, the Chinese are investing in infrastructure projects, improving transportation networks and the power supply.

Yet positioning means more than just a company's physical location. It also means its position in relation to others. Today, customer proximity is not just about physical presence – it's also about psychological awareness. Companies must position themselves correctly in the consciousness of

their partners. Choosing a location is not the only factor that determines their presence: the shaping of the brand and other positioning features are also crucial.

Location strategy today involves creating a position in the awareness – and the estimation – of different partners. This means not just the customers and consumers of products in various segments. Companies must also position themselves in the minds of their suppliers and their workforce, in the estimation of their stakeholders and the expectations of their investors.³

Companies, then, have more than just a physical location. They have a position the awareness of their customers, a stance toward their staff, an attitude toward their suppliers, a relationship with their stakeholders and the general public, and finally a stance toward analysts and financial investors. In each of these markets, companies have a positioning – sometimes closer to the center, sometimes farther away.

Today we can understand this as follows:

- The company's *positioning* is the result of its initial investment decision. This decision determines how close the company is to the resources it needs, its partners and its customers. It also determines the options and costs of access and transactions
- For each of these individual characteristics, the best position for the company is in the center, close to its resources and partners. However, this is an expensive position, because it's where everyone wants to be. So only those companies with an above-average "return on position" locate themselves in the center; those with a below-average return on position choose a second-class position

1.1.5 To Choose the Center or not?

Here's an example of how the model works in practice. Let's take N companies, $i = 1, 2, \dots, N$.

- The companies all produce the same product and have an identical cost structure

³ BUSSO GRABOW, DIETRICH Henkel and BEATE HOLLBACH-GRÖMING: *Weiche Standortfaktoren*. Kohlhammer, Stuttgart 1995.

- However, because of minor differences, they have various sales volumes q_i . We number the companies such that $q_1 > q_2 > \dots > q_N$. In the following example, the sales volumes remain constant
- The sales price is a constant p and the unit costs a constant c . Accordingly, company i has profit (or net income) $NI_i = (p - c) \cdot q_i$.

Now, each of the companies $i = 1, 2, \dots, N$ can choose whether it wants to differentiate itself with the help of a signal (advertising, offering additional services, building up a brand, etc.). This would improve its positioning. It can produce a positioning signal of strength x_i and select a signal strength of between 0% and 100%, whereby $0 \leq x_i \leq 1$.

Opting for repositioning with the help of a signal has two effects:

- It gives rise to signaling costs of $K \cdot x_i$.
- Company i can achieve a higher sales price, giving it an additional margin of $d \cdot x_i$

Both K and d are constant for all companies.⁴

The strength of the signal indicates the company's position: $x_i = 1$ means in or close to the center, while $x_i = 0$ means in a position where no additional costs for a better positioning arise. For decisions between these two extremes, $1 - x_i$ indicates a distance from the center. Company i will determine its optimum positioning or signal strength x_i as follows:

$$\text{Maximize } NI_i(x_i) = (p + d \cdot x_i - c) \cdot q_i - K \cdot x_i \quad (1-1)$$

where $0 \leq x_i \leq 1$

For the optimization, we can drop all the terms in the profit function $NI_i(x_i)$ that do not depend on x_i . This gives $NI_i^0(x_i) = d \cdot x_i \cdot q_i - K \cdot x_i$ as the portion of the profit influenced by the positioning. Accordingly, the company should try to maximize the difference between the product of the

⁴ This model has much in common with the theory of signaling developed by SPENCE 1973. In our model, the revenues from signaling vary from company to company, since their sales volumes differ, while the signaling costs remain constant for all companies. In SPENCE's model, the signaling costs vary from company to company, while the revenues from signaling are constant. MICHAEL SPENCE: *Signaling in Retrospect and the Informational Structure of Markets*. American Economic Review 92 (2002) 3, pp. 434-459.

additional margin $d \cdot x_i$ and the sales volume q_i at signaling costs $K \cdot x_i$. The optimum position or signal strength is now clear:

- The signal has the greatest possible strength $x_i = 1$ (center position) at the point where $d \cdot q_i \geq K$
- The signal has the least strength $x_i = 0$ (position far from the center) when $d \cdot q_i < K$

In other words, what matters is the relationship between the additional margin $d \cdot x_i$ generated by a center position and the positioning costs per unit of sales K/q_i . Since $q_1 > q_2 > \dots > q_N$, the positioning costs per unit of sales are lowest for company 1 and highest for company N : $K/q_1 < K/q_2 < \dots < K/q_N$. What, then, is the relationship between d and K/q_i for company i ? Here, we need to distinguish three different situations:

- The additional margin generated by the center position is smaller than the positioning costs per unit of sales for the first company, i.e. $d < K/q_1$. No company is interested in striving toward a better positioning
- The additional margin generated by the center position is greater than the positioning costs per unit of sales for the last company in the series $d > K/q_N$. All companies position themselves in the center
- The additional margin d lies between the positioning costs per unit of sales for the first and the last company, $K/q_1 > d > K/q_N$. The first company positions itself in the center, while the last company does not sustain any costs for positioning. How company i decides ($1 < i < N$) depends on the case in question. If $d \geq K/q_i$, it positions itself in the center; if $d < K/q_i$, it does nothing

These three situations require further comment.

In the first case, taking up the center position is of no benefit to *any* company.

This positioning option rarely receives much attention, as no one is interested in pursuing it. Here are some examples. In years gone by, companies did not try to position themselves so as to attract the best university graduates. There was no war for talent on the labor market. As a result, most companies did not consider it worthwhile making themselves distinctive in order to attract new talent. Similarly, issuing long product

guarantees is expensive for companies, even with today's improvements in product quality and reliability. Consequently companies prefer to give customers the minimum legally required guarantee. Offering guarantees above and beyond this is not profitable for companies.

However, the initial situation of $d < K / q_1$ can change. This happens, for example, where the company with the best revenue figures improves its sales still further and thereby reduces the positioning costs per unit. The situation can also change where the signaling costs K fall or where the additional margin d generated by the center position increases. This can happen as the result of a new fashion, for instance.

The second situation, $d > K / q_N$, is well known. *All* companies position themselves in the center. A new marketplace or a new standard is born.

An example. The initial development costs for ABS brakes – by which we mean the costs K irrespective of sales volume – were significant for Daimler-Benz. Yet they were worthwhile because of the high sales volumes they then achieved. The non-volume-dependent costs K were much lower for other automotive producers as they could simply transfer the technology to their own production processes. As a result, all other producers quickly appropriated the positioning feature ABS and a new standard emerged. This is how general technical progress works. In the second situation above, the feature has lost its power as a distinguishing feature. As the situation continues to develop, the additional margin d can sometimes even shrink, as all companies appropriate the feature. Once established, a standard remains in place. Such is the way of progress.

The third situation is perhaps the most interesting. Here, the first company positions itself in the center and the first m companies ($m < N$) maybe follow in its tracks. However, companies $i = m + 1, m + 2, \dots, N$ make no effort to achieve a better positioning.

Company m 's impact is only marginal, as $d \approx K / q_m$. In the third situation above, we may assume that d and K depend on m . If m is bigger and more companies position themselves in the center, d may shrink slightly, as other companies acquire the same positioning feature. At the same time, K will increase slightly, as the position is already well occupied and it is therefore getting more expensive to take it up. There is thus an economic force that makes m smaller. This force stops more and more companies positioning themselves in the center. The center retains its exclusivity – it is a position that can only be occupied by a single company, or at most a

few companies. This makes the third situation stable, as long as d and K develop as we expect in practice.

Positioning often gives rise to costs that depend on the distance from the center, not on the sales volume. This can lead to a differentiation in the market on the basis of sales volume. A few companies with strong sales figures position themselves better in the market, exactly in the center. The remaining companies have zero positioning costs but do nothing to improve their margin.

According to the model outlined above, a company's positioning is a type of intra-public good. Irrespective of sales volume, the company's positioning can be used to advantage by all its sales units without being eroded or entirely consumed. As we saw in the last chapter, investing in such resources is more valuable the more widely the resources are used. Consequently it is the companies with the best sales figures and the most numerous and frequent contacts that find it worthwhile to improve their positioning. In other words, a half-hearted approach brings few rewards. If you're going to position yourself, aim for the center.

1.2 Shifting Position

1.2.1 Kondratiev Waves

A company's positioning is not carved in stone. The world moves on. Companies need to reckon with new currents and trends. These currents can be stronger or weaker, and we all find it easier to go with the flow than to struggle against it. So a company's positioning should not be judged just in terms of its proximity to the center right now. How things develop over time also makes a difference. We know this process of development by various names: technical progress, fashion, or simply time taking its toll.

Behind this process lie individual forces, drivers of change, trends. Not all companies are able to appreciate their full impact in time. For example, many telecommunication companies enjoyed an excellent position in 1985. Yet some underestimated the impact of digitization and their customers' desire for mobility. Likewise, certain major airlines such as Swissair failed to recognize the importance of developing networks – and paid the price for it.

A look back at the relative weight or market capitalization of different industries 50 and 100 years ago is highly revealing. Around 1900, railroads (with a 49% share of total market capitalization in England), banking and finance (15%), mining (7%) and the textile industry (5%) were important sectors. In 1950, the biggest share of market capitalization – some 23% – was accounted for by sectors that were still small in 1900, followed by the tobacco industry (13%), insurance (12%) and breweries (9%). In 2000, the share of sectors that were small in 1900 had grown to 47%. They were followed by banking and finance (17%), telephones (14%) and retailing (4%). In the United States, the corporations that in 1900 accounted for 85% of total market capitalization have all but vanished from the scene now. Today, the largest sectors are information technology, banking, pharmaceuticals, telecommunications, retailing, oil and gas – industries that were either of minor importance or did not figure at all in 1900 and 1950.⁵

Here are some of the most profitable sectors of the last decades:

- 1965 – Electrical engineering
- 1975 – Mechanical engineering
- 1985 – Automobiles
- 1995 – Mobile telephones
- 2005 – Energy

The ebb and flow of different sectors can be seen in terms of long-term investment cycles and shifts in demand. Changes are the natural result of innovation – and the likelihood of innovation doesn't depend on the sector.⁶

The Russian economist NIKOLAI D. KONDRATIEV (1892-1938) was the first to discover and investigate long-term investment cycles and shifts in demand. He argues that every 60 years a basic innovation, a new key technology, new fundamental raw materials and new forms of organization appear. This leads to changes right around the globe. At the same time, it

⁵ ELROY DIMSON, PAUL MARSH and Mike STAUNTON: *Triumph of the Optimists – 101 Years of Global Investment Returns*. Princeton University Press, Princeton, NJ 2002.

⁶ SCOTT A. SHANE: *A General Theory of Entrepreneurship: The Individual-opportunity Nexus*. Edward Elgar, Cheltenham 2004.

sends out an economic impulse that brings about a long period of boom. JOSEPH A. SCHUMPETER (1883-1950) calls these cycles *Kondratiev waves*. They are accompanied by established firms being driven off the market – a form of "creative destruction" that SCHUMPETER considers to be a normal feature of capitalist systems.⁷ (The term "creative destruction", although popularized by SCHUMPETER, originates with NIETZSCHE.) SCHUMPETER stresses that this process of destruction should not be seen as a failure of the system, but as essential for the creation of a new order.⁸

WAVE	BEGIN	BASIC INNOVATION	SECTOR
K6	20xx	Psycho-social health	Gyms, fitness clubs, health spas, wellness centers
K5	1990	Information technology	Globalization, communication
K4	1950	Automotive	Automotive, petroleum, road construction
K3	1900	Electric motors, chemicals	Consumer products
K2	1850	Railroads	Railroads, steel industry
K1	1800	Steam engines	Garments

Summary 1-1: Six different Kondratiev waves, based on LEO A. NEFIODOW

At every point in history, then, there are favorable and unfavorable sectors for business activity. When speaking of the different currents that affect the value of a company's positioning, we should look at how different industries have fared.

⁷ 1. LEO A. NEFIODOW: *Der sechste Kontradieff – Wege zur Produktivität und Vollbeschäftigung im Zeitalter der Information*. 5th ed., Rhein-Sieg-Verlag, Sankt Augustin 2006. 2. HANS THOMAS and LEO A. NEFIODOW: *Kondratieffs Zyklen der Wirtschaft*. Busse und Seewald, Herford 2002.

⁸ JOSEPH SCHUMPETER: *Theorie der wirtschaftlichen Entwicklung*; in: *The American journal of economics and sociology*, Vol. 61, No. 2, pp. 405-437, 2002.

1.2.2 Organic Growth

How can we best *measure* the overall value of a company's positioning with respect to the trends and currents in specific sectors? When a ship goes faster than we would expect given its engine power, it is obviously being helped along its way by a favorable current. And when its progress is slower than we expect, it's evidently trying to go against the flow.

We can measure the progress of a company in terms of its annual increase in value. When calculating this increase, we should include any dividends paid by the company so that we end up with the total value creation. The progress of the company is then shown by its rate of return R , as seen from the perspective of the financial markets:

$$R = \frac{\text{Market value } (t + 1) - \text{market value } (t) + \text{dividend}}{\text{Market value } (t)} \quad (1-2)$$

The rate of return is related to the company's level of risk. It increases in proportion to the risk in the portfolio that cannot be further diversified away (i.e. the systematic risk), as expressed by the beta. The relationship between the rate of return and the beta is described by the CAPM (for the relevant formulas, see Section 2, Part 5).

The company's "engine power" is shown by its profit levels. These can be found in the company's accounts. Of course, a lot depends here on the accounting standards followed – these primarily determine how much can be capitalized and how much must be written off. A company's earnings yield or *EYD* is the quotient of its profit divided by its market value:

$$EYD = \frac{\text{Net income}}{\text{Market value } (t)} \quad (1-3)$$

The relationship between the *EYD* and the popular index *return on equity* (*ROE*) can be calculated on the basis of the relationship between the company's book value and its market value. This is known as the "book-to-market ratio". *ROE* is defined as follows:

$$ROE = \frac{\text{Net income}}{\text{Book value}} \quad (1-4)$$

Therefore:

$$EYD = \frac{\text{Net income}}{\text{Market value}} = ROE \cdot \frac{\text{Book value}}{\text{Market value}} \quad (1-5)$$

Now, anyone who knows their stock markets can tell you the following:

- The long-term rate of return on shares (1-2) averages around 10%. Companies with a smaller beta show a slightly lower rate, while those with a bigger beta enjoy a slightly higher rate
- However, the EYD (1-3) for shares lies around 6%. So if a company has a book-to-market ratio of 50%, the $ROE = 12$

The EYD is the reciprocal of the price-to-earnings ratio or *P/E ratio*.

$$EYD = \frac{\text{Net income}}{\text{Market value}} = \frac{1}{P/E \text{ ratio}} \quad (1-6)$$

The average P/E ratio for all firms listed on the stock exchange over time is 17. This means that the mean $EYD = 1 / 17 \approx 6\%$. These are typical values. The company is thus like a ship that progresses by 10% a year over the long term, even though its own engines provide a drive of just 6%. Clearly the company is charting favorable waters – the current gives it an extra momentum of 4% over and above its engines' performance.

What are the implications of this? Basically, even if the company distributes all of its profits in the form of dividends, it will still grow by 4% a year. In other words, even if the ship coasts along and only uses its engines to run the climate control and on-board music system, it will still make 4% a year. Clearly those are good waters to be in.

We can call this underlying current the company's *organic growth*.

$$\text{Organic growth} = R - EYD \quad (1-7)$$

Now, the difference between the actual speed of 10% (the rate of return) and the 6% drive provided by the engines (the earnings yield) – in other words, the company's organic growth – may be due to overly conservative estimates of the company's engine power. The earnings yield naturally depends on how conservative the accounting methods used are. Two general factors affect organic growth:

- In conservative profit and loss accounting, some expenses not relating to the provision of goods and services in the period in question, but increasing the potential for such provision, are nevertheless not

capitalized. Examples include the following: research and development; depreciation/amortization – some companies charge one-time write-downs; and maintenance – some companies incur expenses by carrying out work that increases value

- Some companies enjoy nominal value growth due to inflation and increases in value that are not capitalized. These items are what give the company its good positioning within a favorable current of overall development, and the company can use them to actively develop and exploit its options

In fact, it doesn't matter if the company's organic growth is exactly 10% – 6% = 4%, or somewhat less than this. The absolute level is irrelevant as far as the question of whether different waters have different underlying currents is concerned.

SECTOR	P/E RATIO	EXAMPLES
Biotechnology, software, technology	Over 30	Hilti 29, Logitech 40, Microsoft 43
Pharmaceuticals, medical technology	20 ... 30	Novartis 22, Roche 25
Consumer goods, food, services, media	18 ... 24	Givaudan 17, IBM 19, Publigroupe 23, Swatch Group 15
Banks, insurance companies, retailing, machinery, electrical engineering, chemicals	12 ... 18	Bank Vontobel 15, Boeing 16, Citi Group 14, Ems Chemie 15, Luzerner KB 15, UBS 12, Sulzer 13, Vögele 11
Construction, transportation, steel, raw materials	6 ... 12	Holcim 10, Vetropack 10

Summary 1-2: Typical P/E ratios for five different groups of industries (Source: SPREMANN: *Finance*. Oldenbourg Verlag, Munich 2006, Chapter 5)

What is important for choosing a positioning strategy is the realization that organic growth differs from sector to sector. There are two reasons for this:

1. The beta, which through the CAPM determines the rate of return R (the overall speed of the ship) is not dependent in any way on the specific industry in question
2. By contrast, the earnings yield (the drive provided by the ship's engines) is dependent on the specific industry. This is because the

earnings yield is the reciprocal of the P/E ratio – see (1-6) – the value of which depends on the industry in question

We can calculate the industry-specific beta and hence the market rate of return on an industry-by-industry basis. We can then do the same for the P/E ratio and the typical earnings yield it produces. The difference between the two is the industry-specific organic growth – the current that either helps the business along or slows its down. As we saw earlier on, the absolute values depend on the accounting methods used. Newer accounting standards can potentially recognize higher profits than conservative methods. Consequently, the level of organic growth appears lower.

How does this help us? We can gain useful information from the profit and loss recorded by comparing them to the rates of return expected on the market. In particular, this will tell us which "items" benefit from favorable currents in the industry, and which are going against the flow.

SECTORS AND THEIR EXPECTED RATES OF RETURN (R)	EYD	R – EYD
Biotechnology, software, technology	< 3.3%	> 6.7%
Pharmaceuticals, medical technology: R ≈ 9%	3.3% ... 4.2%	4.8% ... 5.7%
Consumer goods, food, services, media: R ≈ 8%	4.2% ... 5.6%	2.4% ... 3.8%
Banks, insurance companies, retailing, machinery, electrical engineering, chemicals: R ≈ 7%	5.6% ... 8.3%	-1.3% ... 0.4%
Construction, transportation, steel, raw materials: R ≈ 6%	8.3% ... 17%	-10% ... -2.3%

Summary 1-3: The right-hand column shows typical rates of organic growth. For industries in first two rows, market prices indicate that strong organic growth is expected. For industries in the bottom two rows, negative organic growth is expected in certain areas. In other words, if the profits are distributed in full and no externally financed investment takes place in these industries, the market value of the companies in question will decline

1.2.3 Corporate Transformation

The processes of transformation that affect companies have gained enormous momentum as a result of the drivers outlined at the beginning of

this chapter. The rapid changes taking place in markets mean that companies need to be highly flexible. This is not just about being able to adapt to changing conditions. Companies must themselves be proactive in dealing with change. To continue our nautical metaphor, they can't simply drift along hoping to be picked up by a favorable current. They have to actively navigate their way into promising waters – paddling furiously if necessary.

But hang on a minute. Can companies really change their position, their industry, or even simply the field they operate in? The answer is yes, they can. Here are some well-known examples of companies that have shown how it's done:

1. IBM successfully moved out of the hardware business and transformed itself into a solutions provider
2. Nokia, formerly a Finnish manufacturer of rubber boots, took the bold step of repositioning itself as a supplier of mobile telephone equipment – becoming, time and again, the most strongly capitalized company in Europe
3. The management board of Mannesmann decided to drop their steel tubes business in 1999 and reposition themselves in the field of telecommunications
4. Preussag (railroad ties, submarines, fire extinguishers) mutated into TUI (travel) between 2000 and 2002

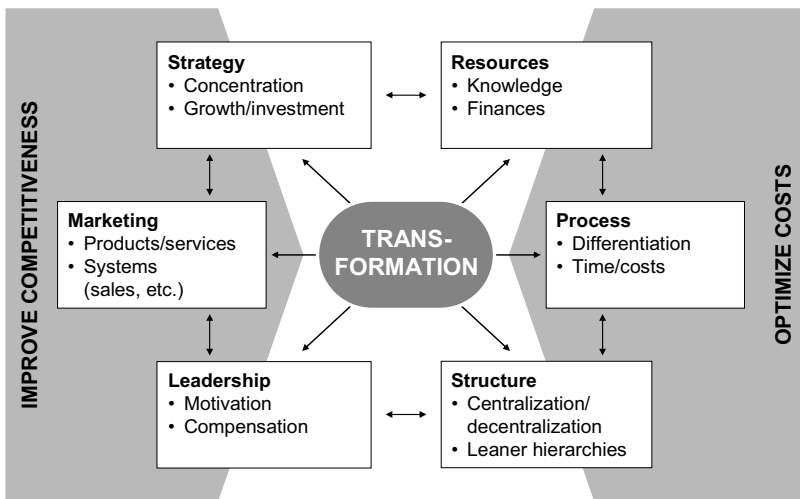


Figure 1-2: Transformation as a holistic concept

After years of crisis management, more and more managers see their primary task today as spearheading development through realignment and change. Companies successfully repositioning themselves have one thing in common: They base their repositioning on a concept of transformation that they implement with the aid of change management tools.

Transformation means making a conscious decision to carry out targeted changes and a fundamental realignment. This includes making changes to the business model. Transformation means much more than changing existing processes step by step. It is a holistic approach involving all the key areas of the firm: its position on the market, its structures and processes, its management, and the behavior of its employees. If we accept this view of transformation, then it will be clear that change management must also involve corporate strategy.

Repositioning a company requires great powers of persuasion. The entrepreneur or the management team needs charisma. They have to convince their employees that the new direction is the right one. Resistance should be expected in all organizations. Overcoming this resistance is no easy task. It is only possible if the management follows certain ground rules:

- Top management plays a key role in the transformation process. It lays out the goals of the transformation and sets the vision, which provides a lasting point of orientation. For the transformation to be credible, top management must be seen to be committed to it. They should demonstrate this commitment by planning and preparing the transformation process, actively supporting it during implementation and leading by example throughout
- The transformation process needs a clear timeframe, set by top management. If the timing is left up in the air, people soon start to see the transformation as a never-ending story
- Involving the workforce is crucial. Employees must be able to participate actively in the change process and to feel they are part of the change. Communication is particularly important on all levels of the organization. The management must make people realize that change is essential. This is the only way to motivate them to support the transformation and to take on ownership of the process
- It is not enough for top management to simply lay down the goal of the transformation process. It must also state how this goal is to be achieved. This means setting interim goals and defining key milestones.

How the individual stages fit into the overall change process must be clear to everyone

Time for a moment of honesty. In many companies, *change management* is something of a dirty word. All too often, companies launch unsystematic, half-hearted change programs then abandon them halfway through – or continue them under a new guise or with a sexier-sounding name. Not surprisingly this has undermined the willingness of staff in many companies to be involved in transformation processes. The same mistakes are made time and time again:

1. Instead of setting clear goals backed up with figures, the management goes for a flash-in-the-pan effect
2. A consistent strategy is lacking during the transformation process. Constant changes of direction make the staff insecure and undermine the credibility of the top management
3. The transformation process is initiated without a clear commitment from top management. As long as those at the top of the organization keep their heads down, no one knows who will be the winners and losers in the transformation

If the top management observes the ground rules outlined further above and avoids the three common mistakes, it will have created the necessary conditions for successfully repositioning the company. Moreover, it must actively cultivate the change skills gained by the organization during the process of transformation. Why? Because nothing is as enduring as change. The meta-goal of all actions taken within the framework of a transformation is to embed the ability of the organization to adjust its value systems and actions as required deep within the organization.

1.2.4 Using Depreciation

Repositioning a company not only means deciding how best to shape the transformation process, it also raises questions of financing. Where is the money for the necessary investments going to come from?

The key provider of financing is the company itself, in fact. The main source of the money is depreciation. Here's how it works:

- In the past, depreciation on fixed assets fed into the pot of money used by the company's engineers and plant managers to make replacement investments. This process was taken for granted and didn't require any

further discussion. The engineers and plant managers went to trade fairs and bought the same pieces of equipment and machinery as they had always done, only in newer, more up-to-date versions. They didn't consider the option of investing the money elsewhere – indeed, they were probably not in a position to weigh up other alternatives. As well as using the cash generated by depreciation to preserve the company's asset base by replacing old equipment, they would also suggest new capital investments. Naturally these were always of a similar type. The new investments were to be financed with retained profits. The objectives were clear: first, to preserve the business in the structure it had developed over time; second, to increase capacity so as to avoid bottlenecks at times of peak demand; and third, to increase security so as to avoid operations being disrupted

- Companies can generate substantial amounts of cash by depreciating their fixed assets. If a company depreciates its fixed assets over an average of ten years and doesn't replace them in the manner described above, it can rebuild its asset base in a completely different area within the same period of time. If it also uses the cash intended for new capital investments – the retained profits – it can probably reposition itself entirely within seven years, in a new industry, for example. Things go even quicker if the company sells off parts of the business, stops any expansion and keeps replacement investments to a strict minimum. Following this option, it might be able to re-establish itself in a new position within three years even

Apart from channeling the cash generated via depreciation on fixed assets into new directions, companies have a whole range of options for reducing capital input without restricting their processes and functions.

A study carried out by Roland Berger Strategy Consultants, in conjunction with the University of Lausanne, produced some telling findings here. The survey investigated 200 listed Western European companies with annual revenues of over a billion euros, from 19 different industries. It found that a total of EUR 420 billion of capital could be generated in the companies examined. The key, first and foremost, was in capital-saving management of inventories. This area offers potential savings of 45%. Capital could also be effectively freed up in the inventories themselves (20%), receivables from customers (16%) and trade payables (19%).

Opening up these internal sources of financing allows companies to finance change. On average, companies spend 57 cents of operating capital to achieve one euro of annual revenue. Yet there is great variation here,

even between companies working in the same sector. Thus companies with greater "capital lockup" use more than ten times as much capital as the top-performing companies. The biggest hidden cash reserves are found in the energy, mechanical engineering, chemicals, ICT and automotive sectors.⁹

1.3 The First Season – Conclusions

1.3.1 Identifying Phases

How can you tell if a company (or division) is in the first season? The way the company positions itself lays the groundwork for its business activities. The choices to be made at this stage are therefore general in nature. When choosing its positioning, the company must consider and then codify its general philosophy, mission and direction.¹⁰ In the next step it adds the meat – the type of technology it will use, the product market, the customer perception aspired to and so on. These choices must harmonize with the company's underlying philosophy. Phase one thus goes from philosophy to strategy, and thence to structure.

Positioning yourself involves costs. It requires investments, some of which are irreversible. The questions to be asked are as follows: Where should the company begin its activities? Where should it set its sights? What should its starting point be? Should it position itself in the center of the multidimensional world of technology and customer perception – an expensive option by any standards – or can it stay on the periphery? Does it need to lead new developments, or can it follow just behind? And having established its position, what further moves should it make?

The first season is thus a period of early investment decisions. To determine whether a company (or division) is currently in this phase, one may look at certain features that indicate the company's orientation. For example, is the company busy making contacts to identify potential future partners or to check the feasibility of some broad general plan? Is the

⁹ BURKHARD SCHWENKER and STEFAN BÖTZEL: *Making Growth Work – How Companies Expand and Become More Efficient*. Springer, Berlin 2006.

¹⁰ BJÖRN BJERKE: *Understanding Entrepreneurship*. Edward Elgar, Cheltenham 2007.

company carrying out screening activities? If so, this would tend to indicate that it is concentrating on defining its position. Other signs that the company is in the positioning phase are vague ideas outlined in memos, and initial business plans.¹¹

Studies have shown that a company's level of innovative activity – measured in terms of its spending on R&D – is also an indicator of whether or not it is in the initial phase. If the company is taking action to protect its patents this is also a sign that it is trying to maintain and secure its positioning.

In the positioning phase, the company also makes a number of internal commitments:

- The leader of the organization's thinking – its chief entrepreneurial figure – must live out the vision. The vision must be visible
- Those contributing to and involved in the business want to be sure of their right to participate in its profits. People don't give their best unless they hope to share in the success later on
- Creativity – and this includes innovation – requires groundwork. Signs that this groundwork is taking place are if the company has a culture of learning, celebrates successes, cultivates skills and communicates in an open fashion
- All of this can be supported by operational initiatives, for example creating and maintaining knowledge databases, integrating external consultants or involving customers in the process of realignment and positioning. Such initiatives are also a sign that the company is in the first season

Cultural conditions	A culture of learning, celebration of success, promotion of service skills, open communication
Strategic conditions	Formation of networks, development of an innovation capability
Operational and process conditions	Knowledge databases, use of external consultants, integration of customers

Summary 1-4: Indicators that a company is in the first season

¹¹ URS FUEGLISTALLER, Christoph MÜLLER and THIERRY VOLERY: *Entrepreneurship*. Gabler, Wiesbaden 2005.

Summary 1-4 gives an overview of indicators that the company is currently in the orientation phase – positioning itself and building partnerships and teams.

1.3.2 Summary

The first season is one in which the company positions itself prior to entering the development phase. The company must ask itself where exactly it wants to operate. In the past, the answer would have been a specific geographical location. Today, geography forms just one element of positioning. Just as important is deciding where the company should position itself with regard to innovation, technology, product markets and customer perception – a complex set of dimensions.

Location theories furnish explanations for how companies are distributed. They examine the factors that impact on, or determine, this distribution. Location theories have been around for a long time. In the past they focused on the transportation costs involved in a business, weighted in terms of the materials it consumed. Later, they also embraced other location factors, such as the availability of a workforce or the level of taxes and contributions.

The factors involved in location decisions have changed dramatically in recent years. The major drivers of change – technical advance, globalization, liberalization and deregulation of markets, and the growing importance of capital markets – all have an impact on how companies position themselves. Location factors and the resulting location decisions are dynamic, not static. Companies need to be highly flexible when it comes to positioning themselves. This includes being prepared to change their position or redefine it completely if necessary.

Various theories exist about how companies should position themselves. Their conclusions can be summarized as follows: First, companies should either position themselves exactly in the middle or they should make no effort to position themselves at all. And second, if they are repositioning themselves, they should pay close attention to existing currents in the market. In particular, they should be on the lookout for a favorable current that might give them extra momentum and so speed them on their way.

It is important to understand that repositioning a company is actually a realistic option. Companies have legs – they can change their position if necessary. Markets develop and change quickly, and companies must be

able to adjust and deal creatively with new conditions. They have to be able to transform themselves. Transformation means making a conscious decision to carry out targeted changes and perform a fundamental realignment, which can include making changes to the business model. The money for repositioning can come from internal financing, particularly by rechanneling cash generated from fixed assets (via depreciation) into new areas.

In the first season, strategy is king. Hence our recommendations: Position yourself in the center, pay attention to underlying currents, and "manage the change". Only in a few specific instances – when calculating organic growth, for example – are financial considerations important. Generally, in the first season companies need charismatic leaders, not financial controllers. In the first season, strategy comes up trumps.

1.4 Recommended Reading

1. Traditional location planning draws on the methodology of linear optimization. For a discussion, see ULRICH THONEMANN: *Operations Management*. Pearson Education, Munich 2005, Chapter 3.
2. For an excellent discussion of game theory and how it relates to positioning, see: WILHELM PFÄHLER and HARALD WIESE: *Unternehmensstrategien im Wettbewerb – Eine spieltheoretische Analyse*. 2nd ed., Springer, Heidelberg 2005.
3. KERSTIN STOLZENBERG: *Change Management*. Springer, Heidelberg 2006 – a well-balanced book on an important topic, with plenty of practical tips.
4. BURKHARD SCHWENKER and STEFAN BÖTZEL: *Making Growth Work – How Companies Expand and Become More Efficient*. Springer, Berlin 2006, Chapter 7.

2 Develop and Build

In brief:

After the first phase of positioning comes the phase of innovation. Ideas are born and transformed into a functioning product, a prototype that can be launched on the market. For this second stage in the business process, the entrepreneur takes over the reins. Creativity and product development require a special, encouraging environment. But before a business idea can be developed, selection must take place. A choice must be made. Here, using internal markets gives better results than using predetermined, fixed criteria. Above all, the entrepreneur must shape his product in line with the expectations of the marketplace. For this, target costing can be helpful.

2.1 Innovation

2.1.1 What Is Innovation?

In the first phase of the business process, the company positions (or repositions) itself. In so doing it creates a specific potential.¹ In the following stage – the second phase of the business process – the company needs to exploit this potential and use its reservoirs as support in generating concrete concepts, product ideas and prototypes. In other words, innovation is the name of the game.

To get a better grip on the subject, we should first look at exactly what we mean by innovation. Let's clear up some common misunderstandings. Many peoples' immediate association with the word "innovation" is ARCHIMEDES' cry of "*Eureka* – I've found it!" We tend to concentrate on the invention, the flash of inspiration experienced by the lone genius working in his garage. But invention is not the same as innovation. "Invention" means generating new knowledge or combining different pieces of existing knowledge to come up with new solutions; "innovation" is invention plus its successful implementation and marketing as a commercial solution. Innovation by definition means generating and

¹ See also Figure 3-3 in Part 2.

implementing new things and ideas. To put it simply, innovations make money out of inventions.

But it would be wrong to think of innovation only in terms of things, to reduce it to the dimension of technical progress. Innovation is more than just new products or technologies. In fact it covers four different areas – although the line between different types of innovation is rather fuzzy and innovations often affect more than one area:

- **Products and services**
This includes new or significantly improved products and services that a firm brings to market. Such innovations are also known as "performance innovation". For instance, the German Business Innovation Prize for 2006 in the category "Small and Medium-sized Enterprises" was awarded to Varta Microbattery GmbH in recognition of its development of extremely thin batteries for the latest generation of nano MP3 players
- **Processes**
Process innovation is where a company introduces new or significantly improved production techniques and processes or processes for delivering services. An example of this is waste management and recycling. In waste sorting, robots equipped with sensors do the dirty work: electronic sorting machines are able to recognize any type of material almost without error
- **Value chain**
Innovations in the value chain can represent fundamental changes to how the value chain is configured. A good example is the relationship between automobile producers and their suppliers. Over time, auto-makers have reduced their level of vertical integration and outsourced parts of their value chain to their suppliers. Many of the latter have developed into system providers. Increasing integration of individual parts and components into entire systems (e.g. brake systems, power systems) is turning suppliers into key partners for automotive producers and an important link in their value chain
- **Customer care**
Innovation in customer care covers all new or significantly improved activities aimed at building customer loyalty. Customer Relationship Management (CRM), for example, means that customer care is not just limited to the sales process or specific aftersales services

2.1.2 The Role of the Entrepreneur

The second phase of the business process requires an entrepreneur who, together with his team, can exploit the potential created by the first phase and transform it into innovation. The entrepreneur needs to be creative and imaginative, able to inspire his employees and at the same time make the choices and alterations necessary to secure the achievement of his business goal. This is what we mean by the entrepreneurial personality.

Entrepreneurship

Entrepreneurship is a process driven by individuals who identify, evaluate and exploit new business opportunities. Creativity, innovation and entrepreneurship are closely interrelated and cannot be separated from each other.

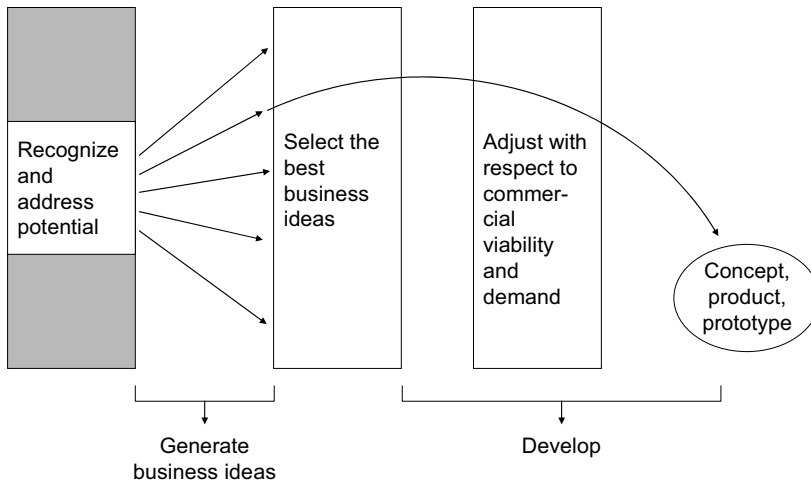


Figure 2-1: The entrepreneur must address the existing potential, generate ideas, select the best of them and guide their development with an eye to their commercial implementation

The entrepreneur must do three things. First, he must be aware of the potential created by the company's positioning and be prepared to realize this potential. Like a grain of corn, potential can only develop into innovation if it receives nutrients from the surrounding soil. Second, the entrepreneur must be able to develop his business ideas and add substance to them. And third, he must be capable of letting go of certain ideas if no commercial use can be found for them – something that often requires great strength. At the same time, the entrepreneur must be able to steer

developments toward their commercial implementation (or a particular segment of demand), ensuring that they hit the spot.

The entrepreneur, then, is an innovator who implements new ideas commercially. But these ideas don't just come out of nowhere. The innovator must be able to find the right environment for producing new ideas – the right feeding ground, as it were – and accept it. He can't move to New York and then complain that he misses his hick hometown. Great creativity, flexibility and a good eye are needed. The entrepreneur's sense of perception must enable him first to see what business ideas are out there, and then to understand how developing them on the market will be evaluated and hence financed.

2.1.3 Development and Scalability

Many new business ideas are "pliable" – they can be molded as required. How the entrepreneur does this determines whether they end up a commercial success or not. Between an idea (a discovery, invention, or the creative improvement of an existing idea) and its marketable prototype (a new product or service, process or form of organization) there is often much work to be done by the entrepreneur and his team. These are the jobs of *shaping*, *developing* and *adjusting*. The idea must be given technical and organizational *substance*. The curved arrow in Figure 2-1 shows how ideas are "bent into shape".

The innovation must be *calibrated*. Calibrating a business idea means shaping it precisely to fit a market or market segment so as to ensure that there is demand for it when it is ready. This requires a disciplined approach. Studies show that chaotic inventors do less well in the innovation process than their methodical counterparts. Among the latter group, those who recognize customer needs and find solutions for them are particularly successful – i.e. inventors who orient themselves toward the market. This finding was backed up by a study of leading European producers of consumer goods carried out by Roland Berger Strategy Consultants and AIM: Innovations enjoyed above-average success when they were introduced in response to clearly identified consumer needs.²

² CURTIS R. CARLSON and WILLIAM W. WILMOT: *Innovation – The Five Disciplines for Creating What Customers Want*. Crown Business, New York 2006.

The entrepreneur starts with an idea and develops it into a solution for customers. His work is then complete. Introducing a functioning prototype onto the market, stimulating demand and achieving large-scale market penetration are tasks that require different resources and a different mindset from those of the entrepreneur. Often the entrepreneur lacks the ability to place the product on the market: If only for this reason, he must leave the market launch to another company or division. Accordingly we consider these later business functions as a separate, third phase – the *growth* phase. Growth requires production, advertising and planning, actions that demand extensive financial input and management skills. If the entrepreneur tries to take on these activities too, research has shown that the innovation has a greater likelihood of being met by failure. The phase of entrepreneurship ends with the entrepreneur handing on a marketable prototype.

Trial and Error

The inventor and developer of plastic floor coverings for sports halls as an alternative to artificial ice tried out more than 500 different modifications before he even knew whether or not his idea would work. Similarly in the pharmaceutical industry, of the thousands of new materials that are tested for effectiveness and possible side effects, only one will ultimately meet the strict selection criteria. The same goes for other industries. Naturally, the media only report on successful innovations – not the parallel developments that were abandoned somewhere along the way.

The aim of entrepreneurship is to recognize potential, use it to generate business ideas, select the best ideas, develop their technical and organizational aspects and finally adjust and calibrate them in line with the market so that the market will consider them of value. Market introduction, large-scale production, market penetration and sales growth form part of the following phase.

Entrepreneurship, then, is followed by a third phase in which the entrepreneur is no longer required. However, the entrepreneur doesn't develop the prototype with just the handover in mind – a prototype that will look great at the handover stage and who cares about after that? Rather, during the design and development process he keeps in mind the requirements of large-scale production and sale. In other words, throughout the second phase he keeps one eye on the demands of the third.

CARLSON and WILMOT (*op. cit.*) argue that the whole company must be involved in innovation and delivering value to customers. Customer value is the product of quantity and willingness to pay. Quantity must not be forgotten here. Even when transforming an idea into a prototype that solves a customer problem, the entrepreneur must follow principles that

will facilitate scaling later on. After all, there's a world of difference between a TV chef preparing a culinary delicacy for two specially invited celebrities and him putting together the food for a wedding reception with 200 guests who expect to be served at the same time.

Another point about scaling is the question of whether to choose an open architecture or a proprietary one. An *open architecture* is one in which all the specifications are made public. *Proprietary architecture* is where the company combines well-known principles of construction in a manner that it does not make public. The advantage of open architecture, of course, is that it gives other companies opportunities to come up with *add-on products* that may mean better applications for the original product. This can speed up growth later on. The disadvantage of open architecture is the fact that *imitations* can also rapidly hit the market.

2.1.4 Development and Variants

Companies' product development divisions often seem rather small compared to their larger counterparts dealing with production or sales. Likewise firms specializing in putting together boxes with new software and getting them out on the market are much smaller than the companies actually manufacturing the software and serving the market. So you might think that coming up with a new business idea can't be so difficult or time-consuming.

However, you'd be wrong. Before a business idea can be further developed, a process of *selection* must take place. This process is subject to at least three factors. First, there are the ideas that turn out to be unfeasible in themselves. This comes to light the first time they are described in a systematic, formal manner, or it shows up in the test models. The first filter is an initial market feasibility study. Second, there is the project selection. Here it is decided which of the potential business ideas should be developed into products and which should be dropped (in Section 2.3.2 we discuss the internal capital market as a way of filtering project ideas). The third filter is market testing. Here, sales figures indicate which business ideas have the greatest commercial potential and which have the least.

This process is usually depicted as a funnel containing a number of filters (see Figure 2-2). At the outset, the funnel is wide and many business ideas can be poured into it. Three filtering stages follow: technical checks, project selection by the people involved (internal capital market), and

finally market testing. In many industries, the ratio of original business ideas to successful products is 100 to 1.

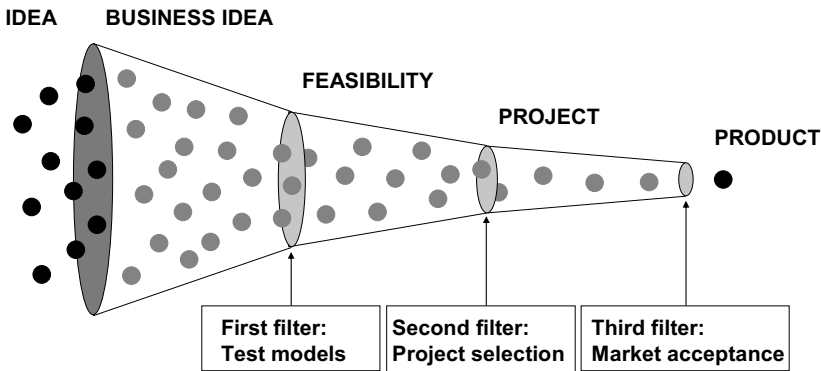


Figure 2-2: The journey from idea to product, seen as a pipeline, has the form of a sharply tapered funnel. Of the hundreds of initial business ideas, a single successful product is ultimately developed. There are three levels of filtering: the initial feasibility study, the project selection and the test of market acceptance

Ideas can fail during the third stage – market testing – for a number of reasons. They may turn out to be too technically complex ("over-engineered") or insufficiently distinct from other existing products ("me-too" products). They may exhibit technical weaknesses that cause them to be abandoned. The market prices may have dropped since they were first devised, making them simply too expensive. They may be found to contain environmentally damaging substances. Or legal issues may come to light only after they have been launched, preventing them from achieving the desired commercial success.

Every prototype or product concept that ultimately comes out of the pipeline has already consumed an enormous amount of resources – the result of all the business ideas and product developments that were abandoned along the way. How can the company make good these costs? Often, using the innovation in a single product aimed at consumers or industry is not enough. The company must also consider whether it can make the produce in a number of different variants and product families. It needs to take the entire spectrum into account – from the luxury vehicle costing EUR 100,000 right down to the basic model for EUR 5,000. Innovations only pay for themselves if they can be implemented in all variants of the product family. Right at the development stage, the company must plan how the innovation can be used in different segments.

Ultimately the innovation will, and must, be used wherever possible – including in slimmed-down, "no frills" variants.

2.1.5 Innovation – A Growth Engine

Innovation is one of the most widely recognized drivers of growth, from both an economic and a business perspective. Indeed, the link between strength in innovation and growth can be proven empirically.

High tech is the fastest-growing branch of industry. What we call "high tech" is, in fact, nothing other than the most innovative areas of the economy. There is a clear correlation between a country's prosperity and its strength in high tech.

The close link between innovation and growth is also apparent on a microeconomic level. This can be seen if we look at the connection between spending on innovation and additional revenue in the technology sector. The more companies spend on research and development, the greater their market success. A study of 16 OECD countries quantified the positive effect of increased spending on R&D by private business on the economy as a whole. It found that if private businesses increase their R&D spending by 1%, the total factor productivity of the country in question increases by 0.13%.

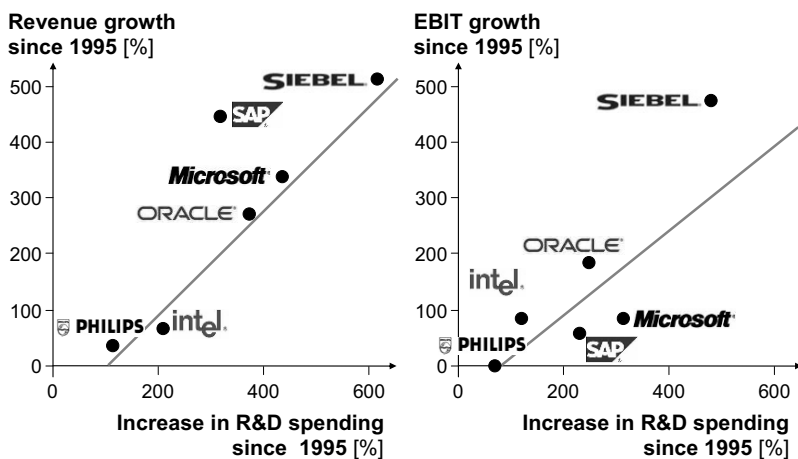


Figure 2-3: Innovation is a source of superior growth and top returns

For companies, innovation is one of the most important drivers of growth. New products and services are the best way to establish a truly distinctive and convincing market presence. Similarly, process innovations reduce costs and so give companies an edge over their competitors.

As far as product and service innovations are concerned, companies need to master the 3S strategy. The first and most important element is the *speed* with which the company brings the innovation to market: the faster it manages this, the more first-mover advantages it can enjoy. These advantages then help the firm to gain significant market *share*, and this can in turn be invested in economies of *scale*.

2.2 Context and Influence – Inspiration and Environment

Innovation begins with an invention or an idea that, however vague, contains in it a business prospect.

- An inventor creates something new. Through this invention, a new procedure, a new piece of technology or a new solution comes into being. Thus an invention leads to the emergence of something that *didn't exist* before (unlike a discovery, which brings to light something was already in existence)
- Although it is new, an invention is always *connected* to something that is already *known*. *Known* materials are used in a new way or combined differently. Invention is the application of *known* laws of nature, or economic laws, in a previously untried constellation. "Innovations break the former circular flow and enable dynamic leaps in development"³

Innovation thus has two ingredients – the *creative act* and the *known environment* whose components are brought together in a novel way. Often, too much stress is laid on the first ingredient. The second part of the equation – that the invention takes places in a *known environment* – is frequently neglected. Yet research into innovation has drawn particular attention to how invention is connected to its surroundings. Studies show

³ JOSEPH A. SCHUMPETER: "The Process of Creative Destruction", Chapter VII of *Capitalism, Socialism and Democracy*. New York, 1942.

that certain environments favor invention, while others produce little that is new, despite numerous flashes of inspiration. The creative act in itself is

Seven Sources for Innovative Opportunity

In his book *Innovation and entrepreneurship* (1985), PETER DRUCKER demonstrates that innovation and entrepreneurial spirit are not restricted to high-tech industries. Innovation is also possible – indeed necessary – in low-tech branches of industry too. According to DRUCKER, innovative ideas stem from the systematic investigation of the seven sources of innovative opportunity: the unexpected, the incongruous, process needs, industry and market structures, demographics, changes in perception and new knowledge.

no promise of commercial success: many inventors die in poverty. Yet when gifted individuals work for extended periods in a *fertile environment*, not only do they become experts, they also soon start producing innovations.

For this reason, studies of innovation supplement the concept of invention with the idea of *discovery*. Indeed, the term "invention" is largely avoided in the literature. Another area that is considered to be more important than invention is the *creative modification of things that already exist*. Business ideas often start with an *imitation*, or an improvement to an existing innovation. Many of the goods and services that make our life today comfortable – and

that we consider to be of value – are the result of *continuous improvements* to well-known inventions that have been around a long time. Often, obvious (and hence not particularly creative) business ideas enjoy greater success than the original inventions. The best examples of this were during the boom in Japanese industry in the 1970s.

Practice shows that economically valuable innovations are often found less in implementing inventions and more in developing imitations. This is not to belittle the importance of inventions. Inventions often open up completely new avenues, thereby making *disruptive* innovations possible. Discoveries, by contrast, frequently just point to product improvements in established markets.

To summarize, innovations may stem from the following sources:

- Inventions, including those leading to disruptive innovations
- Discoveries – the business idea already exists in principle, but hasn't been spotted yet
- Imitations and improvements of products in established markets

2.2.1 Five Factors

As we have seen, the first step in entrepreneurship is a business idea, a technical invention, a discovery or an improved imitation. The business idea is not just the result of some lonely genius tinkering away in his garage. Creativity needs to come into contact with productive *conditions*. For this reason we stressed that the entrepreneur should address the potential created in the first phase and molded by the positioning, making sure he doesn't overlook or reject it.

Researchers have investigated what the ideal conditions for developing ideas are. They have found that the most fertile environment for an inventor or discoverer is one where:

1. Many different things come together (complex)
2. Changes take place (dynamic)
3. Something is produced
4. There are people with creative, practical and analytical skills who have creative sparks and are driven by what SCHUMPETER calls the "will to victory", the "readiness to fight" and the "desire for success"
5. The inventor or discoverer is able to speak with a wide variety of different people

The first and second points are fairly self-evident. A *complex, dynamic* environment is more productive than a simple, static one. In a complex environment, simple rules and the old ways of behaving loosen their grip. A complex, dynamic environment can compel us to come up with something new, something better. Need is the mother of invention, as they say.

Complexity means that many different aspects come together, some overlapping and some leaving gaps between them. This makes it difficult to get a handle on the situation, to understand the wider context and the different forces at play. The simple and the familiar become inadequate. Complexity means that all is not transparent; terra incognita creates room for new insights and discoveries. Often, research in one area leads to unexpected discoveries or inventions in an unrelated field. Moreover, complexity offers opportunities for simplification – and a simplification can also be an innovation.

A dynamic environment is one in which significant changes takes place. The old ways of doing things no longer fit the bill. Certain types of dynamic change favor new business ideas:

- Economic, social or demographic change (e.g. disposable income, the number of older people, travel habits, education, urbanization)
- New technology (e.g. LCD and HDTV, broadband)
- New ways of selling (leasing, shop-in-shop systems, electronic banking, video on demand, theme parks)
- Regulatory and political change

Change favors new business ideas. So the entrepreneur is best off searching for ideas in a dynamic, rather than a static environment. The evidence? Over half of the fastest-growing companies in the United States originated in response to new technology, legal changes or shifts in fashion.⁴

Complexity

A dynamic environment

Ongoing production processes

Creative people

Communication

Summary 2-1: Factors favoring innovation

The third finding – that production favors innovation – is something we tend to draw a veil over in Germany, a country that is losing most of its production abroad. Yet it should be clear that it is the people actually carrying out the work who come up with the best ideas about how they can do the job better. This isn't just true of skilled laborers: Production strongly favors the creation of ideas for improving processes and products.

The idea that one country should specialize in coming up with ideas and another in putting them into production is totally misguided. Around 1965, the Japanese started copying product ideas from Europe and America. To begin with, the copies were laughed at. But the Japanese quickly made improvements and added their own developments to the original products.

⁴ AMAR V. BHIDE: *The Origin and Evolution of New Businesses*. Oxford University Press, New York 2000.

The result? Before long they were setting the pace in sectors such as photography and electronics.

Many analysts thought that the photographic and electronic industry would move back to Europe as soon as wages went up in Japan. They were wrong. In fact, the initial process of imitation not only led to a stream of small product improvements, it also led to fundamental developments in technology. *Miniaturization*, for example. Miniaturization started in Japan around 1970. Its symbol became the Sony Walkman.

Japan was not the only place where production and innovation came together. Around 1980, Taiwan, which had been a poor, agriculture-based country until the end of the Second World War, started copying components for the electronic and optical industries. Today it is the undisputed leader in technological development for hardware. The same process – production feeding innovation – is taking place in China today.

The fourth factor favoring new business ideas is the ability of individuals to have flashes of inspiration. The entrepreneur is a person, not an organization. The activities in question are more closely bound up with individuals who drive them forward than is the case for other economic activities. By contrast, other parts of the business process are better performed by groups of people than by individual entrepreneurs. The fourth factor – human inspiration – flourishes best where good systems of education and training provide a rich feeding ground.

The Coffee Shop as Idea Factory

Computer research in the United States used to take place on both the West Coast and the East Coast. Companies on the East Coast carried out many contracts from the arms industry and so they had to keep their work confidential. IT specialists from different firms were not allowed to talk to each other; chatting about work in the local coffee shops was strictly forbidden. Young businesses in the area around San Francisco, by contrast, did not have any contracts of military significance and so could exchange freely with each other. This is how Silicon Valley on the West Coast came into being. On the East Coast, software development has since largely died out.

These four factors are even stronger where there is a *varied human environment* that sustains innovation and creative discussion. The industrial park is a prime example of this. An environment consisting of young companies, even if they are working in different areas, has repeatedly been shown to be more fertile than an older, established environment. Equally necessary are other companies in the vicinity with large research and development departments and the proximity of universities and colleges. R&D takes place in teams, and these teams need

to be attached to centers of research. Bumping into other creative people in the local pizza restaurant is more important than you might think.

2.2.2 Macroclimate

The fact that certain environments favor innovation is true not just on a microeconomic level, within a company, but also on a macro level. Innovation is affected by political and social factors. The values and performance paradigm in a society and its system of education and training have a considerable effect on the innovation culture found in a particular location. They are what make up the macroclimate for innovation.

If a country wants to promote innovation, it must make the necessary financial resources available. It gives cause for concern when investment in knowledge, the basis for innovation, are neglected. Germany's "R&D intensity" – the share of GDP spent on research and development in a country – is at a level of 2.5%. This is below that of other key economies such as the United States (2.68%) and Japan (3.18%).⁵

The characteristics of a pro-innovation macroclimate can be described by the "three Ts": talent, technology and tolerance.⁶

- *Talent*: Promoting innovation begins in the kindergarten. Innovation flourishes where there is an excellent educational system, and kindergartens and elementary schools form the basis for this. It is vital that the system of school education promotes talent – irrespective of the social background and nationality of the pupils. But it's not just about developing talented individuals inside a country. The extent to which a country is able to attract new talent from beyond its borders is also a key factor. Knowledge is mobile: The competition for skilled, creative people has long had a global dimension. Accordingly countries must ensure they offer conditions that are attractive to qualified workers when compared to other countries
- *Technology*: The economic future of highly developed industrial nations depends on their ability to create technological innovation. It therefore also depends on the professional groups that drive this

⁵ Data for 2005 from Eurostat.

⁶ RICHARD FLORIDA describes the features of a pro-innovation environment in his book *The Rise of the Creative Class*, Basic Books, New York 2004.

innovation ahead. Germany, in particular, should take action to counter the looming threat of a shortage of new scientists, engineers and computer specialists. This is only possible through concerted action on the part of business, academia and the state. In addition, experience shows that creating clusters plays an important part in promoting technological advance. The environment for innovative entrepreneurs needs to be improved via political change – for example, a simplification of the procedure for setting up new companies

- *Tolerance*: Openness to new ideas forms an integral part of a pro-innovation value system. This includes respecting other cultures and not discriminating against people on the basis of where they come from. Diversity is one of Europe's greatest advantages. The old world, with its wealth of different languages, educational structures, fiscal and legal systems has a history of diversity in practice that stretches back hundreds of years. Companies have learned to use this variety as a source of creativity. Societies, and likewise companies, that are afraid of the unknown and stick to the old, familiar ways of doing things are destined for stagnation. A fusty environment does not allow creativity to flourish and blossom – and this is the basis for ideas and innovation.

2.2.3 Schumpeter vs. Kirzner

A complex and dynamic environment is one that not everyone understands in all its different facets. It is an environment in which information is in short supply. In this context, entrepreneurs enjoy an *information advantage* which they can exploit to their advantage. Indeed, they may even have the power to influence their environment. Two economists who describe the innovative entrepreneur and his characteristics in detail are SCHUMPETER and KIRZNER. They differ in how *great* or *small* they consider the entrepreneur's information advantage and his ability to influence the environment.

JOSEPH A. SCHUMPETER (1883-1950), in his analysis of capitalism, examines innovate and radical reforms that have a powerful knock-on effect and *upset the economic equilibrium*. These radical innovations give different industrial sectors different weight. They originate in entirely new information that leads to new knowledge. The entrepreneur performs the creative act of invention and enjoys practically sole access to the new knowledge on which it is based.

SCHUMPETER's entrepreneur further has the ability to implement his ideas industrially. This makes him the driving force behind major upheavals, fundamental changes in the economy and society. New sectors emerge and old sectors die away.

The Schumpeter entrepreneur is a combination of outstanding inventor and great industrialist.

WERNER VON SIEMENS and ALFRED KRUPP are two examples of this type of entrepreneur, the coming together of inventor and industrialist in a single personality. Stepping further back in history – more than two millennia, in fact – we have another good example: the Romans. The Romans invented an entirely new transport technology. They dried out swamps, constructed streets and built fortresses. This allowed them to move troops about and transport large quantities of goods. Distant colonies could now be integrated into the Roman Empire. Prior to this, people didn't move about in large groups as there were no streets and no guarantee of food at their destination. Instead they would move about on their own or in pairs, traveling along mountain ridges so that they could spot any potential enemies early on; traveling in small groups through valleys was much too dangerous. The Romans' development of transport allowed trade to develop. An example of just how fundamental and "disruptive" innovations based on new knowledge can be.⁷

In the capitalist process of "creative destruction," non-innovating firms are forced out of the market. In his book *The Circle of Innovation*, best-selling author Tom Peters even calls one of the chapters "Destruction is Cool".⁸ He argues that companies should be "liquidated" rather than trying to bring them into line with new circumstances by means of structural change.

⁷ Numerous examples of "disruptive" innovations and the Schumpeter entrepreneur can be found in CLAYTON M. CHRISTENSEN: *The Innovator's Dilemma*. Reprint, HarperCollins Publishers, New York 2003.

⁸ TOM PETERS: *The Circle of Innovation: You Can't Shrink Your Way to Greatness*. New York, 1997.

Unlike SCHUMPETER, ISRAEL M. KIRZNER in his post-1973 work stresses economic development through *smaller* innovations.⁹ Although such innovations do not shift the equilibrium of the entire economy, they convert temporary demand or surpluses into economic success. These innovations originate not in major discoveries or knowledge advantages, but in developments, improvements and modifications undertaken by the entrepreneur as a result of his *partial* knowledge advantage.

KIRZNER's entrepreneur is the force that drives business ahead, creating distinctive products and variants. Through these new variants the entrepreneur determines the way business operates, without fundamentally altering it.

Time for a recap on the differences between SCHUMPETER and KIRZNER:

1. For SCHUMPETER, innovations are rarer, more basic and more important. For KIRZNER they are more frequent and less fundamental
2. The Schumpeter entrepreneur *implements* new combinations of factors in the market. KIRZNER's entrepreneur, by contrast, sees an imperfection in the market and *exploits* it
3. SCHUMPETER's entrepreneur must create new knowledge; KIRZNER's entrepreneur must keep watch (i.e. gather knowledge) and spot niche markets
4. For SCHUMPETER, innovations (the implementation of new ideas) require an industry or a large research

Sony – Innovators from Japan

"We must avoid the problems that befall large corporations, while we create and introduce technologies which large corporations cannot match." This was how MASARU IBUKA formulated his objective in his founding address to the company in spring 1946. His partner Akio Morita recalled what drove the two engineers: "We wanted to offer new products, new ingenious functional principles. In other words, to bring original consumer articles onto the market." (*) The history of Sony reveals how the intentions of its founding fathers became reality – with the world's first pocket transistor radio, the Walkman and the PlayStation, to name just a few of Sony's innovations. The Playstation was a radical innovation for its time; since then, Sony has completed the transition to incremental innovation, with models being continuously improved. The aim is to achieve market growth through competitive advantage.

(*) CHIKAKO YAMAMOTO and GEORG BLUME: *Aus Hassliebe zu Amerika*, p. 202; in: UWE J. HEUSER and JOHN F. JUNGCLAUSSEN (eds): *Schöpfer und Zerstörer*. 3rd ed., Rowohlt, Reinbek 2004, pp. 200-206.

⁹ ISRAEL M. KIRZNER teaches at New York University and continues what is known as the Austrian School. This was founded by thinkers and writers such as CARL MENGER, EUGEN VON BOEHM-BAWERK, FRIEDRICH VON WIEDER, LUDWIG VON MISES and FRIEDRICH VON HAYEK.

department for their realization. For KIRZNER, innovations (the exploitation of existing niches) only require a company and a team

5. According to SCHUMPETER, innovations are the result of a sizeable investment in terms of resources and therefore carry considerable risk with them. According to KIRZNER, innovations can be realized with limited means and are therefore less risky

SCHUMPETER and KIRZNER present us with two extreme views of the role of entrepreneurs in innovation. Countless examples of innovations and business ideas fall in the area spanned by these two extremes.¹⁰ However, they all raise the same question: How does the possibility of business activity come to exist in the first place? The answer is that people have *information differences* – especially in complex, dynamic environments. Entrepreneurs either have access to fundamentally new knowledge (SCHUMPETER) or to slightly newer information (KIRZNER), and they give expression to this through their products. The significance of information differences for business is an area investigated in detail by VON HAYEK.¹¹

The information differences that make the entrepreneur stand out from his environment also have an impact on financing. Contract negotiations between entrepreneurs and capital providers are rather different in this second phase from other phases of the business process. In the first place, external financing (e.g. bank loans) does not come into the equation as the entrepreneur has no substantial assets that could be sold off to satisfy creditors. But even equity financing is difficult. It is often said that this is due to the risk, which is particularly high in this phase. That may be true. But the main thing that makes equity financing difficult is the *information difference* that exists by definition between the entrepreneur and the potential suppliers of capital.

Business life is always subject to external risks. Sometimes these risks are high – that is a fact of business life. But nobody is prepared to enter a

¹⁰ 1. ISRAEL M. KIRZNER: *Entrepreneurial discovery and the competitive process: An Austrian approach*. Journal of Economic Literature 25 (1997), pp. 60-85. 2. ISRAEL M. KIRZNER: *Discovery and the Capitalist Process*. University of Chicago Press, Chicago 1985. 3. JOSEPH A. SCHUMPETER: *The Theory of Economic Development: An Inquiry into Profits, Capital Credit, Interest, and the Business Cycle*. Harvard University Press, Cambridge MA, 1934.

¹¹ FRIEDRICH A. VON HAYEK: *The Use of Knowledge in Society*. American Economic Review 35 (1945) 4, pp. 519-530.

contract that specifies all the rights, obligations and arrangements for distributing profit between the two sides when the other party knows more than they do.

In practice, the disadvantage arising from asymmetrical information is attenuated by the fact that only capital providers with specialist knowledge come forward. This means business angels, venture capitalists and private equity partners. The equity they provide comes with strings attached: they gain considerable rights of control, not just over the financial results but also over the business activities of the entrepreneur. With their specialist knowledge they can use these rights effectively. Consequently the information difference between the entrepreneur and the financiers is smaller and financing agreements are easier to reach. Naturally, entrepreneurs who have to rely on external financing of this sort lose some of their freedom to act independently. The inventor, developer or team coach and the financier act together and so become the new entrepreneur. And all the time the financier gently but remorselessly guides the creative half of the team toward his own financial goals, with one eye on the option of making a lucrative exit.

2.3 Entrepreneurship as a Process

2.3.1 Seven Steps

Finding or discovering a business idea is the first step in entrepreneurship. The innovation must then be further developed: the entrepreneur must give it *technical and organizational substance* and *calibrate* it in line with the market. Finally, the entrepreneur must make preparations so that he is financially rewarded for his discovery and development work.

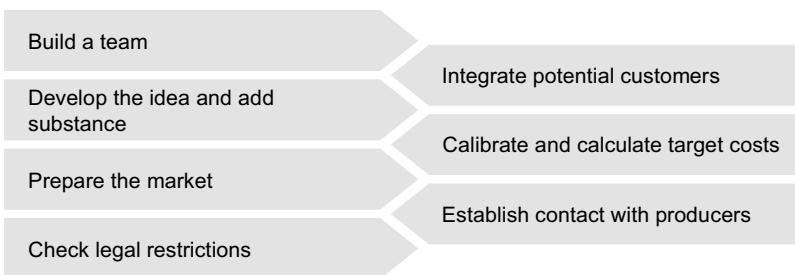


Figure 2-4: The seven steps following a business idea

A number of different activities must be carried out from the time when the entrepreneur has the business idea to the point where he hands on the results of the work and the prototype. For the most part, these activities can take place in parallel and are integrated into each other: 1. The invention or finding of a *business idea*. 2. Building a team, i.e. bringing together the resources and partners needed to *develop* the idea further. 3. Setting up a company to act as the organizational and legal *framework* for the development work. 4. *Selecting* successful aspects of the idea and abandoning less promising parts – an activity that takes place repeatedly during the development process. 5. Adjusting and *calibrating* the idea in line with a specific market segment. 6. Planning a financially rewarding *exit* as entrepreneur, presenting the prototype and passing it on to someone who can market it on a large scale. In total, seven different activities are required from the moment the entrepreneur has his business idea:

1. Build a team: The business idea is in the mind of the entrepreneur, but to develop it he needs a team. This means getting hold of resources – people, knowledge and capital – for the development process, and creating a framework (i.e. setting up a firm)
2. Develop the idea by *adding substance* to it: Within the team, the idea must be developed into a product (or a service, process, or form of organization). Presentations must be devised, models built, and experiments and simulations carried out
3. Prepare the market: Although the market has not yet been created, advertising the product in advance can help estimate its potential
4. Check out any legal restrictions: In parallel to the other activities, the entrepreneur must investigate any regulations that might interfere with the business idea or its realization. Does it overlap with any existing patents, for example? What environmental regulations must he take into account? Are there any industrial safety issues regarding the development work? What characteristics must the product have in order to meet the safety and warranty requirements? Many young entrepreneurs end up having to abandon their projects during the development stage because they don't look into the various legal issues properly and think they are free to act as they like in their capacity as inventors and developers
5. Integrate potential customers early on in the development process: This reveals what consumers expect the product to deliver. At the same time, the customers learn to understand the cost side of product development better

6. Develop the idea by *calibrating* it: The development must be oriented toward a specific market or market segment. Here, target costing can be helpful
7. Hand the prototype on: Once he has completed his job and developed a prototype, the entrepreneur must hand it on to someone else for production and market development. He should contact potential partners early on in the process to prepare the ground for selling his work

The business idea is born in someone's mind or emerges from a conversation between two people. But to put the seven parallel development steps into practice, a framework is needed which can accommodate a whole *team* of people. Realizing, developing and adding substance to the original idea requires teamwork. So the framework must create an atmosphere of open partnership, one that will foster such teamwork. Hierarchies and bureaucracy can get in the way of creativity during the development process. "Soft management" is called for in the way the team is led and organized. In large corporations this may come into conflict with the management culture in the rest of the company. In this situation it can be useful to separate the team off physically from the rest of the organization.

Although the entrepreneur should encourage an open atmosphere within the framework, the knowledge itself still needs protecting. Team members must be aware of the fact that their knowledge is not something that they can make use of themselves; rather, it is the core element in their joint work. In consequence, it is important to categorize the different types of information and knowledge. Not everything that the team members know is strictly confidential, and some knowledge only really comes into its own when shared. The entrepreneur must make it clear to each member of the team what falls into the "confidential" category and what does not. This way no one will be in any doubt where the boundary lies between what can be mentioned in conversation, and what should remain unsaid.

2.3.2 Internal Capital Markets

During the development work, constant decisions are necessary – for example, choosing which variant to go with out of a number of different options. As we have seen, the process of innovation takes place in a complex and dynamic environment, one in which comparatively little knowledge is available. As the development work takes place at an early stage in the process, it is unclear what criteria the entrepreneur should use for these decisions. True, he has a certain knowledge advantage over the

outside world, but early on in the development stage he can't foresee on his own which variant will ultimately be the most successful. As a result, it's not much use advising him to draw up a list of criteria and share it with his team.

In this situation, where it is not known what will be important later on or what the market will ultimately consider worthwhile, the entrepreneur is best off asking other people, while trying not to sway their answers. The most obvious way to do this is to carry out a survey of the customers who he will be targeting later on. If the development period is a long one (as used to be the case with cars, for example), it is possible to approach children and young people and show them phantom drawings of different possible variants.

Of course, customer surveys are not much help in the early development stages where it is still unclear exactly who the target customers will be. In this case, the entrepreneur must turn to the specialists – the members of his development team. Such inquiries can help the entrepreneur choose the best variant without him laying down the selection criteria in advance, i.e. which features are the most important.

- Often companies make decisions where the criteria are laid down in advance. Anyone who has had to ask for clearance for a project suggestion by filling out a set form knows that his or her boss has a clear idea about how important the different features are. The weighting of the various features is not open for discussion: the form simply asks a set series of questions, highlights the features and indicates their importance. The questions are to be answered clearly and no additional information is required. These are the rules of the game: the inquiry is purely "top-down"
- A different situation arises when the entrepreneur doesn't just need to choose between different variants, but also to select a specific evaluation criterion from a number of options. Here, the importance of the different features is as yet undecided. This task can only be performed by a *market*, as the sole form of organization able to choose between different variants when the decision criteria are completely open

Markets are even more necessary for choosing between projects within a company where it is unclear how to evaluate the consequences of particular decisions, or where a general consensus of opinion will only emerge as a result of communication between multiple participants. Often,

the decision to accept or reject a project is connected with the allocation of funds. This type of inquiry is known as an internal capital market (ICM).

The idea of the ICM was developed around 1965. It is recommended for companies with a number of different divisions. Many different structures for decentralized responsibility have since been practiced and investigated.¹² We can use the term ICM even in cases where no capital allocation actually takes place.

An internal capital market (ICM) can be seen as the sum of the highly unstructured and free organizational and communicational activities bringing together and comparing the opinions and evaluations of many different people, in a situation characterized by a low level of information. It makes these opinions more transparent within the company and so allows different variants to be evaluated and the best variant selected.

As with any market, *generating information* is a major part of what the ICM does. The ICM is open to information coming from below, i.e. "bottom up". Like other markets, the people involved need to be given great freedom of form and content with respect to the signals they send out. Every conference, every meeting should help disseminate the market idea. At the outset, participants are encouraged to make their *comments* as freely as they like, the only stipulation being that they adhere to the rules of politeness so that the basis of communication is not endangered. Later these comments are developed into *arguments*. Finally a joint *conclusion* is reached – and stuck to.

The more complex and dynamic the environment, the less general information is available and the more effective an internal market will be. Indeed, internal markets are also used between different companies where it is unclear how to weight criteria and features, in the form of a peer review, for instance.

¹² 1. ALAN M. RUGMAN: *Inside the Multinationals 25th Anniversary Edition – The Economics of Internal Markets*. Palgrave Macmillan, New York 2007. 2. WILLIAM E. HALAL, ALI GERANMAYEH and JOHN POUNDEHNAD: *Internal markets – Bringing the power of free enterprise inside your organization*. Wiley, New York 1993. 3. JAY W. FORRESTER: *A new corporate design*. *Industrial Management Review* 7 (1965) 1, pp. 5-17.

2.3.3 Target Costing

Target costing developed in Japan in the 1970s. Until that point, companies had developed products according to a set sequence, starting with innovation and ending with the prototype. The designers and engineers decided what the product characteristics would be. Engineers would say, for example, "We're going to build the best xyz in the world. Why should we ask our customers what they want?" Management accountants would then work out what the new product was going to cost. A profit margin would be added and hey presto, you had your sales price. Only then could one identify the target segment for the product, depending on its characteristics and price.

At the time this approach worked well, as demand exceeded supply. Around 1970, however, market saturation, the arrival of new competitors on the scene and a number of public projects that set clear price targets made it clear that a new "backward" approach was needed. In the new approach, the target market and the product characteristics demanded by customers became the starting point. It was also a price based on the product characteristics, the competitive situation and the customers' willingness to pay. The company then worked backwards, determining – on the basis of the product's characteristics and price – how the product should be designed and what it could cost. This is what is known as target costing.

Target costing is a form of inquiry, like the internal market. The difference is that the entrepreneur doesn't ask the internal specialists involved in developing the product, but rather the external customers.

Target costing is an appropriate choice when the entrepreneur knows in advance what the customer segment is. If he has not yet identified the external customers, he is better off generating information via an internal market. This presents the entrepreneur with an important decision regarding information gathering. Up to what point, or for which decisions, should he rely on information generated internally by his team (i.e. an internal market), and when should he rely on external opinions gathered from his future clientele?

An example. In the past, publishing houses had large editorial offices. An editor would decide which books would appeal to readers the most and become hits. Today, by contrast, some publishers print everything and leave it up to the market to decide which titles should go to a second

edition. Certain companies go even further, making a policy of announcing new products in advance. In this situation, the product development is undertaken by the users themselves.

Target costing starts with a target price and calculates the target profit on this basis. It is important to be aware of the enormous risks associated with market introduction and market acceptance. Time and again, projects flop. Accordingly, the risk of flopping must be included in the target cost calculation. This determines the maximum "allowable costs". As is often repeated, the allowable costs should be used to guide the search and discovery process early on in the innovation process: 85% of the total cost of a product over its lifecycle is determined in the initial phase. Developers have a tendency toward perfectionism. Many prototypes never reach production because they are "overdeveloped".¹³

Two possible sources of information exist:

- The costs experienced by competitors working in the same market segment (an "out-of-competitor" approach)
- Costs that the company does not face as yet, but which it could face if it fully exploited its technical and business potential (an "out-of-company" approach)

In other words, you can either look at the competition as it actually is, or at the company as it might be in the future.

Calculating allowable costs doesn't yet tell you how they should be *distributed* between the different components that make up the product. If you're developing a 100-dollar computer or a 3,000-dollar car, it's not immediately obvious what portion of the allowable costs should go on the processor or the engine. This triggers a struggle between the different developers responsible for each component. It is rather like a game in which each player tries to secure for himself the biggest slice of the cake, subject to certain technical restrictions. The players know that if they ask for too much, they risk losing out altogether. Game theory tells us that the result depends on whether implicit contracts relating to side payments are possible, and what form these may take. In other words, concessions are only possible if they can be compensated for in some other way.

¹³ WERNER SEIDENSCHWANZ: *Target Costing – Marktorientiertes Zielkostenmanagement*. 2nd ed., Vahlen, Munich 1997.

A process of negotiation is thus set in motion. COOPER writes of a new concept of entrepreneurial dominance in which the employees must enter a process of self-organization motivated by internal competition.¹⁴

An example was NASA's Apollo Program. Here, the struggle was not over dividing up the budget but over the total weight a rocket could have if it was to take a man to the moon and back – as was achieved in 1969. Those responsible for the rocket's different components (pumps, combustions chambers, tanks, and so on) would regularly shout at each other during meetings. An acceptable solution was ultimately reached, but more as a result of *confrontation* than *cooperation*.

2.4 The Second Season – Conclusions

2.4.1 Identifying Phases

After the first season, in which the company positions (or repositions) itself, comes the second phase – the phase of developing and building. Ideas are transformed into a functioning prototype and matured in readiness for market launch within the framework of a business plan. The visionary, who in the first season developed the philosophy, indicated the positioning (or repositioning) and drew up an overall plan, must now motivate his team to undertake the concrete task of innovation.

Innovation, which lies at the heart of the entrepreneurial phase, can itself be broken down into three sub-steps:

- The first sub-step is generating ideas. This, in part at least, has already taken place or been prepared for in the first, positioning phase
- The second sub-step is converting the idea into a prototype. This is the task of the entrepreneur in the narrower sense of the word
- The third sub-step is disseminating the concepts that have been developed, approaching key customers and preparing for the ensuing growth phase

¹⁴ ROBIN COOPER: *When Lean Enterprises Collide – Competing through Confrontation*. Harvard Business School Press, Boston 1995.

Dividing up the second season in this way is important because each of the three sub-steps – generating ideas, converting them into prototypes and disseminating concepts – has different characteristics. The first sub-step, generating ideas, can take place within a single company unit, between different units or outside the company. The indicators here, as for determining what phase the company is in, are the cultural, strategic and operational conditions, e.g. a culture of learning, the promotion of innovation skills and the integration of databases. The second sub-step is dominated by the process of selection, as not all ideas can be further developed. The third sub-step can be recognized by the fact that an increasing number of potential clients are approached and integrated into the project.

Cultural conditions	Team spirit, open communication, a culture of learning, presence of knowledge management, possibility of linking technology and marketing
Strategic conditions	Part of a broader research program, familiarity with customers, existence of reference customers
Operational and process conditions	Project management, ways for using external ideas, a certain degree of time pressure

Summary 2-2: Indicators that a company is in the second season

For many companies, the transition from the first season (positioning) to the second season (developing and building) can be seen when they begin to translate their rather general, vague ideas – their "philosophy" or desire to be seen in a certain way – into concrete business plans and a prototype that is ready for the market. Technical development and concrete business planning occurring in parallel, accompanied by increasing integration of future customers, are a sure sign that the transition has taken place. As before, certain cultural, strategic and process factors are conducive to the phase of building and developing. The presence of these factors is also an indicator that the company has entered the second season.¹⁵

¹⁵ URS FUEGLISTALLER, CHRISTOPH MÜLLER and THIERRY VOLERY: *Entrepreneurship*. Gabler, Wiesbaden 2005.

2.4.2 Summary

The entrepreneur accepts the potential offered to him by his environment. In this rich feeding ground he finds a business idea, develops it and adjusts it in line with customer wishes. At the same time, he keeps in mind the options for scaling it up for large-scale production and the price he hopes to achieve for it in the target market segment. To help him in this task, he creates a team.

The first question is where the entrepreneur should carry out these activities. Research shows that the most fertile location is a *complex* and *dynamic* environment where people are already actively *producing* things. As a rule it's not inventions, but discoveries of existing possibilities that bring the desired success later on. Relatively minor enhancements to products, or new versions of imitations, often offer very good business opportunities.

This leads to the question of what an innovation actually is. SCHUMPETER and KIRZNER offer two differing definitions of innovation. However, they agree that behind the innovative entrepreneur lies an *information advantage*. For SCHUMPETER, this advantage is fundamental; for KIRZNER, it is marginal. But both SCHUMPETER's and KIRZNER's entrepreneurs are privy to information that is not generally known to those around them.

The information difference has certain ramifications for financing. The entrepreneur knows significantly more than the person supplying the capital. And nobody is prepared to enter a contract setting out all the rights, obligations and arrangements for distributing profit between the two sides when the other party knows more than they do. In practice, the disadvantage arising from asymmetrical information is attenuated by the fact that only capital providers who have specialist knowledge present themselves – business angels, venture capitalists and private equity partners. The equity they provide gives them considerable rights of control, not just with over the financial results but also over the business activities of the entrepreneur.

The information difference between the entrepreneur and his environment is what defines him as an entrepreneur. It is therefore easier for him to operate in an area where information is in short supply in any case. The entrepreneur constantly has to make decisions in areas where even his own knowledge is rather vague. This is very different from the situation in simple, static environments, which are child's play to understand. The entrepreneur must make his decisions on the basis of insufficient

information, so every extra opinion is of use. We have discussed two approaches for gathering such information: internal markets and target costing.

In the case of internal markets, the entrepreneur looks at the opinions of the internal specialists working in development. In the case of target costing, he asks his potential customers what they think. As he is in the dark, he has to ask others what they can see. But it is up to him to decide when to ask his colleagues in the business and when to give greater weight to the view from the outside world.

In the second season, the entrepreneur should not be a strong, visionary leader as in the first season. Instead, he should be able to motivate the members of his team to search for opportunities and communicate them within the team. He must be able to stimulate others while keeping an open ear to their ideas. In short, the entrepreneur must act as a *coach* for the team, while guiding them toward an external perspective.

The use of target costing shows that finance-led thinking is of growing importance in the second season of business. Overall, however, strategic methods remain more significant than pure finance. Thus we have recommended that, on the one hand, the entrepreneur should pay attention to his environment (ideally it should be complex, dynamic and located close to production processes), assemble the right team and motivate them to action. At the same time, he should make sure that the development process is geared toward coming up with a product that, at the end of the day, he will be able to sell. Here, an external perspective comes into play – for example, when the entrepreneur takes into account the evaluation of the external financial market. Internal markets follow a similar principle to that of the capital market. The financiers also follow their own financial objectives. Thus the business process in the second season is more strongly shaped by the external world than in the first.

In terms of the decision criteria in the second season, then, strategy-based management wins on points, but only just. At the same time, finance-based management is catching up. Indeed, it becomes more and more important in each subsequent phase of the business process.

2.5 Recommended Reading

1. A classic: PETER F. DRUCKER: *Innovation and Entrepreneurship – Practice and Principles*. Elsevier, Amsterdam 1985.
2. A work that, in addition to a systematic treatment of the subject, contains numerous case studies and therefore gives a good overview: JÜRGEN HAUSCHILDT: *Innovationsmanagement*. 3rd ed., Vahlen, Munich 2004.
3. A book aimed more at college students, but with plenty of accessible material and illustrations: ROBERT A. BARON and SCOTT A. SHANE: *Entrepreneurship – A Process Perspective*. Thomson, Mason 2005.
4. OLIVER GASSMANN and CARMEN KOBE (eds): *Management von Innovation und Risiko*. 2nd ed., Springer, Heidelberg 2006. A volume of contributions by different authors on risk management in the innovation process.
5. A textbook dealing with the financing math for this phase: JANET KIHOLM SMITH and RICHARD L. SMITH: *Entrepreneurial Finance*. 2nd ed., Wiley, New York 2004.
6. How can best present your ideas? For advice, see BARBARA MINTO: *The Minto Pyramid Principle. Logic in Writing, Thinking and Problem Solving*. Minto International, London 2007.

3 Grow

In brief:

The third season – the growth phase – involves employing considerable resources in various directions. These resources must be sourced, managed and coordinated. Due to the scale of the tasks facing the company in this phase, resources are in short supply. This makes it important for the company to act efficiently and exploit the technological options that arise thanks to economies of scale and scope. Profitability calculations can help in finding solutions to the enormous management tasks. Thus, in this phase, finance-based thinking dominates over strategic thinking.

3.1 From Prototype to Market Success

3.1.1 Managing Resources and Risks

The phase of the entrepreneur, the second season, was the time of innovation. It leads from the idea to the concept, from the business idea to the prototype or product. This prototype or product can be a product aimed at consumers or industry, the embodiment of a new piece of technology or design, or the concrete expression of a new approach or form of organization.

At the end of the second season, the entrepreneur hands this product on to the unit responsible for the business process in the following, third phase. This is the phase of market introduction, large-scale production, sales and market development. We can call this third phase or season the "growth phase" for short. By "growth" we mean the expansion of a business activity in terms of both quality and quantity – a process viewed by the world as valuable. This type of growth raises people's level of prosperity.

Companies face a growth imperative. They must grow – not just in terms of quantity but also in terms of quality. In other words, they have to get both bigger and better. Profitable growth is the primary goal of management. This is because growth is an indicator not just of a company's performance, but also the basis for its future success.

Where, then, does this requirement to grow come from? There are a number of different factors:

- The demand for value growth: Increasing cashflows can only be achieved through revenue growth as the potential for cost reduction is largely exhausted due to constant optimization efforts
- Economies of scale: Economies of scale depend on the company achieving critical mass. The tendency toward sinking transaction costs promotes company growth more and more strongly
- Increasing pressure on margins: As markets become increasingly saturated, margins shrink due to increased competition. Constant revenues thus inevitably lead to a drop in profits over the long term. Accordingly, increased profits are only possible by means of increased revenues
- Attractiveness for employees: To attract excellent employees, companies need to offer good career prospects. Employees with top qualifications demand varied, challenging projects, opportunities to develop professionally and salaries that reflect their commitment to the company. Only companies that are growing can guarantee this over the long term

Resource management	<ul style="list-style-type: none"> • Sourcing, allocating and coordinating diverse resources • Optimizing (efficiency, economies of scale and scope)
Risk management	Aligning the strategic path (breadth, speed) and the provision of resources, taking into account potential setbacks

Summary 3-1: Basic tasks during the growth phase

Growth in the third phase of the business process demands very different resources from those required in the second phase. Inevitably, the demands on management are different too. Growth requires great power and energy on the part of those driving the company:

- In the growth phase, the company must employ considerable resources in various directions. These resources must be sourced, managed and coordinated. Communication with external partners is also a priority: they must feel integrated into the process. The various activities must be optimized and aligned with each other. This is an enormous challenge for management and one that requires an integrative perspective. Strategic thinking is called for here

- Because the company is expanding quickly in terms of both production and market penetration, resources are usually thin on the ground. This gives rise to two imperatives. Firstly, the system of resource management must make efficiency a priority. Secondly, the system must explore every possibility for achieving economies of scale and scope. The management therefore turns to mathematical and quantitative approaches. Financial thinking gains in importance
- The company must pay particular attention to risk management during the growth phase. Precisely because such a lot of resources are needed to achieve growth, any setbacks can have disastrous repercussions. Time and time again, entrepreneurs "overstretch themselves"

Whenever the company enters a new phase, the demands placed on the manager also change. The third phase does not so much need an entrepreneur who can coach a small, creative team. What is needed now is a go-getter, a planner, a reliable business partner and contact person for suppliers, banks and customers. To achieve the required efficiency and exploit the economies of scale and scope, the entrepreneur must learn the financial calculation techniques for optimization that underpin them. Such, then, are the management tasks relating to sourcing, allocating and coordinating resources.

But that's not all. The entrepreneur's duties in the third phase also include risk management. No growth path is entirely *safe*. Equating care with safety and aggression with risk is false. True, a carefully planned, slow path of growth doesn't run the risk of resources thinning out or drying up completely. But plan your growth too carefully and the slow pace of expansion may lead to total project failure. By the time you enter the market, the takings may have already been divided up and distributed. The other extreme is a fast, aggressive growth path. High speed and a wide perspective should, if all goes well, lead to ambitious goals being achieved

Underestimating Risks

During the growth stage, the entrepreneur has to be more than a good resource manager (sourcing, allocating, coordinating and optimizing). He also needs to be a good risk manager. Unfortunately, this skill is often undervalued. Take the case of Swissair. The company ended up in insolvency thanks to their fast, ambitious expansion strategy in the competition to secure a better position in Europe and worldwide. This involved takeovers and participations in firms such as Sabena, LTU and certain French companies. The aim of the company was to create a large, independent airline. At the same time, they planned to diversify into additional, non-cyclical business fields. The financial inflows were unable to support this growth path for two reasons. First, the costs – pilots' wages and the restructuring costs at Sabena, for example – were high. And second, the market collapsed after the terrorist attacks of 9/11. As a consequence, on October 2, 2001 all flights were finally grounded.

quickly. But there is real risk that the supply of resources won't be able to keep up with the pace of growth. Those at the front may well find themselves up the creek without a paddle. In fact fast, ill-planned expansion just as often leads to failure as excessively slow and careful expansion.

The entrepreneur takes on two major tasks in the growth phase. First, resource management (sourcing various resources) and optimization (ensuring efficiency, harnessing economies of scale and scope). Second, risk management. So far, we have only taken a cursory look at these tasks. Examining them in greater detail – looking at how they work in practice – we find that they consist of seven different activities, each following on from the other. These seven activities are as follows:

Economies of Scale and Scope

Growth brings rewards – in the form of economies of scale and scope. Economies of scale and scope are the efficiency gains that a company enjoys when it achieves critical mass in its business operations. In principle, economies of scale and scope can be realized in every stage of the value-creation process.

However, as soon as the company grows beyond a certain point, the risk appears that the economies of scale could be eaten up by "diseconomies of scale." The main reason for this is transaction costs, the company's expenditure on coordinating its business activities. Transaction costs play a central role in determining the limits of profitable growth for a company. The bigger a firm is, the greater its coordination costs. Beyond a certain point, the coordination costs outweigh the economies of scale.

Developments in recent years have meant that transaction costs are falling. This means that companies can now expand as never before and enjoy economies of scale and scope that were previously unheard of.

1. **Placement:** The company requires great "placement power" at the outset to ensure that the market launch is successful and guarantee initial sales successes. This first step already brings certain risks with it. For example, if the opinion leaders fail to accept the product, the entire sales process can hit the doldrums
2. **Advertising:** After product placement and the initial market launch, the company must make a strong effort to achieve market penetration in the target segment. First and foremost, this involves working with the media. Advertising eats up a sizeable slice of the resources. Sales may also need support in the form of a brand, so if the company doesn't already have one for the product, it needs to create one now. Later on, a positive "feedback effect" may appear in the market, whereby sales of the product increase as a result of its wide distribution and high level of visibility

3. Production: In parallel with the second step, the company needs to be able to speed up production. This also requires energy. It must create production capacity internally or integrate capacity from external sources. It must design its technological processes so that they can easily be scaled up. And the product must be embedded in a product family so that it can effectively span the gap between mass production and individualization
4. Distribution: At the same time, the company must set up distribution channels for the product. This requires an entire infrastructure, a system. Distribution paths, hubs and logistics processes must cover the entire area and the individual parts of the system must function in an *integrated* way
5. Service: At the end of the distribution channels there must be service points. Many products require on-site services. These services should have *local* characteristics that enhance individualization. In the past, service meant repairs; these days other services are called for, before, during and after the sale. Such services represent real additional value
6. Competition: The company must overcome any resistance created by the competitive situation. For example, it must convince retailers to stock the new product, even if this means dropping a rival product from their assortment
7. Saturation: Later on in the course of the sales process, the company must identify and exploit all possible sales options. It must identify the factors determining the saturation point and try to influence them. Sometimes, at this later stage in the sales process, the company must create new variants of the product, employ differential pricing or modify the product range. Cash cows should not be milked until they go dry: they should be looked after and allowed to pasture. This also requires energy and a certain scale on the part of the company

3.1.2 From Capital to Talent – Required Resources

The tasks we have described above are both comprehensive and closely intertwined:

- In the growth phase, the entrepreneur needs a relatively *large quantity* and *wide variety* of resources. He must source, monitor and coordinate these resources

- The entrepreneur must have the resources and the backup in terms of staff to be able to fight on various different fronts at the same time. He must employ his resources effectively in different directions at the same time
- The entrepreneur must be able to coordinate and integrate the way the resources are used, taking risks into account
- Due to the high level of demand, resources are often in *short supply* during the growth phase. Accordingly, the entrepreneur must always keep one eye to efficiency while planning and coordinating resources

The different *directions* in which the entrepreneur must employ the resources require some comment. The first of these directions is the placement of the new product. To place the product effectively, the company must first achieve a certain scale and the entrepreneur must be on good terms with opinion leaders. The second direction is the scaling up of production and distribution. This is not just about the technical aspects of production, the operational issues: The company must also find a way to bridge the gap between mass production and individualization. For the sake of efficiency, it must also capture the economies of scale and scope – in other words we are talking here about "process reengineering". The third direction is communication and all the activities associated with it, such as advertising and branding. And the fourth, final direction is services and the endeavor to convert the initial wave of sales into a sustained, growing stream.

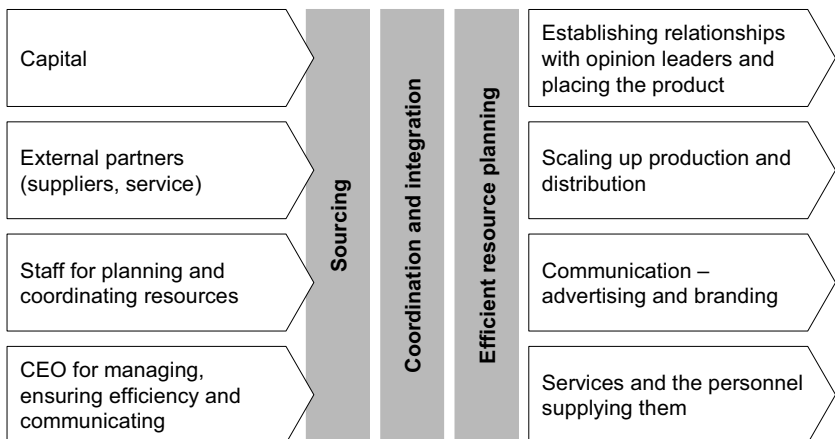


Figure 3-1: The entrepreneur must source, coordinate and employ four different types of resources (left) in four different directions (right)

Staff: The entrepreneur requires the support of a staff to deal with the enormous task of planning and coordinating resources. This job is too much for a single individual. For many of the specific tasks involved, traditional management tools are highly useful: deadlines, meetings, contracts, supervision, controlling and so on. Then there are the tasks of risk management and monitoring capital input. Typical tasks here are "make or buy" decisions and deciding on the desired level of vertical integration. As regards economies of scope, there is also the question of horizontal integration, which can be increased by means of takeovers. The entrepreneur needs people working for him who have traditional qualifications and experience plus additional strengths in finance and accounting, or areas such as marketing and organization.

Talent: The entrepreneur must lead his staff on the home front. At the same time, he must win over and retain external partners – partners who supply capital, provide input, manage the distribution network and deliver services. Above all, he must provide his customers with a binding, guaranteed offer during the growth phase. Increasingly, customers expect to see something more than an interesting bundle of products and services. They want the producer to take on *responsibility*, especially in the case of consumer goods. Modern society expects the business world to provide answers to all the problems that politicians are incapable of solving. In the past it was enough for companies to make donations, offer sponsorship deals or at least desist from harmful practices. Nowadays companies are expected to take a clear stand against such issues. Our entrepreneur must therefore make corporate responsibility part of his vision, at the same time ensuring that his message fits the overall image of his company and staff (brand).

FOUR RESOURCES	FUNCTIONS AND TASKS
Capital	Carrying the risk of the market launch, financing production capacity, advertising and branding (irreversible investments)
External partners	Capital providers, suppliers, distribution network partners, service partners
Staff and management	Resource management for production and sales, coordination, raising efficiency given the resource shortage
Talent	1. Managing staff and achieving a balance with external stakeholders; 2. Risk management

Summary 3-2: The resources needed for the growth phase and their functions point to a wide range of tasks for management. Resources are in short supply in this phase, so the entrepreneur needs instruments that are capable of improving their management and coordination while bolstering efficiency

3.2 Individualized Mass-Market Products

3.2.1 Four Stages of Development

Once the entrepreneur has won over the opinion leaders and safely managed the market launch, the company can focus on penetrating the actual target market. However, as sales increase, a conflict emerges. On the one hand, the company wants to secure *cost advantages through mass production*. At the same time, it would like to achieve *revenue advantages through greater individualization*. The solution to the conflict between minimizing costs and maximizing revenue has developed historically through four different stages:

- Stage one: Colors, packaging, aromas
The earliest answer to the problem of conflicting targets was to produce a mass-market product in a number of different variants. These variants only differed superficially, for example they were different *color* or had different packaging. Thus it was possible to produce many different variants without impinging on the cost advantages provided by mass production
- Stage two: Modules
Offering an identical product in different colors or "skins" is no longer considered an adequate response to the demand for individualization. Part of the value for customers is that they can choose different options within an overall buying experience. If the only option they are offered is a different color, their choice is trivialized. This has led to the emergence of a *modular system*. Here, the product consists of a *core*, fully functional in itself, to which customers add a portfolio of *add-on elements* that they select themselves. Customers purchase a total product that has a tangible level of individualization and at the same time flatters their personal skill in assembling the portfolio of modular elements
- Stage three: Product families and modules
These days it's not enough to offer just one product core. Individualization requires *several product cores* to which modules with various additional elements can be added: The product thus mutates into an entire *product family*. To keep their costs down, companies try to preserve as many common elements as possible between the different product cores in the product family. These common elements are known as the *platform*. A single platform supports the various

product cores belonging to one product family, and each product core is complemented by a selection of modules. Having a platform provides the company with significant economies of scale. The small number of different product cores may also provide certain economies of scope. At the same time, the level of individualization is greater than is the case with a simple modular system as numerous different product cores are available below the level of the add-on elements

INDIVIDUALITY	OFFER	EXAMPLE
Customers have an emotional response to colors, different types of packaging and aromas	Product is offered in variants with superficial differences, e.g. different colors, types of packaging or aroma	Cosmetics
Customers examine various different add-on elements and feel that the choice they make is valuable and supports their individuality	Modular principle is added: differentiation between product core and various add-on elements	VW Golf 1990
In addition, customers choose a level that reflects their attitude and self-image from within a product family that offers recognizable gradations	Platform, product core, add-on elements – variants in the product core and platform form a product family	Series production by automotive manufacturers
Customers above all feel that the services they receive are of lasting value	Platform, product core, add-on elements and services	Private banking

Summary 3-3: Possible solutions to the conflict between securing the cost advantages of mass production while enjoying the revenue advantages of increased individualization

- Stage four: Product families, modules and services
 Today, companies interweave modular product families with services. Services that combine with products to form a single entity are offered almost exclusively at the point of contact with the customer. This puts the focus on the relationship between the sales consultant and customer. Research has shown that this relationship in itself adds value, for two reasons:
 - The relationship offers additional value to customers if they receive a "side payment" in the form of an *extra service* from the sales consultant. This can take the form of a free gift or an invitation to some event. Sometimes the side payments are made via customer loyalty systems, for example air miles or *bonus programs* linked to store cards. Such extra services mean that customers are not lost to competitors – especially if customers receive the benefits only after

a certain period of time. Moreover, extra services are an ideal way for companies to add a local or regional element to their products. This can help camouflage the disadvantages associated with international products that may have been designed for a different country or an unfamiliar context

- Many communication channels are suitable for acquiring new customers. However, for retaining existing customers, research shows that only one channel is effective: personal contact. Services therefore play a key role in ensuring follow-up sales

So, while a single variant is probably sufficient for the market launch, the company must carry out a number of design modifications while penetrating the market. This involves developing a product platform, modules with add-on elements, and services.

3.2.2 Attributes and Add-on Services

The decision about these modules and how they should interconnect with each other represents a critical moment in the growth phase. The usual approach is first of all to classify all the different product cores and module elements that together make up the product family as different *attributes*. The company can then concentrate on the job of choosing what attributes it will offer customers and, having settled on this, splitting them into two clear groups: those that will form the product cores and those that will form the modular elements. For the initial task – choosing the attributes that will ultimately be offered to customers – the company should organize a brainstorming session with experts from Production and Sales, plus external specialists.

Creative techniques such as brainstorming allow the company to draw up a comprehensive list of all the possible attributes. The company then plots each attribute along two dimensions, strategy and finance – the two areas at the heart of this book. The company must ask itself the following questions:

1. How does the attribute fit our brand and image? Are our competencies useful for this attribute? If we choose this attribute, will it contribute to our knowledge base?
2. What is the significance of this attribute for our financial success? How do customers evaluate it? How much are they willing to pay for it?

As always in such cases, there are unlikely to be any attributes that are a perfect fit in terms of both strategy and finance. But some attributes will stand out from the rest along one dimension or the other. These attributes are the possibles. Weaker attributes, those that score poorly on both dimensions, the company can reject.

**Strategic importance of attributes
for company and brand**

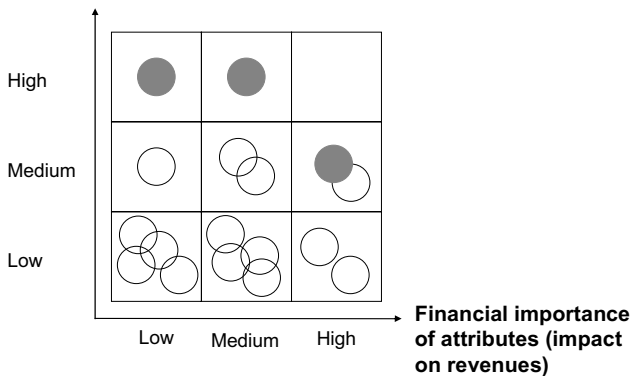


Figure 3-2: Mapping possible attributes on the basis of their strategic and financial importance

The next step is for the company to take a closer look at the stronger attributes and try to find their common denominator. By so doing, it can identify the *broadest possible platform* that can serve as a common basis for *all* the attributes selected. If necessary, the company can create two or three platforms for the chosen attributes. Using one, or at most a few platforms for the entire product family secures for the company the cost advantages that are associated with mass production.

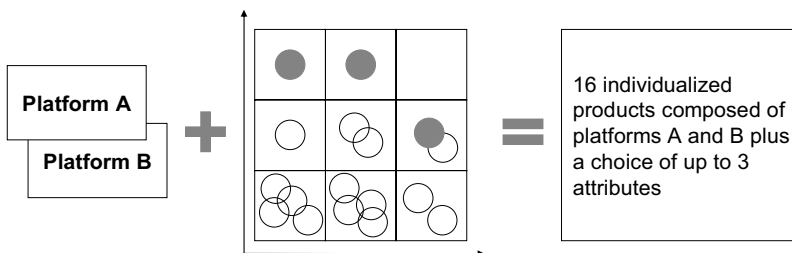


Figure 3-3: Combining one of two platforms with a choice of up to three attributes produces a total of sixteen different product variants

This process results in numerous different combinations of attributes and platforms, which means a sufficient level of individualization for the company to ensure a revenue advantage. For example, if two different attributes are available, the customer can choose one or the other, or neither, or both. So he already has ($2^2 =$) 4 different combinations to choose from. If three different attributes are available, the customer has ($2^3 =$) 8 possible combinations to choose from; and if n attributes are available, he has 2^n combinations to choose from. If these options are available for m platforms, the total number of possibilities is $m \cdot 2^n$.



Figure 3-4: The selected attributes are naturally interwoven with local add-on services

Radical Rethinks

In 1993, MICHAEL HAMMER and JAMES CHAMPY's proposed a concept for radically rethinking firms and business processes. In their book *Reengineering the Corporation – A Manifesto for Business Revolution*, the authors reject incremental progress in the sense of continuously improving processes while retaining existing structures. This they consider inadequate. Instead, they argue that companies should strive to make *quantum leaps* in the four critical measures of performance: *cost, quality, service* and *speed*. For carrying out optimization within existing structures, on the other hand, they recommend *kaizen management* or Total Quality Management (TQM).

So the first question for the company is: What platform or platforms do we need to support the different attributes? Once it has answered this, it can move on to the second question: What add-on services can we interweave with the attributes? The answer it comes up with to this question is critical, as the relationship between the sales consultants and their customers must contain natural points of reference. If not, the customers will reject it as artificial. A good attribute is thus one that can be interwoven in a natural way with a service.

In this way, the company can define the local add-on service if offers to customers by means of the selected attributes. The bundle, consisting of product and service, should deliver the greatest possible value to the customer. In terms of this service, industrial customers value speed and reliability while ordinary consumers

tend to value things that provide satisfaction within a particular "experience world".

The type of product development that we have described above first became best practice in the automotive industry. Since then it has been adopted by other industries, and today it can even be found in the way companies design families of services.

3.2.3 Technological Leaps

Companies can facilitate technological leaps by means of *process reengineering*. Process reengineering is a way of revolutionizing a company by reshaping all its operational and administrative processes with the aid of information technology. It rests on four principles:

1. The company concentrates on *processes*. The first step is to introduce a "process map". This turns the spotlight away from specific jobs or areas of work and onto processes. Processes are defined as series of partial steps and activities; they are subdivided into core and support processes
2. The company *computerizes* all its corporate processes. Using IT wherever possible – ideally with standardized software – helps the company to achieve cost and time advantages
3. The company designs its new processes from scratch, going back to the drawing board. The objective is to come up with processes that deliver an improved service to the company's internal or external customers – shorter waiting times, for example. Customer value and sales are seen as the source of financial success
4. The company carries out the necessary changes top down. The process reorganization is implemented by a team whose tasks are clearly laid out for them by the management. Bottom up doesn't work – one can't expect the employees themselves to come up with suggestions that might put their own job at risk or render them superfluous

In process reengineering, information technology is the key enabler of leaps in performance. In order to raise their productivity and profitability, companies need to radically rethink the way they organize their current processes, to make a completely fresh start. They must ask themselves the following questions: Why do we do that? Why do we do it that way? How would we do it if we were redesigning the whole company from scratch?

3.3 The Sales Process

3.3.1 Market Introduction

Sales patterns develop over time. Customers and consumers are not all alike. They react differently to different variables, and these variables change in the course of time. One such variable is price. Another is the market penetration at a point in time t . A third is advertising, a fourth the brand and a fifth the breadth of the product assortment.

Buyers differ in how they react to these variables. The usual approach is to split consumers into two groups: those who buy early, and those who follow the others' lead and react positively to the presence of the product in the market. At the beginning of the market penetration process, companies should concentrate on the first group – the early buyers – and strive to meet their information requirements:

- The majority of early buyers listen to opinion leaders and those who advise on or demonstrate the product, i.e. "promoters" of the product
- Others early buyers are influenced by media reports (advertising, newspaper and magazine articles, reports) and a certain sub-section are particularly sensitive to technical data, tests and ratings of the product

The company must try to find out which of these information channels is the most promising for their new product. If opinion leaders are the key information channel, the company must quickly get them on their side.

A Gesture of Gratitude

Mercedes was the name of one of the daughters of the dealer and consul EMIL JELINEK (1853-1918). He had ordered 36 vehicles from the designer WILHELM MAYBACH (1846-1929) and the Daimler Motor Company, which he then sold on in Cannes.

They must do this before the product reaches the target market: opinion leaders don't generally like being approached when the product is already on the market. Once the company has got the opinion leaders on its side, it can start selling and promoting the product on the target market.

Of course, there is a risk that the company will be unsuccessful in winning over the opinion leaders. Market introduction is a bit like an exam that you can prepare for, but can't retake straight away if you

fail the first time. The prototypes that the entrepreneur provides are worth less than their calculated value if the possibility of a failed market launch is ignored in the calculation.

To begin with, the company should present the new product – at this stage, generally only a single version – to a small group of opinion leaders or multipliers. To do this, it first has to identify who the opinion leaders are and form some sort of relationship with them. It may even have to create a group of opinion leaders itself so that it can then exert a positive influence on any product tests or evaluations. At the same time it must be careful not to exclude any key customers from the group of opinion leaders, as this would risk losing them as clients.

Who are the opinion leaders? In the case of securities it is the institutional investors: Investment banks are well aware that private individuals will only invest their money if institutional investors give a positive sign first (which is why road shows for institutional investors are so important). In the case of durable consumer goods, it's often the wholesalers: What they say goes. In the case of apparel, which is aimed at a broad segment of the population, the opinion leaders are the clientele of fashion boutiques. In the case of pharmaceuticals, they are the senior physicians at major hospitals: No country doctor will prescribe a new drug unless it has been given the OK by a leading big-city physician.

In fact, sometimes the promoters aren't people. Events can act as multipliers or amplify their effect; the same goes for media appearances.

In almost every case, however, the company must overcome certain entry barriers before it can reach the real target market. This is known as *two-stage communication*: First the company contacts the opinion leaders, then the opinion leaders contact the target market.

3.3.2 Branding

A *brand* is the expression of the company's *value proposition* in its name, logo, signal or other operational principles for its employees.

The value proposition can relate more narrowly to the product or service. This used to be common in the past. Alternatively – and this is more often the case today – the value proposition expresses the company's mission as a whole given the tasks it must perform in modern society.

In line with this, the value proposition can range from the product characteristics promoted in its advertising (its quality, its suitability for its

social milieu) to the company's overall stance on social issues (such as ecology, the Third World, globalization).

The target group for the brand (the expression of the value proposition) can range from people who buy the product right up to society as a whole. Adding a value proposition to a product integrated with a service increases its value.

The key question here is whether the value proposition is credible. It is, after all, a promise made by the company to the customer.

1. The company benefits directly from the brand – in terms of bigger sales figures and above all bigger profit margins. One can determine the value of a brand by comparing the price of the product with a comparable no-name item. The brand also creates entry barriers for other companies and so slows down the general trend toward increased competition. Furthermore, the brand has a positive impact on the providers of capital and the workforce. It makes it clear to the company's employees exactly what is expected of them. When companies stress this aspect, it is called *internal branding*
2. The brand and its positive impact can be destroyed if certain sections of the target group run down the value of the brand. These groups do not gain financially by attacking the brand, but the company suffers a loss in terms of its intangible assets. The brand acts as a *pledge* that the company makes to the target group: It lends credibility to the value proposition

Researchers have looked at why brands lead to increased sales and higher prices for products. Here are some of their findings:

- Brands and the message they communicate reduce the search and information costs for consumers. In conditions of uncertainty regarding quality, brands perform a key function in *orienting* the customer
- Brands can also generate real *additional value* if the value proposition contains things that are important for the customer. Many products offer the same basic functions due to their standard design and production (all companies adopt the same best practices). This makes additional value especially important. The additional value can consist of a return warranty, an extended lifespan, improved design or such like

- Brands can strengthen customers' sense of who they are, becoming part of their *identity*. Here we are talking about ideas such as prestige, lifestyle and attitude. If the customer is another business, the brand can also benefit their own brands. For example, a company that produces laptops can bolster the image of their products by adding the label "Intel inside". Similarly, advertising for the Lexus mentions Marc Levinson as the supplier of its sound system
- These three functions – orientation, additional value and identity – lead customers to view a branded article as "better priced" than a no-name product. This erects entry barriers for players who don't yet have a brand. Clearly, for this to work properly the company must formulate its value proposition in *precise* terms and give the product a *unique* image through its advertising
- A precise formulation of the value proposition and a unique image are what make a brand distinctive. Numerous brands can exist side by side, as long as they are distinctive. Audi, BMW, Mercedes and Lexus locate their showrooms in close proximity to each other: their different value propositions make them quite distinct. Differentiation is all to do with communication – the cars themselves can be practically identical. This means that several companies can position themselves in the center without stepping on each others' toes. They can all follow the same best practices, as is the case with modular product design, for example

Driving the Porsche to Aldi – The Hybrid Consumer

It is a truism of marketing that successful advertising is impossible without a clear target group. However, it is increasingly difficult these days to divide up potential customers into target groups. The old patterns don't hold water. Today's customers shop in the discount store one day, the designer store the next and on the Internet the day after. This type of hybrid consumer can't be squeezed into the normal segments favored by marketing experts. They show two contradictory patterns at the same time: they are price-conscious, but also brand-focused. And that makes brand positioning rather tricky.

The brand image is the way the brand is seen by outsiders, i.e. how external target groups perceive and evaluate the value proposition. This contrasts with *brand identity*, which is the way the company sees the brand and how it expresses this in its formulation of the value proposition.

It is vital that the brand identity doesn't come a cropper right at the outset. The company must make sure that the message is consistent, both internally (with staff, sales advisors and services) and externally (with the

media). On no account must the management overstretch its staff with a value proposition that they are then unable to live up to.

The defining features of the brand are either laid down by the company's founder or established by a process of interaction. Here, the history of the firm, its competencies and its organization are the key determining factors. The origins and the competence of the brand are a core part of brand identity.

The value proposition contains two messages:

1. Who am I? What qualities do I have?
2. What do I offer? How do I offer it?

According to ESCH, this stimulates both the left and the right brain hemispheres of customers in the target segment.¹ As is well known, the left hemisphere of the brain is where functions such as language, self-perception, analytical thought and mathematics are located. The right hemisphere is home to feelings, imagination and intuition, symbols, holistic thinking and the subconscious. Ideally, brands should stimulate all these functions of human thought and perception.

The brand identity influences the outside world through a process of *positioning* and by shaping potential customers' perception. It is important that the company doesn't start the positioning process before it has fully defined the brand identity. Later on, *feedback* from consumers is important. The company compares the internal brand identity with how external target groups understand the value proposition (if they understand it at all). This interaction between brand image and brand identity, as expressed by the positioning and the feedback, is the core concept underlying "identity-oriented brand management". The company can use all the information channels normally at its disposal in the positioning process:

1. Media advertising
2. Product characteristics (these come to embody the brand)
3. Staff behavior (especially staff involved in customer support and service areas)

¹ FRANZ-RUDOLF ESCH: *Strategie und Technik der Markenführung*. 3rd ed., Vahlen, Munich 2005.

The third information channel – staff behavior – is particularly important if the product is a service. New members of staff must be informed about what makes up the brand's value proposition, its substance. They should receive guidelines on what they have to do to live up to this pledge. Later on they should build up an understanding of the connection between the company's success and the brand. The staff must learn to believe in the brand. Finally they should internalize the message and the appropriate behavior and begin to live out the brand in a credible fashion. The traditional marketing mix of product, advertising and distribution is thus complemented by a fourth element: a workforce that is loyal to the company and that delivers on the value proposition because it truly believes in it.

3.3.3 Market Penetration

The company should guide the process of market penetration rather like one steers a ship, with frequent checks to see that it is still on course. Otherwise it is impossible to use tools such as price to control the process.

The basic idea is that after market launch, the sales per unit of time initially pick up speed. Later the market reaches saturation and sales drop off again. Various models and forecasting systems offer a *quantitative description of market penetration* as it follows this S-curve. These models originate in the field of demography and are widely used in studies of population growth. Generally the logistics function (or some modification of it) is used.

To illustrate these models we can examine a series of discrete points in time $t = 0, 1, 2, 3, \dots$ and measure the total sales achieved up to each point in time, $x(t)$. The points in time represent a week, a month or a quarter. In this example, the product is something durable: replacement purchases do not occur. The sales process begins with a small initial quantity ϵ : $x(0) = \epsilon$. A total of $x(t)$ is sold up to the beginning of sales period t . In sales period t , the quantity

$$q(t) = a \cdot x(t) \cdot (s - x(t)) \quad (3-1)$$

can be sold. At the end of the period (and up to the beginning of the subsequent period), the total volume sold is thus

$$x(t + 1) = x(t) + q(t) \quad (3-2)$$

Equation (3-1) expresses the following:

1. The sales in one week, month or quarter are in proportion to the total quantity sold so far, $q(t) = a \cdot x(t)$
2. At the same time, the weekly or monthly sales are in proportion to the remaining market potential, $q(t) = s - x(t)$; s is the market's saturation point

Market penetration [%]

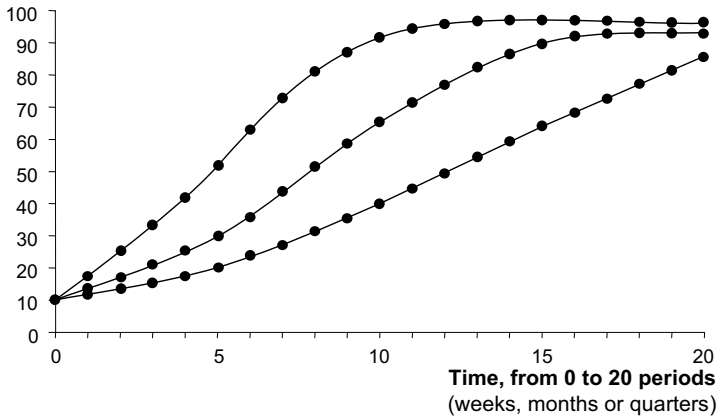


Figure 3-5: The development of market penetration for three parameter values of a and periods up to $t = 20$. We assume a market penetration of 10% at the beginning of the first time period. A typical S-curve is seen. The turning point is reached at 50% market penetration, i.e. in periods 2 ($a = 0.2$), 8 ($a = 0.3$) and 5 ($a = 0.5$). From this point onward, addition market penetration slows down

Combining (3-1) and (3-2) gives the following statement of how market penetration develops:

$$\begin{aligned}
 x(t+1) &= x(t) + q(t) = \\
 &= x(t) + a \cdot s \cdot x(t) - a \cdot x^2(t) = \\
 &= (1 + a \cdot s) \cdot x(t) - a \cdot x^2(t)
 \end{aligned}
 \tag{3-3}$$

If we take market saturation to be 100%, i.e. $s = 1$, then the percentage of total sales develops as follows:

$$x(t+1) = (1 + a) \cdot x(t) - a \cdot x^2(t)
 \tag{3-4}$$

The logistics model has been extended in a number of ways:

- In 1969, FRANK M. BASS (University of Texas at Dallas) extended equation (3-3) for the diffusion of a new product to take account of the fact that spontaneous purchases also occur that are independent of the level of market penetration already achieved:

$$q(t) = a \cdot (x(t) + b) \cdot (s - x(t)) \quad (3-5)$$

- Because the volume sold at $x(t)$ declines at a specific rate, making replacement purchases necessary, the sales volume in period t was increased by $d \cdot x(t)$. If the loss rate d is high, we are dealing with a non-durable product
- In addition, the speed of market penetration a was represented as being independent of the price. This makes it possible to derive optimum dynamic pricing policies. Such optimizations always produce one of two types of dynamic pricing policy (which one is preferable depends on the specific case). The first policy is to start out with a very high price, even if this puts the brakes on initial sales; as sales develop, the price is lowered. This is known as a policy of market skimming. The second policy is to start out with a low price in order to give sales a kick start; later on the price is raised. This is known as a policy of market penetration
- Analysts have also studied generalizations looking at the impact of pricing policy on market entry by competitors

Models such as these serve various purposes. They allow companies to assess more accurately their progress in terms of market penetration. They improve companies' medium- and long-term sales forecasting and encourage them to look for ways to influence the speed and level of penetration. And they give companies an indication of what sort of pricing policy they should be employing and how they can most effectively steer the sales process.

3.3.4 Employees and Incentives

The immense task faced by management in the growth phase not only requires efficient planning of capital expenditure. It also requires a strong focus on the people that make up the workforce – especially those working in the areas of production, sales and services. Bureaucratic and hierarchical management is of little use here, as employees must be able to react

flexibly to constantly changing customer wishes. They need greater individual competence than used to be the case in manufacturing companies 50 years ago. Today's world requires decentralized, not centralized management, and companies must be able to motivate their people.

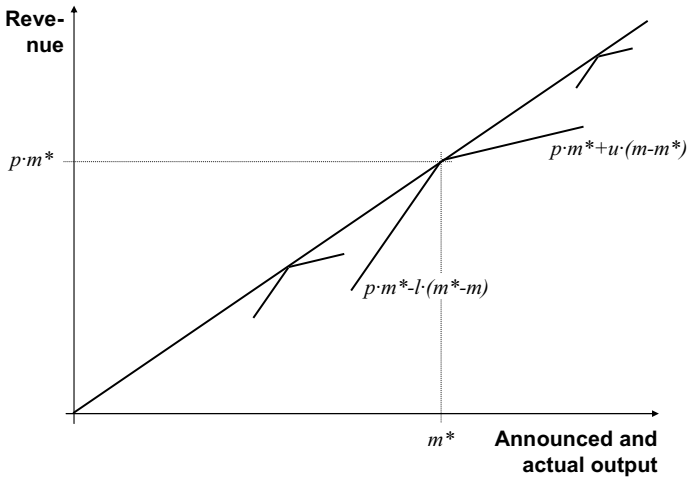


Figure 3-6: Outline of motivation patterns in the Soviet Union. Three different quantities reported by functions (corresponding to the sub-units in charge) and their peaked development pattern, indicating revenue in line with actual output

Even the Soviet Union – a prime example of a planned economy – had motivation patterns. The sub-unit responsible for supplying a particular resource had to report at the beginning of the planning period what quantity it was capable of supplying. The sub-unit was not put under pressure, but it was encouraged to report a realistic output. We may call this announced level m^* . The sub-unit received a planned revenue of $p \cdot m^*$ for this. Naturally the volume the sub-unit actually produced – which we call m – usually differed from the target level m^* . For this there was a system of rewards and punishments:

- If the actual output was *below* the level reported in advance, $m < m^*$, the sub-unit's planned revenue $p \cdot m^*$ was not in fact reduced by $p \cdot (m^* - m)$ but by a larger amount. Instead of $p \cdot m^*$ it received only $p \cdot m^* - l \cdot (m^* - m)$, where the reduction per "unit of shortfall" l was set above the level of the price

- If the actual output was *above* the level reported in advance, $m > m^*$, the sub-unit's planned revenue $p \cdot m^*$ was not increased by $p \cdot (m^* - m)$ but only by $u \cdot (m - m^*)$, where $u < p$. In total, the central office paid the sub-unit $p \cdot m^* + u \cdot (m - m^*)$ when output exceeded the level previously announced

This revenue function is shown in the figure as a peaked line whose apex slides along the revenue function determined by the price p . The sub-unit is thus motivated to fix this peaked line by announcing m^* such that its own forecast for m agrees with m^* .

These days a wide variety of incentive schemes can be found. They work on the basic principle of a framework that gives employees personal rewards for behaving in the desired fashion. The employees work in their own interests, as it were, in such a way as to raise the overall performance of the company. The personal rewards don't have to be financial in nature: research has shown that non-monetary rewards can also be effective.²

The term *principal-agent relationship* is used to describe models that are essentially based on delegation. 1. One person or party (the principal) entrusts a task to another person or party (the agent). 2. The principal can only partially monitor what the agent does. 3. A remuneration or profit-sharing system leads to the agent acting in his own interests in line with the objectives and wishes of the principal.

Research into this form of delegation originally assumed that the principal enjoys *full* information about the activities of the agent, or can easily get hold of this information thanks to monitoring or reporting systems. The level and type of efforts made by the agent could thus be *included in the contract* and the agent and the principal were free to reach an agreement regarding performance and consideration.

In reality, full information is rarely a given. In today's models one party (the principal) is unable to monitor the activities, efforts or qualifications of the other party (the agent) at no cost. This gives the agent the freedom to act unobserved by the principal. The principal-agent relationship is typically characterized by asymmetrical information.

The agent has his own objectives. For example, he must bear the cost of making a special effort. Within the framework of his discretionary freedom

² MARTIN HILB: *Integriertes Personal-Management. Ziele – Strategien – Instrumente*. 14th ed., Luchterhand (Hermann), Munich 2005.

he will not necessarily behave in a way that harmonizes with the objectives of the principal. The principal therefore tries to structure the remuneration system in such a way as to make the agent act in his own interest in line with the principal's objectives.

But motivating the agent comes at a price. The principal has to sacrifice something in order to secure behavior on the part of the agent that is in line with his wishes. The key lies in giving the agent a stake. The details of this incentive system can be defined in the best possible way. But even the best possible incentive system is only a *second-best* solution. The *best* solution would still be to have a contract outlining exactly performance and consideration – impossible, as the principal cannot verify beyond doubt the agent's fulfillment of the contract (or to do so would be prohibitively expensive). The gap that exists between the results achieved by the best and the second-best situation is known as the *agency costs*.³

Where the design of the reward system has its roots in psychology or management theory, rather than in a microeconomic model in which the people being motivated are "soulless" maximizers of their utility, we can speak of a "motivation system". Motivation systems form part of a *human resources management system*. Awarding prizes, giving bonuses or granting staff and managers share options form part of what we call the *compensation system*. The two approaches differ in terms of their focus:

- Motivation systems put the emphasis on *social* recognition, praise and accolades, possibly accompanied by competition and a program of incentives

³ Further literature on this topic: 1. MICHAEL C. JENSEN and WILLIAM H. MECKLING: *Theory of the firm: managerial behaviour, agency costs and ownership structures*. Journal of Economic Literature 3 (1976), pp. 305-360. 2. BENGT HOLMSTRÖM: *Moral Hazard and Observability*. Bell Journal of Economics 10 (1979), pp. 74-91. 3. KLAUS SPREMANN: *Agent and Principal*; in: GÜNTER BAMBERG and KLAUS SPREMANN (eds): *Agency Theory, Information, and Incentives*. Springer Publisher, Berlin 1987, pp. 3-38. 4. ALFRED WAGENHOFER: *Anreizsystem in Agency-Modellen mit mehreren Aktionen*. Die Betriebswirtschaft 56 (1996) 2, pp. 155-165; 6. ROBERT GILLENKIRCH and LOUIS JOHN VELTHUIS: *Lineare Anreizverträge für Manager bei systematischen und unsystematischen Risiken*. Zeitschrift für betriebswirtschaftliche Forschung 49 (1997) 2, pp. 121-139. 5. KLAUS SPREMANN: *Reputation, Garantie, Information*. Zeitschrift für Betriebswirtschaft 58 (1988) 5/6, pp. 613-629. 6. WERNER NEUS: *Ökonomische Agency-Theorie und Kapitalmarktgleichgewicht*. Gabler, Wiesbaden 1989.

- With prizes, bonuses and share options, the emphasis is on *material* rewards

In fact, the two systems are complementary. Companies should design them at the same time and harmonize them with each other. They are both based on an understanding of where – in what areas of work and on what levels – the workforce can be motivated. Sure, everyone loves praise and recognition, and a bonus is always welcome. But companies must understand that motivation and rewards are particularly important in those areas and on those levels of the organization where complex decisions are made. It is precisely here that employees can either make their lives easy or work with care and attention to detail.

3.4 Different Paths to Growth

There are many paths to growth. Companies have numerous options for realizing their growth targets in practice. Making the right decision is one of the biggest challenges faced by management. It is not a decision that can be reached purely on the basis of financial considerations: The strategic fit is just as important. In this section we take a closer look at the different paths to growth available to a company. To help us in our examination, we use the options systematized in Figure 3-7.

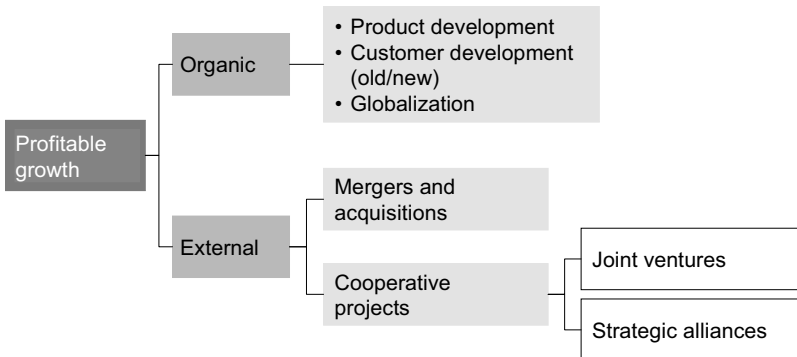


Figure 3-7: Different growth paths

3.4.1 Organic Growth

In internal or organic growth, the firm expands using its own energy and resources. In a narrow sense of the definition, internal growth occurs without mergers or acquisitions. However, minor takeovers – such as the purchase of sales organizations or production facilities – are usually considered part of an organic growth strategy. Internal growth harbors few risks. But it also represents a weaker lever for growth, particularly as the company increases in size. Large companies find it difficult to achieve the growth rates demanded by the capital market, which lie around the 7% mark. Take, for example, a company with total revenues of EUR 50 billion. A growth target of 7% per year would mean that in the first year it has to earn an additional EUR 3.5 billion. In the second year, it would have to increase its revenues by EUR 3.745 billion and in the third year by EUR 4.007 billion. Clearly, internal growth is not possible once the company has reached a certain size. As a general rule, then, organic growth only leads to major growth spurts in exceptional cases.

3.4.2 External Growth

Organic or internal growth is not an option if the necessary resources are not available within the organization. The same is true in situations where building up resources would take too long or be impracticable for other reasons. Where this is the case, the only option for a company bent on expansion is that of external growth. External growth refers to the various strategies a firm can use to achieve growth by means of externally produced resources. Two types of external growth exist: mergers and acquisitions, and cooperative ventures.

Mergers and Acquisitions

Mergers allow companies to achieve fast, significant growth spurts. Mergers are appropriate where a company wishes to capture new market segments quickly or consolidate saturated markets. They are also a good option where a company plans to expand internationally or integrate its value chain horizontally or vertically, to improve its cost position for example. Acquiring an established brand or specific expertise are also strong arguments in favor of mergers.

Yet a degree of caution is called for. Mergers and acquisitions offer the potential for rapid growth, but they also bring with them considerable risks. High acquisition premiums put extra time pressure on exploiting synergies. The company must realize the benefits within one to two years for them to be worthwhile financially. Integrating two different corporate cultures – a key success factor in mergers – is no easy job in such a short time period. As a result, the ambitious growth plans that some companies envision as a result of mergers and acquisitions sometimes go out the window. And we don't need to look far for examples of failed mergers.

Euphoria, Depression and Cool Calculations – A Brief History of Mergers and Acquisitions

The 1990s were the decade of merger mania. The number of deals grew steadily until they peaked in 2000, which saw around 13,000 mergers worldwide. Prices for acquiring companies skyrocketed, as did the expectations of what mergers could deliver.

After the hype came a period of sober reflection. In many cases accompanied by a real humdinger of a hangover. In their euphoria, many companies had underestimated the risks associated with mergers and acquisitions. Critical mistakes had been made. Some examples:

- The strategy behind the merger was not properly thought through
- The cultures of the two companies were incompatible
- The hoped-for synergies couldn't be realized or only started delivering much later. The acquisition premium turned out to have been far too high

These mistakes meant that more than half of the mergers that took place in the 1990s are now considered failures and two-thirds did not live up to the original expectations. In many cases, the mergers did not increase the value of the firm as had been hoped for, but rather knocked it into freefall.

The reaction was not long in coming: the pendulum swung sharply in the other direction. After 2000, mergers fell drastically both in terms of their total numbers and their size. However, since 2004 the level has recovered and is now showing impressive growth. Particularly noticeable has been the number of cross-border transactions, a result of increasing globalization.

As in the past, today's companies hope to achieve a number of specific things through mergers: synergy effects, a stake in new markets and subsequent growth. But their approach has changed. Nowadays there is less euphoria and more level-headed calculation. Companies have learnt from mistakes made in the past. The key success factors for acquisitions are as follows:

- The acquisition must fit into the overall corporate strategy
- Synergies should not be seen only in terms of their absolute size, but also in terms of how long it will take to realize them. The bigger the acquisition premium, the faster they must be realized
- Alternatives to takeovers must also be taken into consideration
- Cooperative ventures can deliver a similar impact with much less risk

Cooperative Ventures

Another type of external growth is that achieved via cooperative ventures. Here the company uses external resources but without incorporating them into the organization as is the case for mergers and acquisitions. Within the framework of a cooperative venture, two or more companies work together to achieve agreed objectives. The participants remain separate legal entities, their economic autonomy only affected in the areas of cooperation. The key differences between M&A and cooperative ventures are outlined in Summary 3-4.

CATEGORY	M&A	COOPERATIVE VENTURES
Time horizon	Permanent	Usually temporary
Flexibility	Low	High
Independent organizations	No	Yes
Number of partners	Usually two	Basically unlimited
Cost advantages from restructuring	Usually present	Difficult and rare
Complexity of management	Low (hierarchy)	High
Legal restrictions	Strong	Weak

Summary 3-4: Mergers and acquisitions versus cooperative ventures

Cooperative ventures are frequently the only alternative to a merger or acquisition. This is the case where buying the target company would be prohibitively expensive or is impossible for some other reason, for example it would contravene antitrust law.

The partners in the cooperative venture retain their legal independence and only cooperate in certain specific areas. This makes cooperative ventures highly flexible – another reason why they are particularly suitable for quickly capturing new markets. The legal independence of the partners also means that they rarely have problems with antitrust law. And, unlike mergers, they avoid the problem of having to integrate two disparate corporate cultures.

But it's not all good news. Cooperative ventures can lead to an undesirable transfer of know-how, loss of competitive advantage and a high level of

complexity. This presents the partners with an enormous challenge in terms of coordination. Fortunately, the rapid progress achieved in information and communication technology and the consequent drop in transaction costs in recent years has meant that companies can coordinate cooperative ventures much more easily now than just a few years back. This is likely to lead to a further increase in the number of cooperative ventures taking place around the globe. The integration of the global economy is also contributing to the current revival in this form of external growth. Falling barriers to trade and investment combined with growing legal security have made it much easier for companies to form relationships across national boundaries. As a result, the total number of international cooperative ventures has shown substantial growth.

Forms of Cooperation

Two different forms of cooperation exist, each of them with a distinct legal status:

- **Joint ventures:** The two partners participating in the cooperative venture found a legally independent company in order to pursue their joint objectives
- **Strategic alliances:** In this type of cooperative venture, no legally independent company is founded. The two companies sign "cooperative agreements" setting out in a more or less formalized way how they will work together. Cooperation between the two parties can take place at various stages of the value chain, for example in research and development, production or distribution

Horizontal and Vertical Cooperation

Another feature that distinguishes the different types of cooperative venture is their place in the value chain.

In horizontal cooperation, companies working in the same stage of the value chain join forces, sharing their complementary skills and bundling their strengths. Among other things, this allows them to concentrate on their core competencies rather than investing their valuable resources in other areas (such as building up a distribution network). A further advantage of complementary cooperative ventures is that they allow companies to grow quickly by expanding into new markets.

In vertical cooperation, companies work together but each of them at a different stage of the value chain, further upstream or downstream. For example, this allows a company that provides input for later stages of production to capture a larger stretch of the value chain, thereby strengthening its negotiating position with the end customer. By developing unique selling propositions together the two companies can also secure a better competitive position. Another example of vertical cooperation is cooperation between end customers and suppliers. This increases efficiency and innovation potential, as demonstrated by numerous examples from the automotive industry.

3.5 The Third Season – Conclusions

3.5.1 Identifying Phases

A clear indication that a company (or a function within a multidivisional corporation) is in the third season – the growth phase – is if it plans its activities in production, sales and financing in a clear, consistent fashion. The company will have a structured system of planning and coordination. Firstly, this planning process will aim to be effective: deadlines must be met and putting plans into practice will often require instructions from higher up the hierarchy. Secondly, the planning process will aim to save resources and create efficiency. If these signals are present – indicators that the company is striving toward efficient and cost controls – then the company is currently in the third season. This also involves meeting standards and striving to achieve scale effects. To make this happen, the company needs well-qualified managers high up in the organization during the growth phase.⁴

A second indicator that the company is in the growth phase is the importance it attaches to marketing. The marketing itself in this phase puts the emphasis on innovation and quality.

A number of empirical studies have investigated what factors are typical of fast-growing companies. The presence of such growth factors is a third indicator that the company is currently in the growth phase.

⁴ BJÖRN BJERKE: *Understanding Entrepreneurship*. Edward Elgar, Cheltenham 2007.

Planning	Efficient and effective planning, coordination of the various resources that need to come together, tight and strict planning, professional managers in line functions
Production and marketing	The new quality level captures previously unserved markets, marketing focuses on quality
External partners	These must be integrated to guarantee a flow of resources, especially financing; risks are high

Summary 3-5: Indicators that a company is in the growth phase

HARRISON and TAYLOR identify five typical growth factors.⁵ To some extent these factors overlap with our first two indicators – effective and efficient planning and marketing focused on quality. Harrison and Taylor's five factors are as follows:

1. Quality is more important than price as a competitive factor
2. The company occupies and dominates a market niche
3. The company frees itself from unnecessary "flab" and concentrates on its core competencies in order to raise efficiency
4. The leadership practices tight operational and financial control
5. The company has the power to make ongoing product improvements

SMALLBONE and WYER, and also DAVIDSSON, identify further factors whose presence likewise indicates that the company is in the third season:⁶

1. The company runs periodic programs of modernization and efficiency improvements
2. The company is highly willing to take risks. As we have discussed, growth requires very high, often irreversible investments. These only pay off if the company actually captures the market to the extent it

⁵ JOHN HARRISON and BERNARD TAYLOR: *Supergrowth Companies: Entrepreneurs in action*. Butterworth-Heinemann, Oxford 1996.

⁶ DAVID SMALLBONE and PETER WYER: *Growth and Development in the Small Firm*; in: SARA CARTER and DYLAN JONES-EVANS (eds): *Enterprise and Small Business. Principles, Practice and Policy*. Prentice-Hall, Englewood Cliffs, NJ, 2000. PER DAVIDSSON: *Researching Entrepreneurship*. Springer, Boston/New York et al., 2004.

plans. If it fails, the losses can be heavy. So a high level of willingness to take risks is a prerequisite for the third season, as well as an indicator that the company has reached this stage

3.5.2 Summary

The third season – the phase of growth – puts a major drain on resources and confronts the management with major tasks. Not surprisingly, the overwhelming majority of management studies and business textbooks focus on the various problems that arise in this phase of the business process. The company aims its activities in various different directions – production, sales, branding. It needs a sizeable staff just for the purposes of planning and managing resources, as well as enough people to work in production and service delivery.

The company must direct its resources in various different directions. The level of resources required also grows as a result of increases in production and sales. As a result, resources are constantly in short supply. So the company must identify and exploit opportunities for increasing efficiency and capture any economies of scale and scope.

Companies can choose between various options for realizing their growth targets in practice. In the case of organic or internal growth, the firm expands on the basis of its own energy and resources. Organic growth strategies usually come with a low level of risk, but they also represent a weaker lever for growth. External growth refers to all the different strategies a firm can use to achieve growth by means of externally produced resources. There are two types of external growth: mergers and acquisitions, and cooperative ventures. In the case of cooperative ventures, the company uses external resources without incorporating them into the organization.

As far as the management techniques and decision criteria are concerned, financial considerations become much more important in the third phase. While this doesn't mean that strategic considerations can be completely ignored, overall financial thinking dominates. The quantitative methods of management science provide effective support for the tasks of steering, coordinating and optimizing resources.

In the third season, then, decisions are overwhelmingly based on financial thinking. This is closely followed by strategic thinking, which is still of considerable significance.

3.6 Recommended Reading

1. A management book on the growth phase: BURKHARD SCHWENKER and STEFAN BÖTZEL: *Making Growth Work – How Companies Expand and Become More Efficient*. Springer, Berlin 2006. This book underlines the importance of economies of scale and scope and of decentralized structures. It reveals how companies can be guided toward greater growth and efficiency.
2. A book that discusses the pressure on businesses to grow, from a not uncritical perspective: HANS CHRISTOPH BINSWANGER: *Die Wachstumsspirale – Geld, Energie und Imagination in der Dynamik des Marktprozesses*. Metropolis, Marburg 2006.

4 Earn

In brief:

The fourth phase is the time at which the drivers of profitability must be carefully coordinated and optimized. Price, cost and product range issues must be addressed. So too must leverage and outsourcing. What should be done with the money that comes in? This is the time to sow the seeds of rebirth, of fresh beginnings.

4.1 Present vs. Future

4.1.1 Balance

The third phase – the growth phase – places tremendous strains on management and is enough to overtax any entrepreneur. Several challenges must be mastered simultaneously:

- Entrepreneurs need effective plans of action to quickly ramp up production and sales
- They must provide the necessary resources and recruit external players
- They must coordinate the entire effort
- They must motivate the workforce
- They must position the brand in a way that gives customers a clear commitment
- While doing all this, they must keep an eye on economic efficiency and contain risks to ensure that expansion does not overstretch the company

In a nutshell: Entrepreneurs must fight on a wide range of fronts and deal with wishes and preferences from all sides.

When managers have so much to do, again and again, individual issues may slip through the net. Aware of this possibility, different stakeholder groups clamor to assert their own personal demands. "Shout louder and you might get more," seems to be the rule. Indeed, certain claims are voiced loudly and more frequently, while others are articulated more rarely and less persuasively. One CEO sums the situation up: "I see the employee council every day, the customers every week, the banks every month and

the shareholders once a year." It is therefore perfectly feasible for imbalances to arise. In such situations, there are winners and losers. Suffice it for us to quote three examples from history of how the fruits of joint economic activity were, from today's perspective, shared out unequally:

- During the Industrial Revolution in the 19th century, workers had to labor under miserable conditions. Graphic artist and sculptress KÄTHE KOLLWITZ (1867-1945) portrays their grim predicament in her series "The Weavers' Uprising". Yet there were winners too. The mercantile structures that existed 150 years ago – leveraging low labor costs to increase production and sales – transformed the whole of Germany into an industrial nation. The country thus attained a status from which it draws strength to this day
- The Soviet Union experienced what can be called a golden age. In 1957, for example, a Soviet rocket put the sputnik, the first artificial satellite, into orbit around the Earth. YURI GAGARIN (1934-1968) likewise became the first man in space. Yet for all these heady advances, consumers suffered badly in Russia. The quality of products was poor. Shortages and lengthy waits were commonplace everywhere. Despite the threat of punishment, people tried to alleviate their plight by smuggling goods from abroad. At the expense of the common people, who had little or nothing to consume, the former tsarist agrarian culture nevertheless reinvented itself as an industrial and political superpower in just a few short years
- In the 1970s and 1980s, it was capital investors in the USA who drew the short straw. Returns were low, especially when expressed in terms of purchasing power. Other countries too experienced a similar trend. Between the start of 1968 and 1978, Switzerland's leading stock index grew at a nominal average rate of only 1.7% per annum – against a very long-term average nominal return on shares of 10%. Banker HERMANN ABS (1901-1994) noted: "Shareholders are stupid and impudent: stupid because they hand over their money; and impudent because they then demand a dividend." Back then, the *zeitgeist* seemed to put capital on the losing side wherever one looked. Even this cloud had a silver lining, though. During this period, the US economy penetrated the ends of the Earth – and has dominated the global economy ever since

4.1.2 Market Demands

When examining the allocation and distribution of overall economic output, it is perhaps tempting to concentrate on *three* key stakeholder groups: *employees*, *capital providers* and *customers*. This customary focus would be too narrow, however. It would be wrong to assume that a lack of balance must inevitably create at least one loser and one winner within this set of three. We must instead factor three further "groups" into the equation, all of which have a stake in what a company produces. We call these three groups tax, investments and inefficiency.

- Tax: First, we have the government and its political claims, to which its own commitment to distribute wealth increasingly belongs
- Investments: Second, there is companies' own ongoing growth and development. A sizeable chunk of a healthy company's output will also flow into its own future
- Inefficiency: Losses caused by inefficiencies within the company constitute a third "consumer" of what companies produce

We thus find a total of six recipients of a company's total output:

1. Employees (in the form of wages and salaries)
2. Capital providers (in the form of dividends and interest)
3. Customers (as the quality of products and services)
4. Society at large/the government
5. The ongoing development, preservation and creation of the future potential to provide goods and services
6. Inefficiencies

A word about the latter "consumer". No manager is ever going to report that some EUR 20 million out of total output of EUR 100 million has been squandered due to his or her lack of coordination and management shortcomings. Even so, it is still useful to visualize all six roads which total output – or total potential output – takes.

On three of the six roads – those that lead to employees, capital providers and customers – a company receives immediate feedback. These groups of stakeholders say what they expect. The markets for labor, capital and products have developed to a very advanced degree. Market norms thus define a clear standard for anticipated claims.

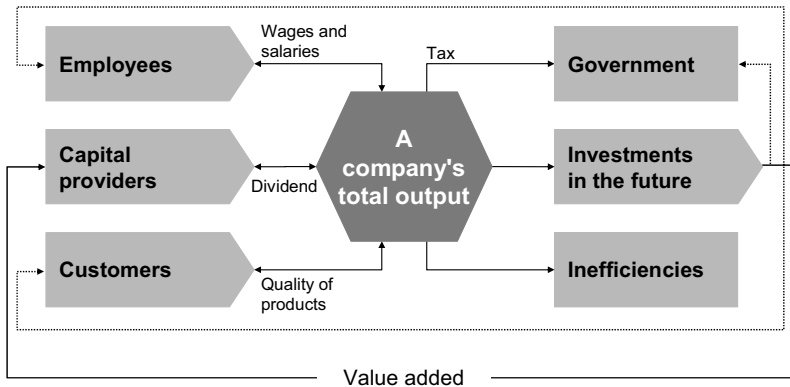


Figure 4-1: The first three groups (left) are compensated for their respective contributions: *employees* for their work, *investors* for their temporary provision of capital and their willingness to shoulder risks, and *customers* because they pay the price for the products and services. Having said that, dividends constitute only partial compensation for the provision of capital, as the market rate of return is higher than the dividend yield. Investors and other capital providers therefore lay claim to future performance in the form of added value

If a company wanted to offer lower wages to its workforce or inferior product quality and less service to its customers, this would trigger a veritable exodus. Entrepreneurs and managers therefore have no choice but to *closely track* market norms and *factor these into their calculations*. And calculate they must. If they did not, they would remain in the realms of generalization – and would soon find stakeholders voting with their feet. Careful calculations and financial thinking are therefore the order of the day. Let's be honest: The government itself would not think twice about complaining if too little tax was paid – or no tax at all!

Even so, if total output declines, one or other of the parties may fare better or worse than the others. It is possible to scale back investment, for example, without provoking resistance on the part of all stakeholders. Similarly, in the event of a crisis, the government may willingly waive tax receipts. Let us therefore explore those special circumstances under which a company's total output is not enough.

4.1.3 Crises

Let's examine some different aspects of a company's economic health. We will begin by addressing three types of crisis before moving on (in the next section) to the desirable status of sufficient total output. We distinguish between three categories of crisis: genuine emergencies, serious crises and mild crises. A brief description of each kind of crisis is provided below.

A *genuine emergency* exists when a company can no longer earn enough even to pay its people's wages and supply products of a reasonable quality. Enterprises that find themselves in such situations receive little assistance and are ostracized by society. All the parties that could help out are reluctant to do so. Once they are in such dire straits, what amounts to a gagging order is placed on management. Either the capital providers initiate an extensive program of restructuring, or creditor protection legislation takes effect (as under Chapter 11 in the USA), or the company files for insolvency. Governments often make a show of organizing a rescue company and at least salvaging some aspects of production. After a time, however, it becomes apparent that the administrator cannot get rid of the company's rights, patents and assets fast enough.

Serious crises that do not constitute emergencies in the sense defined above are more interesting. Let's describe a serious crisis in these terms: Employees and customers get just about the market norm – and not one iota more. Maybe dividends will still be paid. That, however, depletes the company's resources completely. Companies mired in serious crises can neither give the government its due nor invest in or otherwise make provision for the future. How does such a situation arise? The company may be operating in a gloomy context from which it would do better to withdraw. It may also have encountered resistance to its moves to adjust capacity and reduce the headcount. Or inefficiencies may have been eroding performance for too long.

Two stakeholder groups see themselves at a disadvantage when this happens: capital providers and the government. In the past, companies used to scrimp and save on production or the product itself in such situations. In today's open, global economy, that is no longer an option. Employees reject wage cuts in every country. Nor, in a world largely free of inflation, is it possible to reduce real wages by maintaining nominal wage levels.

Let us therefore take a closer look at providers of capital and the government. When serious crisis strikes, governments often waive their tax

receipts. Tax revenues would in any case be meager if profits are thin. Allegedly, hidden subsidies sometimes help to protect jobs. Though the government may not be happy with this situation, any misgivings are generally aired *sotto voce*. Which leaves us with the capital providers, who have spotted the dearth of investing activity. The dividend they (still) receive is only part of the compensation that the market owes them for the risks they have taken in investing money. This compensation must be complemented by adding value to bring returns into line with what could be realized elsewhere. Value cannot be added without investment, however.

For a time, some politicians thought that capital providers might be persuaded to do without returns in serious crisis situations – a gross misconception which immediately caused share prices to collapse. Yes, it *can* be done. Attempts are indeed made from time to time. There are some games you only win once in your life, however. At the latest when the rematch comes around, every financial investor in the world will remember. And who will then foot the bill for the country's continued economic growth? For these reasons, the government is often the one that makes concessions in serious crises. Tax claims are deferred, subsidies are provided or assistance is doled out under the auspices of a "proactive" industrial policy. Stricken companies thus get to stay alive at least for a while. Socialist governments do this to preserve jobs. Capitalist governments do it to avoid causing aggravation in influential constituencies. Proud governments of any political hue resort to industrial policy to ensure that the international community continues to hold their country's products in high esteem.

It must nevertheless be recognized that companies in such predicaments no longer have sufficient resources to provide for their own future. There comes a point when it is clear to everyone that propping up a moribund industry is not the solution. Though maintaining the status quo for a time, such action ultimately only postpones the company's demise – and guarantees that disaster will strike sooner or later. Certain major industrial corporations – in Italy, for example – have been subsisting in this state for years.

Is disaster really that bad? The point is this: If a company responds to the early-warning signals (when the return on equity is out of line with the market rate), it is possible to make a dignified, *orderly* retreat from an unhealthy line of business. At this stage, inefficiencies can still be overcome.

Restructuring is always a bitter pill to swallow. There will be losses, yes. Yet these losses can be contained. On the other hand, companies that merely paper over the emerging cracks and wait for the worst to happen will destroy the assets they could have saved if an orderly retreat had been engineered in good time.

STATUS	WHO GETS WHAT?	DOES THE COMPANY HAVE A FUTURE?
Emergency	Company not even earning enough to pay wages and make products of a decent quality	Restructuring or insolvency are the only options
Serious crisis	Employees and customers get the market norm. Financial investors receive only a minimum. The company pays no taxes and is dependent on state assistance	Subsidies intended to keep it alive maintain the status quo until disaster strikes
Mild crisis	Employees and customers get the market norm, and the government receives taxes. But capital providers <i>only</i> receive a dividend, because...	... the value of the company is increasing <i>more slowly</i> than it would need to to compensate capital providers at market rates. The company may even collapse
Healthy company	Employees and customers get the market norm, and the government receives taxes. Capital providers receive a dividend...	... and also see the value of the company grow. The sum of the dividend and this value growth thus lines up with the market rate of return. All groups are happy (though none of them are jumping for joy...)
Company that is fighting fit	Employees and customers get the market norm, and the government receives taxes. Capital providers receive a dividend...	... and the additional increase in value is <i>higher</i> than the market rate of return. The company thus remains <i>attractive</i> to <i>all</i> stakeholder groups

Summary 4-1: The future can provide a buffer for variations and fluctuations in performance

The third kind of crisis is a *mild crisis*. At this stage, companies' total output is still sufficient to satisfy employees and customers in line with market conditions. Shareholders get their dividends, the agreed interest is paid to banks and the government gets its tax revenues. When all these needs have been met, however, there is nothing left over. In other words, the company has no money left to finance investment and thereby maintain – let alone expand – its production of goods and services in future. The employees are happy, as are customers and politicians. After all, no-one knows what will happen 20 years down the road. So who is going to worry about the gentle erosion of performance? Aren't flowery

Vain Rescue Attempt

In 1970, the Austrian government wanted to prop up its domestic steel industry. Within a few years, however, it no longer had the resources to do so. When the industry did collapse, it happened very quickly and production units were worth nothing. Ultimately, more was lost than if early-warning signals had been heeded and an orderly retreat had been organized.

sermons enough to distract attention from them?

In the midst of such a mild crisis, capital providers are unhappy despite the normal dividends they receive. As we have said, customary dividends and payouts (about 3% of the capital invested) do not constitute adequate compensation for their investment and their willingness to bear risks. Depending on the level of risk, 10% or so would be a more reasonable return on equity. And though the difference between this market rate of return and the dividend is not actually paid out, growth and value added at least present shareholders and other contributors of capital with the prospect of such a return. Let us, however, explain where we get this expectation of a 10% return from. On average over many decades, companies have offered their shareholders a *sum* of dividend yields and capital growth that adds up to roughly 10%. The difference between the return on equity and the typical 7% dividend yield thus reflects companies' average (nominal) capital growth over this period.

Social and economic risks always give rise to certain fluctuations, especially in relation to capital growth. Capital providers are, obviously, willing to accept these ups and downs. However, once financial investors

realize that a company lacks the resources to fuel lasting growth and development, they will either seek to influence management activity and change the situation or they will run for the exit. If they do not act in this way, their demand for adequate market returns will remain unfulfilled.

A Close Eye on the Store Rooms

In the media, financial investors are not always cast in a friendly light. Many social groups would prefer not to invite them to the party at all. Yet everyone tacitly admits that this is a short-sighted perspective. Financial investors are, if you like, the cellarers who keep a watchful eye on corporate store rooms. Innkeepers who provide their guests with the usual service but are thrifty and mistrustful when it comes to their stores are naturally less popular than those who always serve the very best they have and seldom spare a thought for the future.

Management will naturally want to prevent financial investors either from becoming heavily involved in the running of the business (and possibly overturning the existing management team) or selling more and more shares and thus gradually withdrawing. So what can it do? It can, against its better judgment, attempt to paint a picture of a rosy future. We all know the

story. We all know the presentations of management projects that, "going forward", will "empower" the company to penetrate "forward-looking markets". A more realistic assessment quickly exposes the hyperbole, however. Sure, everything is still running like clockwork right now. Wages are being paid, customers are happy with the quality of the products, taxes

are being paid, as are dividends. Yet the investors know that their expectations with regard to future performance are unlikely to be met.

In such a mild crisis, investors will, at some point, start getting out while the going is good. The value of the company thus begins to crumble and banks call in their loans. Even if salaries are still being paid on time, employees will be the next to go. Finally, customers too will turn away. No group of stakeholders wants to stay with a company that is going nowhere.

4.1.4 A Healthy Company

Having examined these three types of crises, let us now turn our attention to the economic health of a company. We distinguish between two levels of health: healthy companies and companies that are fighting fit.

The performance of an economically *healthy* company is enough to satisfy two key demands:

1. Wages, dividends and taxes can be paid and product quality is perfectly acceptable in the respective markets
2. The company's performance will in future expand in a way that leads investors to believe that their expectation of market rates of return will be fulfilled

Financial investors are happy to leave their money with a healthy company and give management free rein. The value of the company is growing fast enough to make up for the difference between market rates of return on equity and dividends, and that in the long run. Financial investors, like all the other stakeholder groups, gladly stay with a company that is prospering in this way.

Maybe management is able to achieve *even greater* output than is just enough to service the customary market demands of all stakeholder groups. In such cases, we speak of companies that are *fighting fit*. Economists might ask whether it is even possible to outperform the market norms. In a world in which all factors and all outcomes are rewarded in line with the market, how should it be possible to conjure up additional earnings?

National economist WILHELM KRELLE (1916-2004) remarked that this can only happen if individual factors of production are overlooked – by chance

or by design – or if they are not properly priced as market input. To answer our question, therefore, we must exclude this kind of trickery:

- The company in our example should not be allowed to enter into implicit contracts that it does not honor
- It must not supply substandard product quality and conceal this fact
- It must not claim that its investments are more profitable than they are
- It must not enter into additional risks and then conceal this fact

In other words, we are assuming a world in which a perfect market is perfectly transparent and is always in perfect equilibrium. To get back to our question, however: Why should there still be ways to generate extra returns? Well, there are ways – three ways, in fact, for a company to become fighting fit:

- Possibility 1: The company manages to eliminate *inefficiencies* to an extent that goes beyond the market norm. There will always be certain inefficiencies. Companies must therefore seek to *beat the market average* in their use, optimization and coordination of resources. They can do this by quickly adopting best practices, introducing lean organizational processes and structures and improving coordination (by fostering trust, for example).

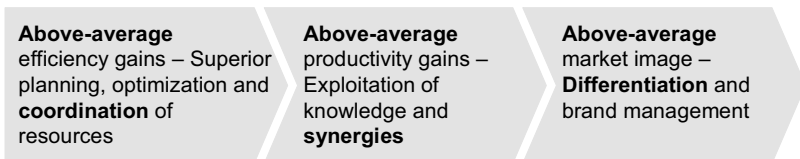


Figure 4-2: Financial investors derive their expectations from the performance of all companies. Since these expectations are necessarily based on averages, a company must do something that exceeds the average

- Possibility 2: The company improves the productivity of resources beyond the market norm. The opportunity to do so is provided by resources that are in effect private-public goods (see Part 1, Section 3). For example, if a company can make better use of synergies than would be reflected in customary valuations of the relevant resources on the financial market, it achieves *above-average productivity gains*.
- Possibility 3: The company manages to soften the laws of the perfect market to its own advantage. Our assumption is that this is usually

easiest to do in sales markets. The company must therefore realize prices for its products that are higher than the market norm. It can do this if its products transform the market into monopolistic competition. New and varied products pave the way to such a development. In other markets, the company can mitigate what is normally the driving force behind stronger competition. In respect of suppliers, for example, exceptional reliability can nurture trust that pays dividends. Similarly, management can gain advantages by conducting superior investor relations in respect of financial investors.

So much for the good news. There are three possibilities, all of which can, without trickery, increase the value of the company faster than financial investors would normally expect based on their observations of the corporate universe. These three possibilities can be summarized as follows:

1. The company must reduce inefficiencies to an *above-average* extent
2. It must exploit synergies to an *above-average* extent
3. It must develop innovative products to an *above-average* extent

The bad news is that the market catches up with every company sooner or later. Other companies – now by definition below average – *must* and *will* catch up. That is why these three possibilities are means but not ends. You never arrive. Companies must tread these paths incessantly.

So who benefits from a company that is fighting fit? All stakeholder groups. Take the example of BMW: Employees at the southern German auto company have reaped significant benefits from the unprecedented upswing their company has experienced in recent decades. The benefits go beyond customary compensation issues. Their jobs have become more secure, they have more opportunities to learn and enjoy better career development prospects. The same goes for shareholders, who have received higher returns than the market as a whole. Banks too are pleased not just that BMW services its credit facilities meticulously, but also that their business with the company has constantly increased. Finally, customers have also benefited from the company's stellar rise. Anyone who bought a BMW 2002 twenty years ago (at the then going rate) can sell it today to collectors at a handsome profit. The city of Munich, the state of Bavaria, suppliers and other stakeholder groups besides have likewise profited from the company's positive development. All the talk about who gets the value added becomes superfluous. In reality, everyone gets their share.

4.1.5 Indicators

Diagnosing the health of a company is extremely important. It is therefore imperative to specify individual conditions very precisely. Distinguishing criteria must be defined and a sophisticated set of diagnostic tools must be developed for each condition. The ability of ratios to distinguish between conditions has also been explored. Let us briefly outline the main thrusts that research has pursued. WILLIAM H. BEAVER (1966, at the time in his capacity as a professor at Stanford University) was one of the first to develop and empirically calibrate a categorization model.¹ BEAVER investigated the figures that financial ratios must reach to enable a company to be assigned to one or other of his categories. In particular, he tried to spot the occurrence of economic emergencies at an early stage. BEAVER studied thirty ratios, testing each one individually (using single ratio models) to find out whether they could be used to separate "good" companies from "bad" ones. Of the thirty ratios he examined, three turned out to be useful. The first is the ratio:

$$\frac{\text{Cashflow}}{\text{Debt}} \quad (4-1)$$

At a healthy company, this ratio is comparatively high (i.e. cashflow is strong and borrowings are generally low). The empirical probability that an economic emergency will occur in the next five years is indeed lower, the higher this ratio is. The second-best ratio to identify corporate health is the return on assets (ROA), i.e. profit in relation to total assets (which is also total assets):

$$ROA = \frac{\text{Profit}}{\text{Total assets}} \quad (4-2)$$

¹ 1. WILLIAM H. BEAVER: *Financial Ratios as Predictors of Failures*. Journal of Accounting Research 5 (1966), pp. 71-111. 2. WILLIAM H. BEAVER: *Market Prices, Financial Ratios, and the Prediction of Failure*. Journal of Accounting Research 7 (1968), pp. 179-192. 3. PETER WEIBEL provided a treatment of this issue in German: *Die Aussagefähigkeit von Kriterien zur Bonitätsbeurteilung im Kreditgeschäft der Banken*. Dissertation, University of Zurich, 1973. 4. RICHARD B. WHITAKER: *The Early Stages of Financial Distress*. Journal of Economics and Finance 23 (1999) 2, pp. 123-133. 5. MATHIAS KAHL: *Economic Distress, Financial Distress, and Dynamic Liquidation*. Journal of Finance 57 (2002) 1, pp. 135-168.

The third-best ratio expresses a company's indebtedness:

$$\frac{\text{Debt}}{\text{Total assets}} \quad (4-3)$$

The lower this ratio is, the less likely a company is to get into serious economic trouble. Later on, models were proposed that featured linear combinations of multiple ratios. Examples include ALTMAN's Z-score model (1968) and the model put forward by BAETGE.² The empirical method used to identify the weightings of ratios that are useful in distinguishing between different health conditions is known as linear regression. On the other hand, OHLSON and SHUMWAY use logistical regression.³ Such approaches are today held in high esteem in the assessment of creditworthiness and the calculation of ratings. We have HAUSCHILDT to thank for a more in-depth classification of corporate crises. He, for example, distinguishes between "companies faced by a technological threat" and "companies experiencing uncontrolled growth".⁴

-
- ² 1. EDWART I. ALTMAN: *Financial Ratios, Discriminant Analysis and the Predictability of Corporate Bankruptcy*. Journal of Finance 23 (1968) 4, pp. 589-609. EDWART I. ALTMAN: *Why businesses fail*. Journal of Business Strategy 3 (1983) 4, pp. 15-21. EDWART I. ALTMAN: *Corporate Financial Distress and Bankruptcy: A Complete Guide to Predicting & Avoiding Distress and Profiting from Bankruptcy*. 2nd edition. Wiley, New York 1993.
2. JÖRG BAETGE: *Die Früherkennung von Unternehmenskrisen anhand von Abschlusskennzahlen*. Der Betrieb 44 (2002), pp. 2281-2287.
- ³ JAMES OHLSON: *Financial Ratios and the Probabilistic Prediction of Bankruptcy*. Journal of Accounting Research 18 (1980) 1, pp. 109-131. TYLER SHUMWAY: *Forecasting Bankruptcy More Accurately: A Simple Hazard Model*. Journal of Business 74 (2001) 1, pp. 101-124.
- ⁴ JÜRGEN HAUSCHILDT, CHRISTIAN GRAPE and MARC SCHINDLER: *Typologien von Unternehmenskrisen im Wandel*. Die Betriebswirtschaft 66 (2006) 1, pp. 7-25.

4.2 Value Orientation

4.2.1 Judging the Future

When diagnosing the conditions discussed above, the key issue is assessing the *future* of the company. To return to a metaphor we used earlier: Is the innkeeper's store room filling up or emptying? We have repeatedly stressed that the words of the innkeeper alone are too vague a basis for forecasts about the future of the company. What we need is a recognized *method of measuring* the inventories in the store room. But what might such a method look like?

Traditionally, one might at this point think of accounting methods and balance sheets. Profit is calculated in the annual financial statements. Profit is that portion of total output that is allocated to capital providers. Wages are deducted as expenses before profit is calculated, as are interest payments and taxes. In addition, the fact that customers receive products is reflected in the cost of materials, for example.

Profit is essentially used in two ways. One part is returned to investors in the form of a dividend. The remainder is retained and increases the amount of equity reported on the balance sheet. For our purposes, it is of no significance whether these retained earnings are further subdivided, whether they are regarded as profits carried forward or whether they are presented as additions to statutory or legal reserves.

Although external reporting is very useful in many ways, investors are not happy with the methods used to measure future performance. Even the most rudimentary accounting course would reveal the weaknesses:

- External reporting has a *historic* focus (based on acquisition cost)
- The valuation policies used and the principle of imparity create an inherent bias toward *creditors' need for information and protection*
- Published balance sheets are *static*. In other words, they paint a picture of a momentary status, rather than the change in this status over time
- Balance sheets focus on assets and liabilities, earnings and expenses. They do not, however, emphasize how these items *impact cashflow*

Researchers and professional associations are working on these issues. As far back as 1962, SCHMALENBACH's book "Dynamische Bilanz" ("Dynamic Balance Sheet") expressed concerns about static (momentary)

balance sheets. The transition to the principle of *true and fair views* in modern accounting standards (such as IAS, IFRS and US GAAP) has triggered a debate about the extent to which more up-to-date item valuations should be used that align with current market prices. Despite these accounting reforms, however, one important point for financial investors remains the lack of emphasis given to items' *impact on cashflow*. Uninitiated readers of balance sheets can easily overlook several vital points:

- Reported earnings do not always correspond to cash amounts that flowed into the company during the fiscal year. The company might merely have filled its warehouses or sold products with long payment targets
- Analysts interpret a (capitalized) increase in inventories – which appears desirable when expressed as earnings – as a sign of crisis, because it has never been easy to sell off inventories in today's fast-paced world
- On the other hand, depreciation and amortization – generally seen as an undesirable expense – constitute huge sums of money that actually flowed into the company (and were immediately spent again on some "replacement investments" or other that no-one can now identify)
- The fact that earnings are retained does not mean they will be used to finance investments that genuinely yield returns in line with what the market demands

To return once again to our metaphor:

The innkeeper can go down into the basement and verify what the hams, cheese and wines cost when he bought them. However, entrepreneurs in general, and financial investors in particular, want to know how much money he can earn by selling meals in future and when this money will flow in in cash and be available to grow the business.

4.2.2 Profit or Cashflows?

A new realization gradually dawned as of 1980. Paper profit says nothing about those aspects of a company's performance that really matter to financial investors. Cashflow is a much more useful indicator on this score.

Potential future profit says nothing about the value of a company that really matters to the financial markets. Here again, the free cashflows that can be generated in future are a much more useful indicator. It is the merit of ALFRED RAPPAPORT that the focus has shifted away from profit and toward cashflow, from the sum of the present values of future profit to discounted cashflows (DCFs). In various publications, Rappaport developed a method of putting a value on a company's future performance. What set his methodology apart was the way it combined three approaches, each of which had already been discussed in isolation by other researchers. Rappaport was merely the first to bring them together:⁵

1. Business plans and budgets can be extrapolated for the years ahead and used to calculate *free cashflows*, i.e. that surplus value on which value is posited
2. The Capital Asset Pricing Model (see Part 2, Section 5.7) is proposed to determine the discount rate. The CAPM quantifies the correlation between risk and the normal market rate for risk premiums
3. The value formula reveals those factors that influence value. The doctrine of value drivers clearly showed how and by what means the value of a project can be changed and the extent to which company value responds to each *value driver*.

⁵ Bibliography: 1. ALFRED RAPPAPORT: *Selecting Strategies that create shareholder value*. Harvard Business Review 59 (1981), pp. 139-149. 2. ALFRED RAPPAPORT: *Creating Shareholder Value: The New Standard for Business Performance*. Free Press, New York 1986. 3. ALFRED RAPPAPORT: *Creating Shareholder Value: A Guide for Managers and Investors*. Free Press, New York 1998. 4. EUGENE M. LERNER and ALFRED RAPPAPORT: *Limit DCF in capital budgeting*. Harvard Business Review 46 (1968) 5, pp. 133-139.

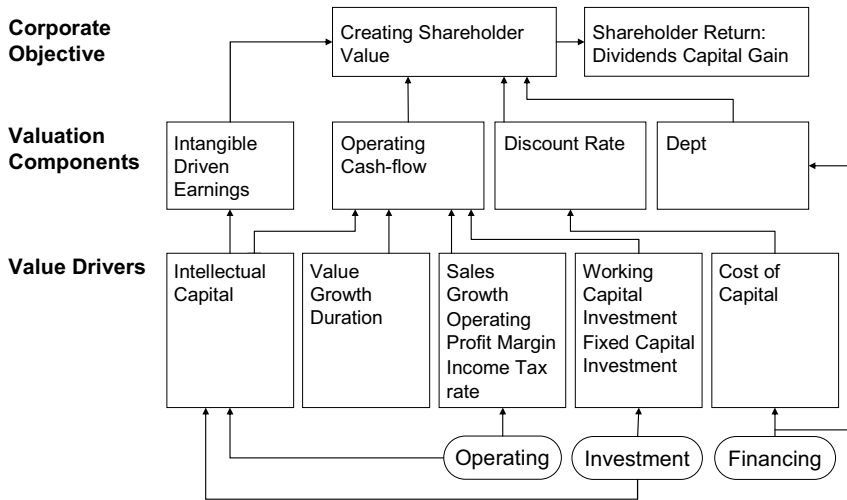


Figure 4-3: The value drivers in the DCF method, augmented by a representation of intellectual capital and those profits that are attributable to *intangible driven earnings*

Yet we have known for much longer what captures the attention of financial investors. The first person who strongly advocated that dividends be used in place of profits to value companies was ROBERT F. WIESE in 1930: "The proper price of any security, whether a stock or bond, is the sum of all future income payments discounted at the current rate of interest in order to arrive at the present value."⁶ It was thus WIESE who gained acceptance for the realization that a capital investment is only worth as much as the cash it generates in future. A few years later, in 1938, JOHN BURR WILLIAMS made the following observation in his doctoral thesis: "A stock is worth only what you can get out of it". He then quoted a poem in which a farmer explained to his son that an orchard is worth as much as the fruit it yields and a beehive as much as the honey it gives (pp. 57-58). According to WILLIAMS, the farmer does not make the mistake of telling his son that the orchard should be assessed on the basis of its blossoms, nor the beehive on the basis of all the buzzing. JOSEPH A. SCHUMPETER (1883-

⁶ ROBERT F. WIESE: *Investing for True Values*, Barron's, 8. September 1930, p. 5.

1950), the man who supervised WILLIAMS' thesis, had instructed his student to explain the "intrinsic" value of the company.⁷

4.2.3 Sales, Goods and Services, Finances

In its fourth phase, entrepreneurial activity focuses on adding value. Ongoing sales processes take on pivotal importance in this phase. Accordingly, the company's gaze concentrates on the product of quantities and margins. In the third (growth) phase, quantity alone commanded greater attention than quantity times margin. Now that the market has gathered momentum, however, this momentum must be translated into earnings. A closer look at free cashflow reveals it essentially to be the product of sales volumes and margins. The key drivers of free cashflow are therefore those that shape sales activities.

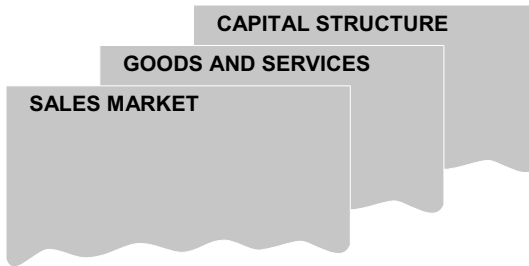


Figure 4-4: Value orientation focuses on three main areas: sales, goods and services, and finances

The most important focus is on the price-demand function, with all its variations with regard to quality, service and product range. Variations in customer segmentation and price differentiation are measured on the basis of *invoices*. Though the closest attention is paid to the earning process, many employees tend to try to hide behind internal processes. In doing so, however, they overlook one very basic truth: The company must sell its goods.

The cost of production, logistics, material management – indeed of the whole realm of the *provision of goods and services* – forms a second key

⁷ JOHN BURR WILLIAMS' thesis, *The Theory of Investment Value*, was republished in book form by Fraser in Burlington, Vermont, in 1997.

focus. Given the speed at which new products must be launched these days, a company in this phase must have gained control over and be able to dispose of many resources in order to respond swiftly and act decisively. Increasingly, it can then attain a position in which resources can be managed more in light of economic efficiency than with a view to availability and control. This is where economic thinking and calculations truly come into their own. The playing field is wide open. Costing exercises decide which *additional suppliers* can take on parts of the process of providing goods and services. In this fourth phase, make or buy is a question that must be addressed ever more frequently.

However, traditional cost- and output-based financial analysis does not adequately model the provision of goods and services. More and more risks and factors of uncertainty – such as those arising from fluctuations in the order intake – must also be taken into consideration. The activities needed to provide goods and services must therefore remain *flexible*, even if the lowest-cost configurations often tend to be the most rigid production structures. Real option strategies can be used to put a figure on flexibility. Practical problems mean that this approach can never deliver a precise calculation, however. Even so, the outcome is sufficient to reveal the fundamental need to modify traditional financial analysis calculations by adding a way of *valuing flexibility*.

Operational risks are a further important point in the provision of goods and services. Germany's Corporate Control and Transparency Act (KonTraG), for example, requires larger companies to create risk-monitoring systems.

A third area of focus is the financial side. A company's tax burden can be fine-tuned and optimized by carefully coordinating the relative proportions of debt and equity. Alternative calculations can prepare the ground for business policy decisions. At the same time, though borrowing money may be advisable for tax purposes, it also affects a company's *rating*. These days, banks cost loans and financial investors do their sums for company bonds in much the same way as actuaries. Default risks are factored into rate of return calculations using the risk-adjusted pricing (RAP) model. As a result, no company can afford to define its financial policy on the basis of returns alone. Finances must be structured subject to due account for both returns *and* risks. Financial investors thus see not returns but risk-adjusted returns as the key performance indicator. When companies are valued using the DCF formula, free cashflows at least (or, to be more precise, expected future cashflows) are discounted at a rate that reflects their inherent uncertainties.

Regrettably, certain imponderables are repeatedly overlooked when finances are being structured. Everyone naturally claims that their finances are "made to measure". Fine. Suits of armor too were made to measure in their day. That didn't stop them from being rigid, though, and their weight alone made the wearers singularly inflexible. Corporate finance must also be flexible enough to cushion the impact of imponderables. Many companies push indebtedness to the very limit and are then left with no room to maneuver. What is the use of having an optimized risk-return ratio if lucrative options – new projects, say – cannot be tackled because the capital structure is too rigid? One last important point: All financial contracts are linked to the design of corporate governance, so the aim cannot be to fight off every outside influence. The goal must instead be to develop appropriate communication.

4.2.4 Ratios and Programs

Incidentally, the three dimensions of value-based management – sales, the provision of goods and services, and finance – are exactly the same as the ones examined years ago in the return on equity ratio system. Fifty years ago, DuPont's system of ratios presented *ROE* as the product of three tributary ratios. One is the margin (profit per unit of sales). Another is the turnover rate (sales divided by assets), and the third is a financial ratio (total assets relative to equity). As far as it goes, this represents a very modern school of thought. The problem, however, is that all the figures used to calculate *ROE* are accounting numbers, not market values:

$$ROE = \frac{\text{Profit}}{\text{Equity}} = \frac{\text{Profit}}{\text{Sales}} \cdot \frac{\text{Sales}}{\text{Assets}} \cdot \frac{\text{Total assets}}{\text{Equity}} \quad (4-4)$$

The above breakdown shows that *ROE* spans the efforts of three departments:

1. The *sales department* must try to increase the profit margin, i.e. to earn as much as it can relative to sales revenue
2. The *production department* must try to reduce lead times in a way that maximizes sales revenue relative to assets and/or property, plant and equipment (machinery and production capacity)
3. The *financial department* must try to scrape together as much capital as possible relative to the company's own resources (which are regarded as limited). Here, the balance sheet equation $\text{assets} = \text{total capital}$ applies

In light of these questions and challenges, entrepreneurs and managers will, from the word go, advocate an attitude that recognizes and acts on possibilities to increase value. The point is therefore not to produce a list of decision issues and then dictate an investment appraisal. What matters more is not to squander the potential afforded by the company's future capabilities. This attitude is referred to as *value orientation*.

Financial investors and all other stakeholder groups, too, naturally expect companies to meet their obligations and pay market prices for the resources they use. At the same time, however, they also expect them to concentrate on the need to develop their future performance capabilities. Value orientation zooms in on efforts to reinforce prosperity. As such, it goes beyond DCF as a computational tool. Such a focus expresses itself in programs that spell out step by step what the company wishes to achieve. In this context, the following four points are cited again and again:

1. A clear goal: to grow the value of the company. Fulfillment of this goal is measured and communicated transparently
2. Openness to the outside world. What best practices can be adopted? To which quality standards, preferences and values does the market pay heed?
3. An end to inefficiencies. Companies must break out of fossilized structures and make their own organization more receptive to change. Flexibility is targeted
4. Mobilization of internal resources and capabilities. Companies must motivate their people and encourage internal communication. At the same time, they must compare individual performance more closely than ever

In the real world, these four points translate into value-added programs such as Deutsche Post's STAR program and Karstadt/Quelle's 10-point program. One of the first such initiatives, however, was the Six Sigma program launched by General Electric. This in turn borrowed from ideas used 30 years ago in the Japanese shipbuilding industry. It thus becomes clear that value orientation is not merely a way to assess the benefits or otherwise of activities where cashflows can be planned and risks can be measured based on the beta factor. No, value orientation is a fundamental attitude. It is a

Three Dimensions

Technological reality has changed since the glory days when ROE emerged as the cornerstone of an entire system of metrics. The main point is that ROE is a figure based on *book values*. Even so, it clearly reveals the three dimensions on which efforts to increase earnings and returns must concentrate in the fourth phase: sales, production and finance.

conscious commitment to deal responsibly with resources. It acknowledges that there are legitimate stakeholders, that the world is changing, that openness is the order of the day, and that internal resources must be mobilized.

4.2.5 Economic Value Added

Theoretically, the increase in value achieved in a year can be presented as the difference between company numbers at the start and end of the year (adjusted for dividend payouts, of course). As a rule, however, the economic results for the year are not presented as the difference between two DCF valuations. Instead, a variation on the present value theme is assumed and is referred to as *residual income*. Subject to certain adjustments, residual income reveals how much value has been added.

This approach has been around for more than a hundred years and has recently experienced something of a renaissance. Consultants Stern Stewart & Co. gave residual income the name *Economic Value Added* (EVA). In the academic community, this variant has been investigated primarily by KEN V. PEASNEILL and JAMES A. OHLSON.

To understand the underlying economic concept, the company or unit to be valued must be split (notionally and for accounting purposes) into two parts. First, however, the company's necessary business assets are set apart. No further attention is paid to these assets in the following discourse.

- The first part of the company receives the necessary business assets but does not engage in operational business. The value of this part – let us call it B – is equal to the entire company's equity as stated on the balance sheet
- The second part of the company rents these assets and engages in operational business. It can also use knowledge and the customer base (which is perhaps not stated on the balance sheet) to the same end

The value of the second part of the company is goodwill, because:

$$\text{Company} = \text{book value} + \text{goodwill} \quad (4-5)$$

The second part receives all company profits. For the fiscal year t , these are referred to as E_t . The second part of the company must pay rent for the business assets to the first part. The annual rental charge is calculated by applying customary market rate of return r to book value B . In other words,

the rent is $B \cdot r$. Profits that are left over after this rent has been paid are referred to as *residual income*:

$$RI_t = E_t - r \cdot B \quad (4-6)$$

Residual income is sometimes expressed using the return on equity formula $ROE = E / B$:

$$RI_t = (ROE_t - r) \cdot B \quad (4-7)$$

Residual income in relation to the book value is equal to the difference between ROE and customary market rate of return r , $RI / B = ROE - r$.

It follows that the value of goodwill – i.e. the value of the second part of the company – is determined by residual income. Goodwill is the sum of the present values of all future residual income. Hence, the value of the company as a whole is equal to the book value (of necessary business assets) plus the sum of the present values of all future residual income:

$$V = B + \sum_{t=1}^{\infty} \frac{RI_t}{(1+r)^t} \quad (4-8)$$

The formula used here (4-8) is known as the *residual income valuation* (RIV) formula. Residual income is at the very core of this model. It is calculated by subtracting the cost of capital (the rent paid for the business assets) from profits. This cost of capital constitutes a benchmark for profits. If residual income is positive in a given year, this means that profits have exceeded the cost of capital paid for the business assets. In other words, management has succeeded in making "more" out of its business assets than merely the customary market rate of return (interest) on the capital reported on its balance sheet. Seen from this angle, positive residual income can be interpreted as outperformance and negative residual income as underperformance.

RIV is popular in practice because it seems to build a bridge between the substance of the company and the value of capitalized earnings. Initially, the book value B (the substance of the company) prescribes the market value used in the RIV formula. Income rooted in the difference between actual profits and the rate of interest on the book value is then added. RIV thus reveals a correlation between accounting and book values on the one hand and market valuations on the other. Interestingly, the accounting policies applied make no difference.

Residual Income

The origins of the residual income model (RIM) can be traced back to ROBERT HAMILTON, who outlined the concept in his textbook "*An Introduction to Merchandize*". In 1898, British economist and co-founder of the neoclassical school ALFRED MARSHALL (1842-1924) described residual income as "*earnings of undertaking or management*". G. A. D. PREINREICH and KEN V. PEASNELL were the first to use residual income as the basis for corporate valuation. In 1936, PREINREICH had obviously realized (and used charts to explain) how residual income can be used to measure goodwill. In 1981, PEASNELL provided a mathematical description in the context of what is known as *clean surplus accounting*.

Since 1995, the RIM has been extended by the work of JAMES A. OHLSON, published both alone and in collaboration with G. A. FELTHAM and/or X. ZHANG. Of late, residual income has been rediscovered as a yardstick to measure outperformance.

- If very conservative accounting reports relatively low book values, residual income tends to be higher
- Conversely, if higher book values are reported, residual income will be lower. The equation balances itself out because the value of the company is presented as the sum of the book value plus the sum of discounted residual income.

Seen from a theoretical perspective, the RIV formula is valid for every valuation of corporate substance – even for utterly stupid valuations. It is true for the statement $B = 0$, for instance, and lines up with DCF. The RIV formula simply splits the profit time series E_1, E_2, \dots, E_n into two distinct time series. The first contains the rental payments, which amount to $r \cdot B$ year for year. The second is the time series for residual income, which amounts to $E_t - r \cdot B$ for the year t . The value of the first series – an infinite series of payments which almost amounts to $r \cdot B$ – is known to be:

$$\sum_{t=1}^{\infty} \frac{r \cdot B}{(1+r)^t} = \frac{r \cdot B}{r} = B \quad (4-9)$$

The value of the second time series is the sum of the discounted residual incomes for all future years. Accordingly, (4-8) always applies simply because the values are added together. The amount B has no bearing on the validity of the formula.

In recent years, consultants Stern Stewart & Co. have revived this theme, referring to residual income as *Economic Value Added*, or EVA. They replace book value B with "invested capital" (IC). IC is recognized not at fair (market) value but at its book value. It follows that the return on invested capital ($ROIC$) is used in place of ROE .

The distinction between book value B and invested capital IC merely eliminates the difference between equity and debt. It also takes non-operating assets out of the equation:

$$IC = B + \text{debt} - \text{nonoperating assets} \quad (4-10)$$

$ROIC$ is thus understood as $NOPAT$ divided by IC , i.e. $EBIT \cdot (1 - \text{tax rate})$. This can be expressed as follows:

$$ROIC = \frac{EBIT \cdot (1 - \text{tax rate})}{IC} \quad (4-11)$$

For this reason, r is not the company's return on equity but the total return on equity that can be expected by providers of equity and debt together. This number is calculated using the *weighted average cost of capital* ($WACC$). Having identified RI as EVA , ROE more or less as $ROIC$, r more or less as $WACC$ and B more or less as IC , formula (4-7) – the definition of residual income – takes on the following familiar form in practice:

$$EVA = (ROIC - WACC) \cdot IC \quad (4-12)$$

Our valuation is now based on the sum of the present values of all future EVA . The total entity value is made up of three elements: 1. non-operating assets, which were eliminated earlier; 2. invested capital; 3. and the present value of all future EVA . To arrive at the equity value, debt must be deducted from this figure. And to maximize the present value of all future EVA , the return on invested capital should be higher than the cost of capital, while growth should drive an increase in invested capital.

4.3 Continue or Liquidate?

Again and again, managers face the decision whether a corporate unit, a division or an entire company should be *continued* or *liquidated*. This is a very complex decision. And even when it has been made, it is difficult to implement. Let us explore the fundamental aspects of this issue.

It is reasonable to assume the following consensus of opinion in society as a whole: Wherever a choice exists between two alternatives, the *more valuable* option should be chosen. Value reflects the extent to which something is perceived as desirable. In market economies, the market value – the price – indicates how strongly people desire to have something and what other things they are prepared to do without in order to possess it.

The value of continuing a business is therefore expressed as company value V . Assuming that the business will be continued, V is calculated as the sum of the present values of future cashflows derived from a business plan. We draw a distinction between the market value of company V and the book value of equity B . $V - B$ (referred to as goodwill in the case of an acquisition) normally gives a positive figure. This betrays the existence of assets that are not carried on the balance sheet: knowledge, ideas, business plans and good organization, for example.

When deciding whether to continue or liquidate the business, V can always be taken as the value of the continuation option. But how much is the liquidation option worth? Roughly speaking, let us equate book value B with the value of liquidation.

There are three reasons why this equivalence is only a rough approximation:

1. The realizable proceeds of liquidation depend heavily on the form of liquidation and how long it takes to wind up the company
2. Especially when a company is to be liquidated, it often turns out that the book values are higher than the proceeds of liquidation. This can be due to an accounting policy that has embellished the overall picture to delay the onset of a crisis. Another reason may be that the company's crisis occurred while the industry as a whole was in a downturn. In such cases, industry-specific equipment may be unsaleable
3. Barring a relaunch, liquidation destroys the option of quickly resuming business activity if the macroeconomic climate improves. The value of this option is all the greater, the more volatile the climate is. Any decision to liquidate must therefore also take into account that it will necessarily eliminate the option of continuation. The value of the liquidation option is therefore lower than the proceeds of liquidation

Having made these comments, let us return to our explanation of the fundamental arguments and continue with the assumption that B is the value of a liquidation.

By consequence, the economy as a whole will want a company to be continued if $V > B$. Such an entity is seen to have an efficient organization. Conversely, a company for which $V < B$ should be liquidated. Such an entity is seen to have an inefficient organization.⁸

On a microeconomic level, this criterion is not always true in reality. Some companies should indeed be liquidated or should sell off part of their operations (where the proceeds of sale would exceed the value of continuation) because $V < B$. Nevertheless, management goes ahead with its business plan, and there may be little that investors can do to influence their decisions. Creditors may have nothing against continuation because the company is still meeting all its payment obligations even if it is no longer particularly valuable as a going concern.

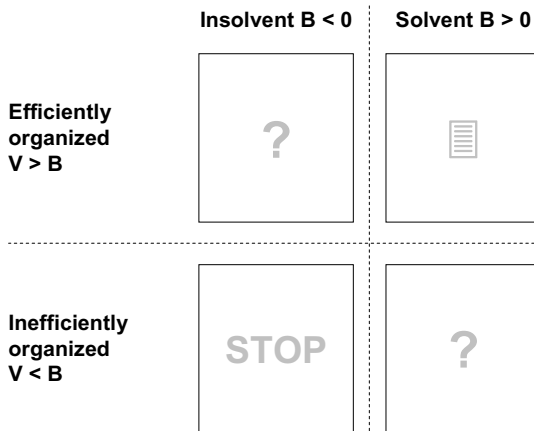


Figure 4-5: Two criteria – organizational efficiency and solvency – can lead to four distinct corporate conditions. Efficiently organized companies are at the top, inefficiently organized companies at the bottom. Solvent companies are at right, insolvent companies at left

⁸ HANS NEUKOMM: *Soll eine zahlungsunfähige Bank liquidiert werden?* Quarterly publication by the Swiss National Bank (1992) 2, pp. 180-194.

As we know, insolvency law does *not* normally draw a distinction for cases of organizational inefficiency. Insolvency law seeks to protect those parties with whom the entrepreneur has willingly entered into contractual relationships: employees, suppliers and banks. If a company is no longer able to honor its payment obligations, the entrepreneur's right to dispose of the company's resources is withdrawn and entrusted to an insolvency administrator. The latter attempts to satisfy outstanding claims.

The keys to insolvency law are found in the related concepts of *liquidity* and *solvency*. It is relatively easy for outside observers to detect when a company is unable to meet its payment obligations and is thus illiquid. Managers, however, can also tell whether the company is overindebted and hence insolvent. Appropriate triggers are defined accordingly. Moreover, as we have said, the two terms are related. A company that is insolvent will have a hard time finding new creditors. Conversely, it is reasonable to assume that a solvent company – a company that is not overindebted – will still be able to obtain credit facilities. As an aside to this assumption, it should be noted that, when granting loans, banks these days use free cashflow to calculate the limits of a company's indebtedness.

Entrepreneurs and managers will be able to continue running their company with no hassle from creditors as long as $B > 0$, i.e. as long as reported equity is still positive. If the company becomes overindebted ($B < 0$), an insolvency administrator will intervene and the company will be wound up.

Distinctions must thus be drawn between four conditions. A company can be efficiently or inefficiently organized. Irrespective of how it is organized, it can also be solvent or insolvent (see figure 4-6). Efficient organization combined with solvency adds up to a company that society will want to see continued in its entirety. Creditors too will have no objections as entrepreneurs and managers continue to exercise their rights. Equity investors will naturally be keen to pursue a value orientation; the other stakeholder groups too will welcome this stance. Such a company will certainly be continued. At the other end of the scale, equal clarity prevails about companies that combine an inefficient organization with insolvency. The economy sees no alternative to liquidation for this kind of company. Creditors too will assert their rights and insist that the company go into insolvency.

The two remaining conditions are perhaps more interesting. Let us first look at the condition of a company that is efficiently organized (and should

therefore be continued from an economic point of view) but insolvent (and is therefore a candidate for bankruptcy in the eyes of creditors; see the upper left quadrant in Figure 4-6). The knowledge, brand name and management of such a company may all be in order, but a question mark suddenly hangs over its liquidity.

How do companies get into such a predicament? Clearly, the value of some asset or other has suffered an extraordinary loss. Alternatively, perhaps an unforeseeable obligation has arisen, leading to over-indebtedness ($B < 0$). Examples of the first circumstance include losses in the price of a company's stock of marketable securities. Customers (for instance) may have defaulted on receivables. Machinery and molds may have been rendered obsolete by sudden shifts in demand. Examples of the second circumstance are equally well known. Damage caused by asbestos suddenly comes to light, or product liability provisions trigger expensive lawsuits.

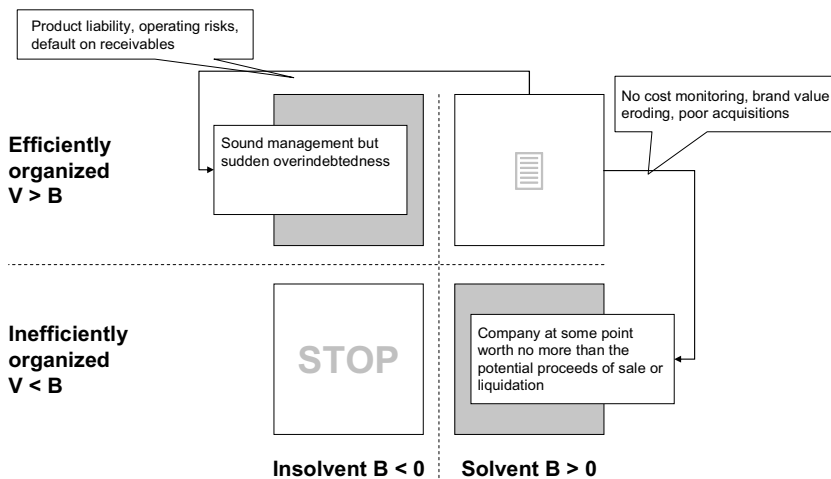


Figure 4-6: A company that is insolvent but efficiently organized (top left) needs a moratorium on debt. It must also reorganize its capital structure and improve its risk management. A company that is inefficiently organized but solvent needs better corporate governance, superior financial analysis, a strict focus on value and – possibly – a change of management

The immediate cause may be operational damage, misfortune or, quite simply, bad luck. Dig a little deeper, however, and inadequate or ill-designed risk management will probably be at fault. In such situations, the following steps can be attempted:

- It is worth trying to get creditors to waive insolvency proceedings by agreeing a moratorium. Equity investors might also be persuaded to inject fresh venture capital
- Management might be allowed to stay in office if it meets two requirements. First, it must improve its risk management. Second, the company must adopt an earnings and risk policy that aligns with the new capital structure and the terms of the moratorium

Companies that are inefficiently organized (and should, from an economic point of view, be liquidated) but solvent (such that creditors have no interest in insolvency proceedings) find themselves in a completely different position (see the bottom right quadrant in Figure 4-7). Such companies have experienced negative developments with regard to their knowledge, brand name and management. There is, however, no question about their ability to pay their bills. Many companies in this condition still enjoy good credit relationships with their banks. Maybe they have even built their business policy on this foundation and are planning "safe, reversible" investments of the kind that creditors like to see. They may be highly regarded by their employees, customers, the banks and other social groups. Their equity investors, however, are unhappy because they have seen the value of the company eroding over several years.

Here we see the difference $V - B$ eroding, even though book value B may indeed remain stable and positive. In other words, the value of intellectual capital is being lost. In most cases, this kind of erosion does not happen overnight. It is the consequence of a misdirected business policy over many years. External developments can naturally also precipitate such erosion in the difference $V - B$, ultimately leading to a situation where $V < B$. Product piracy is one example. Changes in the political environment are another. Mostly, however, this condition arises as a result of poor management. Too little attention has been paid to costs. Value orientation has been lacking. Any maybe ill-considered acquisitions and other forms of empire building have overstretched the company.

- How do companies get into this kind of situation? There are several possible explanations. A company might have lacked a superior business plan or simply had the wrong products. Management may not have communicated its strategy properly. Cost monitoring may have been insufficient, or funds may have been badly invested over a period of years
- How could this situation be allowed to happen? Modern CEOs are often celebrities. Corporate governance all too often centers around their

personality cults. A weak supervisory board can do little to restrain management and its mediagenic impact

- What can be done? One solution would be to change the company's strategy. However, this normally also requires a change of management. It may also be important (or necessary) to modify corporate governance practices. Alternatively, the company might be sold off. Under such circumstances, this often amounts to a hostile takeover

Lastly, take a look at companies that are both inefficiently organized and insolvent.

In this condition, there are sound economic reasons not to continue the company. The company is also illiquid or, to put the case more generally, in financial distress. Either of these isolated crisis conditions can plunge a company into such a lamentable dual crisis.

- *Realignment* does not work: In some cases, only a poor solution is found when trying to reorganize the capital of a company that is efficiently organized but insolvent. When this happens, the company may be "paralyzed" for the immediate future – and can thus slip into organizational inefficiency too. Hence, a dual crisis now looms. In such situations, realignment has failed. Maybe the company also fails to improve its risk management. A second mistake would then be more than the company could cope with.

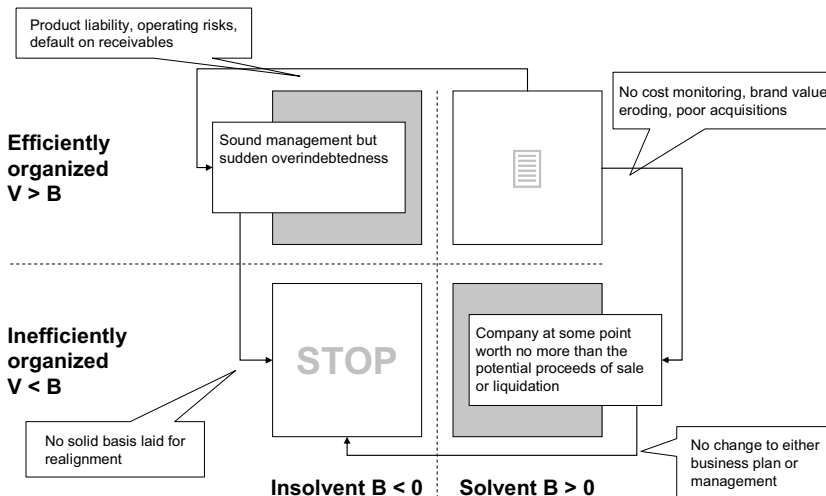


Figure 4-7: When the reorganization (of capital) does not lay a firm foundation

for realignment, development tends from top to bottom. When asset restructuring fails, development tends from right to left

- *Restructuring* does not work: In the same way, a company that is solvent but inefficiently organized (in the bottom right quadrant) can slip into insolvency. Let us assume that no solution is found to the problems that led to inefficient organization: a misdirected strategy, poor management, too-high costs, bad acquisitions and/or a lack of value orientation. Restructuring thus fails. Equity investors will then sell off more and more of their shares. All of a sudden, the banks and other creditors will begin to grow wary. Thus the company can slip into the clutches of insolvency.

4.4 The Fourth Season – Conclusions

4.4.1 Identifying Phases

The fourth season, in which strong emphasis is placed on returns and earnings, begins as soon as growth levels off. A tendency for demand to decline, smaller production volumes as a result and hence free capacity are the first signs that the fourth phase is beginning. School classes visit such companies – and find empty space on the premises.

As sales revenues dwindle, companies quickly begin to save on ongoing innovation, research and development. They might still bring forth considerable achievements in these areas, however, as some of the work done in the two preceding phases bears late fruit. Research and development has not yet lost all its momentum. Top management still hands out certain product maintenance orders to the R&D department. These are more routine tasks than creative, new developments, however. The time quickly comes when products are no longer revamped. Cost considerations result in ever greater product standardization. Differentiation declines, while mass production gains the upper hand.

By this time, the first movers, who still focus on innovation and high quality even in the third phase of growth, have got what they wanted. They too begin investing in replacement. The company thus makes the transition to the fourth season, in which very low prices seek to attract new swathes of buyers with diminished purchasing power. The policy of granting discounts becomes the dominant marketing tool. Suddenly, the product is

available in huge, family-size packages – and in combination with toys, gadgets, you name it. Games and competitions accompany the sales process on every side.

Although standardization saves money on both advertising and production costs, profits stagnate during this phase. Why? Because prices and volumes are dropping. The EBIT margin – and with it the profitability of the company (or division) – declines. Precisely this requires careful thought on the part of management, which now sets value orientation as its goal. How much capital does it still need? What will be the returns? And what risks must be shouldered?

A further indicator that the fourth season has arrived is when production and organizational structures change. Certain upstream aspects of production can be farmed out to companies that operate in countries with lower labor costs. The organization can be made flatter because routine makes a lot of steps much simpler. At this point, innovative endeavors concentrate on creating new processes rather than new products. Above all, the number of employees recedes. During the fourth season, people who still performed high-level functions in the growth phase begin to leave.⁹

Studies of the fourth season have identified six typical indicators:

1. Generally declining demand, leading to overcapacity
2. More competition on price, less competition on quality
3. No further attempts by rivals to penetrate the market
4. Lower profit margins
5. A shift from product innovation to process innovation
6. Headcount reductions on all levels of the hierarchy

⁹ LUCIO CASSIA, MICHAEL FATTORE and STEFANO PALEARI: *Entrepreneurial Strategy. Emerging Businesses in Declining Industries*. Edward Elgar, Cheltenham 2006. DOMINIQUE DEMOUGIN and CHRISTIAN SCHADE: *An Economic Perspective on Entrepreneurial Decision Making*. Duncker & Humblot, Berlin 2006.

OVERCAPACITY BECOMES APPARENT	SALES FIGURES GO INTO DECLINE
Research and development are scaled back	Less innovative, more strongly focused on the routine maintenance of existing products
Product differentiation is not as pronounced	Standardization, mass production, price battles, no new competitors penetrating the market
Profits planned	Cost monitoring, outsourcing of some activities, dismissals, flattening of hierarchies

Summary 4-2: Indicators that a company is in the fourth season of business

4.4.2 Summary

At some point, the growth phase must lead to a harvest. Now is the time for entrepreneurs to realize that growth has been completed, and that the focus of momentum must be shifted to earnings. A new management style is needed to deal with resources too. The hectic days of rapid growth when resources had to be monitored closely and the right to take decisions was important now gives way to a fresh opening. Where might a less expensive solution be found? Suddenly, the decision to make or buy – like every other management decision too – is driven not by the imperative of success, but by the compulsion to achieve profitability.

The fourth phase is the phase of doing sums. Investment appraisals are used practically without limit. However, the need to create value cannot be satisfied with a pocket calculator alone. Rather, a fresh alignment toward value creation is required. Programs are therefore launched that contain four main points:

1. They consciously focus on increasing value as the goal
2. They open a company's gaze toward the outside world
3. They seek to make the internal organization more flexible
4. They encourage the company to do things with its own resources

Some companies use residual income rather than the change in DCFs to measure performance. They compare (adjusted) profits with the cost of capital that relates to the book value. We have discussed these methods of

computation and shown how they relate to the valuation of companies: Goodwill (the difference between the market value and the book value) is the sum of the present values of future residual income.

Finally, the question of whether to continue or liquidate the business must be addressed in this phase. Should the business plan be updated and pursued or should it be modified? Here, a distinction must be drawn between situations where realignment is appropriate and those where restructuring is the better option.

Our discussion of the challenges facing entrepreneurs clearly reveal the importance of financial thinking in the fourth season of business. During this phase, entrepreneurs must no longer play the role of strategist and coordinator. They must instead become cool and calculating. They must be able to take hard decisions. In the fourth season of business, strategy takes a back seat and gives right of way to investment appraisals.

4.5 Recommended Reading

1. A number of books have been written on the "Six Sigma" program to increase value. We would recommend: CRAIG GYGI: *Six Sigma for Dummies – Define, measure, analyze, improve, control – and get results*. Wiley Publishing, New York 2005.
2. Readers of German who would like to explore the notion of different health conditions in more detail might like to refer to the book published by JÜRGEN HAUSCHILDT and JENS LEKER: *Krisendiagnose durch Bilanzanalyse*. 2nd edition, Verlag Otto Schmidt, Cologne 2000.
3. Also for readers of German, the IDW standards quoted in the text and available on the Internet could also be of interest on the subject of company valuation. A whole series of textbooks naturally also deals with this topic, including JOCHEN DRUKARCZYK: *Unternehmensbewertung*. 5th edition, Vahlen, Munich 2006; and WOLFGANG BALLWIESER: *Unternehmensbewertung, Prozess, Methoden, Probleme*. Schäffer-Poeschel, Stuttgart 2005.

5 The Four Seasons of Business – An Afterword

5.1 The Question: Strategic or Financial Thinking?

The four seasons of business is a way of looking at the business cycle as a sequence of phases, each one following on from the other. In this book we have distinguished four phases in the lifecycle of a company. However, lifecycle models are nothing new. Many attempts have been made to describe the specific nature of business processes on the level of products, companies or entire industries as a sequence of individual phases that make up an overall cycle. We give an introductory sketch of such models further below.

In fact, the main message of this book is not that companies develop according to specific lifecycles, that there are four such phases or that we can call them the four seasons of business. It is about two competing perspectives – strategic thinking on the one hand, and financial thinking on the other.

These two perspectives dominate entrepreneurial thinking today. They shape the research that is published in journals and books, determine how university Business Administration departments are organized, and form the basis on which companies make key business decisions.

In this book we have seen how these two competing perspectives do not always lead to the same outcome. Not only do they differ in terms of their starting points, they also differ in terms of the arguments they use and the language they are couched in. Companies make different choices depending on whether they take a strategic or a financial perspective. In this book we have dissected this dichotomy and asked whether the strategic and financial approaches cannot sometimes complement each other. Our answer to the question "strategy or finance" is not an either/or but a both/and. Which approach receives the greater weighting depends on the specific circumstances.

Our response to the question posed at the outset of this book has thus led us to the attempt to determine which circumstances lend greater weight to strategic considerations and which to financial considerations. On closer

examination, taking into account both theoretical and practical points of view, it emerges that the weight given to strategy as opposed to finance (or vice versa) has little to do with the industry in which the company operates, the size of the organization or the economic situation in the country under consideration. It depends, rather, on the phase in which the company finds itself. In the early phases, strategic considerations are dominant; in the later phases financial considerations play a leading role. From here it was a small step to distinguish four different phases and designate them the "four seasons of business".

Now, toward the end of our book, the first phase reveals itself in a somewhat surprising light. Lifecycle models often claim that everything starts with innovation. This is followed by a phase of growth, ultimately leading to revenues and profits. Not so. In our approach, developing and building constitute the second phase. They are preceded by a phase in which the entrepreneur creates a basis for the company and determines its future position. This initial phase is often overlooked, as if fate or chance were responsible for deciding where exactly the company starts out. The truth is that we are mobile. We must first carefully consider how to position ourselves and what is the basis for our business. Our first task is to choose a position within the complex matrix of technology and perception. For this reason we propose four, and not three, lifecycle phases.

5.2 Lifecycle – The Key to the Question

The lifecycle model presented here is not an end in itself: it provides answers to our initial question. In the first phase, in which the entrepreneur builds a basis for the company and determines its future position, strategic thinking dominates. As we have seen, financial thinking is of limited use at this stage. Too many of the inputs created in the first season are public goods – or at least publicly available within the company. Moreover, a finance-based system of management cannot be broken down adequately to the level of the initial activities. At this early stage it is not possible to quantify exactly the results that the company ultimately hopes to achieve.

In our second phase, which we call "developing and building", the company still accords strategic considerations greater weight than financial considerations. But financial considerations are catching up. The company cannot develop every idea: Choices must be made. Although the company only has a vague idea of the results it ultimately hopes to achieve, it must

now estimate these results in terms of quantity. These details are of key importance in deciding which projects to pursue. The company must also do some fine-tuning, adjusting the prototype – the result of these processes – in line with its target segment. Profitability calculations can help in this process of calibration. Financial thinking becomes an increasingly powerful tool.

The third phase is the growth phase. The company focuses not just on achieving growth, but on managing the growth process. This presents an enormous challenge in terms of planning and coordination. Naturally enough, a business approach to planning – i.e. financial thinking – becomes more important than a strategic approach in this phase. The costs associated with resource use and the services provided on the basis of sales income are not the only considerations. The risks in this phase are particularly high. Financial thinking is needed to assess the relationship between the results the company hopes to achieve and the risks it must take in order to achieve them. The growth phase is about more than carrying out set calculations: Planning, calculating and coordinating requires strategic thinking as well as quantitative planning models. Nevertheless, strategic thinking is less important than financial thinking in this phase.

The fourth phase – the earning phase – presents new challenges. The market becomes increasingly saturated and sales figures go into decline. A policy of low prices, combined with lower production costs thanks to outsourcing and the transition to mass production, allow the company to target a broader audience. The management must make many decisions in this phase. Is it worth continuing our research and development activities? What cost savings can we achieve by reducing the number of product variants? What can we gain from further standardization? These decisions are based on math: The management has to do its sums. Financial thinking and a clear focus on value growth come to the fore and strategic thinking fades into the background – along with the broader perspective, as critics often point out. In the fourth phase the company must reap the harvest. If it fails to do so, it will have nothing to sow the following spring.

5.3 Other Lifecycle Models

As mentioned, it was not the intention of this book to develop a new lifecycle model. Yet the lifecycle model is the key to answering the

question of "strategy or finance" – a question which stands at the very heart of this book. In our case, the lifecycle model was a sort of by-product of examining the two differing perspectives involved in business thinking. But for many writers, the lifecycle model is the center of attention. This is because it provides a basis for the logical and chronological sequence of events that constitute the business process. Plus it's very useful for companies. After all, if you know you're currently in a certain phase, you also know what lies just around the corner.

Lifecycle models allow companies to make forecasts. It's not always possible to state exactly how many years each phase in a lifecycle lasts. But if the lifecycle consists of a number of different stages and you're currently in the third stage, you can be as sure that the next stage you'll enter is the fourth stage. This allows companies to adjust themselves and start making preparations. Indeed, it is this facet of lifecycle models that make them so appealing – they provide a basis on which to make forecasts. Of course, the passing of time is not always the sole factor bringing about changes. But the complex process of evolution can usually be reduced to a few different factors or drivers in addition to time.¹ A key question that lifecycle models address is therefore what factors make the hands of the clock go round.

Early lifecycle concepts described how product sales developed over time. Various marketing policies and tools come into play as the product passes through the different stages. In parallel, different types of production and forms of financing emerge. Sales, and changes in the sales volume over time, not only indicate what marketing mix is best at a specific point in time but also drive changes in production and financing. The way the company is organized changes too. Modern organization theory holds that the patterns of operational and organizational structure in a company and its style of management change as the company passes through different phases in line with the requirements of new contexts.

Lifecycle models, originally developed to predict how sales would develop over time, have thus been added to and adjusted over time. Today they attempt to describe the lifecycle of the entire company. Time and developments in sales also drive how the company evolves. The five-phase

¹ LUCIO CASSIA, MICHAEL FATTORE and STEFANO PALEARI: *Entrepreneurial Strategy. Emerging Businesses in Declining Industries*. Edward Elgar, Cheltenham 2006.

model of MILLER and FRIESEN, for example, has received wide attention.² The model distinguishes five stages: birth, growth, maturity, revival and decline. Various analysts have tested this model and found empirical evidence for the differences between the phases. Different patterns do exist, and companies now and then change the pattern they follow as time goes by and sales increase.³ Later lifecycle models focus directly on the company as a whole (technology, production, sales, finance) and how it develops over time.⁴

There are some interesting differences between the writers who propose the different lifecycle models and the researchers who check them against reality. The writers suggest typologies and present arguments as to the sequence of phases, drawing on widely acknowledged facts of business. Their three basic questions are as follows: What are the different phases? What takes place in each phase? And what makes the company move from one phase to the next?

Contrast this with the researchers. They look at whether the reality matches the patterns postulated by the writers. The question they ask is: Are the two consistent? They take an empirical approach that ignores the sequence of phases and the speed with which they follow on from each another. Their findings go something like this: Companies in this or that situation do indeed follow said pattern in production, sales, organization or finance.

² DANNY MILLER and PETER H. FRIESEN: *Successful and unsuccessful phases of the corporate life cycle*. *Organization Studies*, 4 (3) 1983, pp. 339-356. DANNY MILLER and PETER H. FRIESEN: *A longitudinal study of the corporate life cycle*. *Management Science* 30 (10) 1984, pp. 1,161-1,183.

³ KEN MOORES and SUSANA YUEN: *Management accounting systems and organizational configuration: a life-cycle perspective*. *Accounting, Organizations and Society*, 26 (2001), pp. 351-389.

⁴ DANNY MILLER: *Towards a new contingency approach: the search for organizational gestalts*. *Journal of Management Studies*, 18 (1) 1981, pp. 1-26. KEN MOORES and SUSANA YUEN: *Management accounting systems and organizational configuration: a life-cycle perspective*. *Accounting, Organizations and Society*, 26 (2001), pp. 351-389. LUCIO CASSIA, MICHAEL FATTORE and STEFANO PALEARI: *Entrepreneurial Strategy. Emerging Businesses in Declining Industries*. Edward Elgar, Cheltenham 2006.

What empirical studies do *not* do is examine whether the speed with which the models claim the phases follow on from each other is actually borne out by the facts. To do this would require longitudinal studies. However, most case-studies concentrate on just two phases, looking at a company as it transitions between them; they do not look at a company's development across all the phases. In this book we have relied on our business expertise and various case-studies to back up our lifecycle model. No empirical test of the entire sequence of phases has been carried out.

The idea of the lifecycle was not just developed for products and companies. Some lifecycle models deal with entire industries. They look at how the dominant design found in an industry relates to both the product lifecycle and the transition from innovation, architecture and quality to mass production and routine product improvements. When new products appear on the market, there is a lack of information about them. This creates uncertainty. Over time, people purchase various versions of the product, differing in terms of their design and quality. In so doing they gain experience. Soon just a few models emerge and everyone concentrates on choosing the right model for them.

The automobile industry is a good example of this. The industry as a whole develops dominant designs. These designs acquire the status of market standards. As soon as the dominant designs are established, companies can decide which of them they wish to offer. The companies themselves can now strive toward economies of scale and scope. Further product innovations are unnecessary as new variants find no quarter beside the dominant designs. The radical innovation of the initial period is replaced by incremental innovation. Companies begin to shift their attention from product innovation to process innovation.⁵

Most writers distinguish four phases in the lifecycle of industries: introduction, growth, maturity and decline. Let's take a closer look at each of these phases:

1. In the introduction phase, companies concentrate on product innovation. Average prices are high. As time passes prices begin to fall, dominant designs establish themselves and companies start shifting their attention to process innovation

⁵ WILLIAM J. ABERNATHY and JAMES M. UTTERBACK (1978): *Patterns of industrial innovation*. *Technology Review*, 80 (7) 1978, pp. 40-47.

2. In the second phase – the growth phase – companies fight for capacity and resources for distributing the products. The question here is: Who will come out top dog?
3. In the maturity phase, demand is stable. Only the dominant designs survive. Customers are better informed and able to make price comparisons. The concentration on just a few designs and the introduction of routine in research and development means that product quality may well improve. Production becomes more and more efficient, leading to greater profitability. The competitive advantages in the third phase are found in the economies of scale. These include learning curve effects, the availability of financial resources, and the option of lowering prices to block market entry by new competitors
4. In the final phase, product differentiation continues to decline and some of the previously dominant designs disappear from the market. Companies face overcapacity and attempt to activate new customer segments. In this phase, business models may appear in the area of sales⁶

As we have seen, lifecycle models are useful for looking at three different levels of business: product sales, companies and entire industries. The academic discipline of Business Administration aims to help managers toward responsible decisions. The business process can and must be shaped. But it is a complex process. Individual, isolated microeconomic perspectives only shed light on some aspects of the whole. Comprehensive, all-embracing perspectives, by contrast, are highly general.

What, then, should a course in Business Administration cover? In the old days, the answer was to teach production, sales, finance and organization as separate subjects. Unfortunately, such courses often fail to point out how each of these disciplines are interconnected with the neighboring area. It is our belief that looking at strategic versus financial thinking opens us a fruitful new perspective. As we have shown, the weight given to strategic or financial considerations depends on the phase in which the company finds itself. For this reason we have presented the typical patterns according to which technology, money and individuals are interwoven in these different business situations – the four seasons of business.

⁶ LUCIO CASSIA, MICHAEL FATTORE and STEFANO PALEARI: *Entrepreneurial Strategy. Emerging Businesses in Declining Industries*. Edward Elgar, Cheltenham 2006.

Part 4: The Art of Balance – A Closing Remark

1 The Tug of War

1.1 Between Two Extremes

Let's go back to the key theme of this book: Which should take greater priority, strategy-based or finance-based management? Clearly a particular decision about an action, project or an investment may be desirable from both a strategic and a financial point of view. But it would be wrong to assume that strategy always equals increasing value – a not infrequent mistake. Strategic and financial mindsets usually lead in different directions.

Why is this so? There are two main reasons:

- Managers with an entrepreneurial mindset tend to base their decisions on the company's mission or the vision of its founder. They believe that to have vision requires *lateral thinking* or *thinking out of the box*. These visionaries are not part of the mainstream, they belong to the avant-garde. Strategic thinking usually conflicts with the majority view
- Managers concerned with financial calculations base their investment decisions on the perspective of the majority of market participants. Behaving in line with the market means *adjusting yourself to the current view of the majority*. Thinking out of the box is not required

So when the strategic view and the capital market view agree it's the exception rather than the rule. In this book we have focused on the differences between *strategy-based* and *finance-based management*. This contrast occurs very often. Where it is acute, the result is frequently arguments and discussions about first principles. In this situation managers must take great pains to achieve a balance between the representatives of the two opposing schools of thought. The company's employees often interpret this balancing act as hesitation on the part of the leadership, and this can drag down and weaken the company.

The key questions for both theory and practice are as follows:

- Should companies choose actions and investments that are a good strategic fit on principle?

- Or should they subject potential actions and investments to financial analysis and only select those where the present value of the inflows or the discounted cash flow (DCF) is greater than the original outlay?

Advocates of strategy-based management would ideally make all the decisions within the company on the basis of a *master plan*. This master plan is drawn up beforehand in line with the precepts of strategic management or the company's mission as outlined by its founder. The master plan then takes precedence over investment calculations and financial data. Decisions within the company must be in line with the strategy, even if they appear unprofitable from a financial perspective or in the eyes of the capital market. As long as the decision fits the overall strategy, it gets the go-ahead.

Strategy-based and finance-based management thus present two different perspectives. Financial thinking means looking for ways to increase value and taking the necessary action. The only thing that counts is the financial value of the future net cash inflows. The details of the project – the center of attention in a strategic approach – take a back seat. Strategic thinking, by contrast, means improving and fine-tuning strategy; developing a finance-based system of management in this case is of no additional value for the company's decision-making. The external view, that of the capital market, now takes a back seat. From time to time, differences of opinion may arise between the management and financial analysts or investors. The management can try to justify its strategic perspective in its communication with external stakeholders. But, if necessary, it is prepared to accept a drop in the value of the company's shares. By contrast, proponents of the finance-based approach treat the wishes of participants in the capital markets as the ultimate objective of the company.

Whatever the company does with the money it makes, whoever the beneficiary, the following rule applies:

- The company has a business objective
- In a system based on specialization, the company must therefore achieve financial results – through value creation

For participants in the capital markets and shareholders, becoming involved in a company means making a financial investment. The value of this investment is represented by the present value of the future net cash inflows, or discounted cashflow (DCF). Another way of looking at the same thing is economic value added (EVA). Alternatively, we can

determine the level of value creation by looking at financial ratios such as EBIT, ROI or ROE.

Supporters of finance-based management consider net present value the be-all and end-all. It is their basic decision-making criterion at all levels of the company. Strategic considerations are only helpful as a sort of brainstorming exercise, a way of helping the company to come up with a variety of possible business plans. They then choose the plan that promises to create the greatest value in the eyes of the capital market.

To judge the success of a company, we need to look at how its value develops over a specific period. The total value contribution is the *sum* of the value contributions of the company's individual activities. The company maximizes this by choosing those activities that promise to make a positive value contribution, evaluating each of them in their own right. The various different investments and actions carried out by the company are thus evaluated *separately on the basis of their individual value contributions*. Supporters of finance-based management try to apply the capital market's value judgments deep within the company. They argue that financial evaluations should not just be used for the company as a whole and its various divisions, but also for its individual activities and decision-making further down the company. In short, all decisions within the company should have a financial basis.

To make this possible, the value goal must be broken down to the level of the different areas and lower levels of the company. This makes it necessary to distinguish the different areas from each other carefully. The company must get the transfer prices right. All positive side-effects must be quantified, as well as any options that present themselves. In addition, the company must define the time horizon correctly.

Finance-based management needs a finely-tuned set of financial tools:

1. The first task for management is to describe the individual decisions within the company in terms of the *cashflows* they generate
2. If there are interdependencies, the different activities must be carefully defined and distinguished from each other. Inputs must be accounted for by means of *transfer prices*
3. All other side-effects, both positive and negative, must then be quantified

The second task for management is to determine the *capital costs* of each action or investment. It does this using the *Capital Asset Pricing Model* (CAPM). The CAPM describes the relationship, as seen by the external financial market, between the expected rate of return and the risk, expressing this as a formula. Risk is measured by the *beta*. The general argument is that the company should open itself up to the capital market, whatever situation it finds itself in.

1.2 The Devil is in the Details

Representatives of both the strategic and the financial schools of thought agree on one key point: the ultimate aim of the company is to create value. However, they couch this view in slightly different terms:

- Advocates of strategy-based management talk about "long-term success" and describe value creation in the eyes of the capital market as a *long-term* objective. They often refer to intermediate and subsidiary targets, the implication being that these lead to an increase in value over the long term
- Advocates of finance-based management argue that the company's total value creation is the sum of the individual value contributions, so the value creation must be positive *in every individual case*. However, we need not examine this fine distinction further here

Both schools of thought acknowledge the existence of constraints on business activity in the modern world. Companies must adhere to ethical norms and behave in an exemplary way as far as certain important issues are concerned – peace, freedom, the environment, equal rights for women, and so on. Increasingly companies live up to these expectations; apart from anything else, they do themselves damage if they fail to. More and more companies, for instance, check that their suppliers adhere to certain standards such as not using child labor. They also go further than is actually required by law in areas such as environmental protection, where society holds strong views.

Proponents of both strategic and financial approaches agree that the value generated must benefit the shareholders and stakeholders. By fulfilling their explicit and implicit contracts, companies create further independence for themselves; if they fail to meet their implicit contracts, they sustain damage.

When it comes to the ultimate aim of the company, the strategic and financial approaches hardly differ at all. The same goes for their view of the constraints of modern society.

However, the two schools of thought differ in what they believe this ultimate aim means for *earlier* actions and decisions at lower levels of the company. As is often the case, the devil is in the details. Supporters of strategy-based management favor decisions that fit in with strategy; those who support finance-based management favor decisions that are profitable in terms of net present value.

1.3 Shades of Gray

The key question posed by this book can be expressed as follows: Is long-term success and value creation best achieved by basing decisions on strategic fit or on profitability?

In practice, companies fall into three groups on this question:

1. Some companies base their internal management closely on financial criteria and figures. They never choose actions that are unprofitable and they believe that growth is impossible in the absence of good relations with the capital market and banks
2. Other companies usually base their decisions on financial criteria, but now and then they are prepared to make exceptions. The management says that under some circumstances it will pursue its own objectives rather than those of the capital market
3. A third group of companies turn their back almost completely on the capital market and its obsession with quarterly results, as they see it. They reject any pressure to apply the capital market's "short-term" perspective to decision-making within the company. Instead they try to find one major shareholder and would consider the option of delisting

An Important Clarification

Note that when we talk about the tug of war between strategy-based and finance-based management, we are not rehashing the "shareholder versus stakeholder" debate of the 1990s. That issue has by and large been resolved today. In modern society, companies are beholden to the individuals and bodies that they have contractual relationships with. This includes staff, customers, suppliers, communities, and so on. They have to meet not just their explicit commitments, but also their implicit ones – rejecting the implicit contracts unilaterally is not an option. For this reason our book is not about how shareholders' interests differ from those of stakeholders.

1.4 Integrated Approaches, Hidden Antagonism

For the sake of completeness, below we discuss two approaches that do not ask the *strategy versus finance* question but rather try to integrate the two, putting them on a par with each other. One is the Balanced Scorecard, the other the Navigator in the Intellectual Capital Approach. We give a brief outline of these two approaches rather than discussing them in detail, as they tend to obscure the opposition between strategic and financial thinking.

The *Balanced Scorecard* (BSC) was first proposed by KAPLAN and NORTON in 1992. It attempts to give equal weight to financial and strategic thinking, integrating them into a single system.¹

The BSC comprises four perspectives, expressed as points on a scorecard. These are the "financial perspective," the "customer perspective," the "internal business processes perspective" and the "learning & growth perspective."

1. The financial perspective asks the question: How should we behave toward partners and shareholders in order to be successful in the financial world?
2. The customer perspective asks the question: How should we behave toward our customers in order to realize our vision?
3. The internal business processes perspective asks the question: In what business processes must we excel in order to satisfy our partners and customers?
4. The learning & growth perspective asks the question: How can we boost our change and growth potential in order to realize our vision?

¹ 1. ROBERT S. KAPLAN and DAVID P. NORTON: *Alignment – How to Apply the Balanced Scorecard to Corporate Strategy*. Harvard Business School Press, Boston 2006. 2. ROBERT S. KAPLAN and DAVID P. NORTON: *Translating Strategy into Action – The Balanced Scorecard*, Harvard Business School Press, Boston 1996.

The BSC aims to boost internal transparency and encourage actions that benefit the company, even if their ultimate impact on value is not directly measurable.

The *Intellectual Capital Approach* (ICA) similarly attempts to integrate the different target dimensions. It calls these dimensions "focus areas" rather than "perspectives" as in the BSC.

The ICA puts the spotlight on human capital. The company achieves its highest objective by steering its employees toward entrepreneurial thinking. The ICA gives them the *Navigator* as a compass to guide individual initiatives in a direction that is useful for the firm. In this respect, the ICA is not just a top-down process like the BSC, but also allows bottom-up processes. The approach embraces the workforce, customers, business relationships and alliances, organizational structures, business processes and the company's power to achieve renewal and development. The computer-generated graphic representation and interpretation of the specific situation for each worker has a more immediate impact on shaping the future than traditional budget-based planning processes. The ICA is based on a 1994 article by the journalist THOMAS STEWART and is further associated with names such as EDVINSSON and MALONE, and LEV.²

² Some biographical details: 1. THOMAS A. STEWART, Member of the Board of Editors at *Fortune* magazine, wrote the cover story *Your Company's Most Valuable Asset: Intellectual Capital* published in *Fortune* October 3, 1994 (pp. 28-33). STEWART is also author of *Intellectual Capital – The New Wealth of Organizations*. Doubleday, New York NY 1997. 2. LEIF EDVINSSON, Director at Skandia, together with MICHAEL MALONE author of LEIF EDVINSSON and MICHAEL S. MALONE: *Intellectual Capital*. Harper Business, 1997. 3. BARUCH LEV, Professor at New York University, one of the main figures associated with research into the ICA. BARUCH LEV: *Intangibles – Management, Measurement, and Reporting*. Washington 2001.

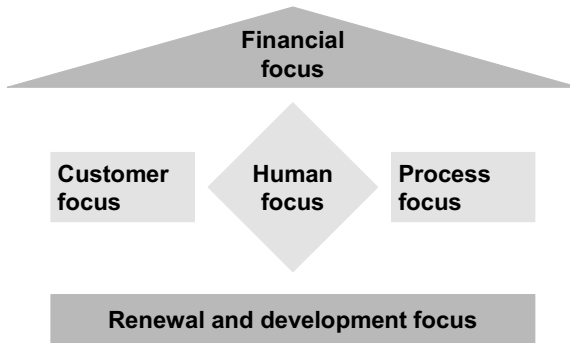


Figure 1-1: The Navigator displays the five focus areas and stresses the central importance of the human focus (Skandia annual report)

1.5 The Phase-Based Approach

We have seen how entrepreneurial thinking takes place in phases. Our metaphor for what happens in business is the four phases of the agricultural cycle – selecting a suitable field, sowing, tending growth and harvesting. The business cycle begins with positioning (the first season). This phase creates potential. The next phase is that of the entrepreneur. He develops a concept, product or prototype (the second season). Production and selling then begin. The third season is that of growth. The company changes more and more and enters the fourth phase. In the fourth season the focus is on earnings and returns.

Why did we choose a phase-based approach in the first place? How does it help us answer our question of *strategy versus finance*? The fact is that breaking down the financial basis for decision-making is impossible in the early stages of the business cycle. Here, financial thinking fails or leads to vague decisions at best. We have described the reasons in Section 3.2.5 of Part 2:

- Internal resources with externalities, synergies and intra-public goods play a significant role in the early phases but are less influential later on
- The full range of possible developments is not known at the beginning of the business process

- Errors in the projected cash flows may affect the backward recursion (necessary for setting transfer prices), particularly in the early phases

The gap left by the financial approach needs to be stopped, and the strategic approach does the job nicely. Strategic thinking is useful in the early phases because financial thinking only really comes into its own in the later phases.

PHASE IN THE BUSINESS PROCESS	DECISIONS BASED ON ...
Choose and establish a position	... strategic considerations
Develop and build	... strategic arguments with some financial input
Grow	... financial arguments with some strategic input
Earn	... financial thinking

Summary 1-1: Phases of the business process and bases for decision-making

In our journey through the four seasons of business, we have drawn attention to the fact that each phase places different requirements on the entrepreneur. The table below gives a summary of what these requirements are.

PHASE IN THE BUSINESS PROCESS	ROLE OF THE ENTREPRENEUR
Choose and establish a position	Charismatic leader
Develop and build	Coach and team leader
Grow	Resource manager and risk manager
Earn	Does the math – sees when the time is right to venture into new pastures and leads the way

Summary 1-2: Phases of the business process and the role of the entrepreneur

2 Management Between Strategy and Finance

Today's management requires the ability to coordinate and shape the different phases of the company and its parts. For top management this means dealing with a wide range of challenges, both shaping the organization and its processes and mediating between the various leadership personalities. This is quite a job in itself, but it doesn't stop there. Top management also faces rising expectations – some of them contradictory – from the outside world.

The environment for firms has changed radically in recent years. As discussed in Part 2, Section 4, four factors lie at the root of this change: technological advance, globalization, deregulation and liberalization, and the growing importance of international capital markets. The joint effect of these drivers has been to create a new level of competition that is growing faster than ever before. The remarkable pace of change and the complexity of the environment have meant that the speed of reaction demanded of companies has multiplied many times over. These factors make strategic orientation a difficult undertaking for today's top management. The pressure on companies' leaders has increased tangibly.

"Fear of the Boot Rampant in the Boardroom" shouts the headline of the September 2007 issue of *Manager Magazin*. In 1996, Board Members at DAX companies remained in office for ten years on average. A decade later, the average period had fallen to just six years. In some companies, board members come and go even more quickly. This new hire-and-fire culture is beyond doubt the result of changes to the business environment. Supervisory boards, financial markets and the media have become more critical and less patient. Institutional investors play a particular part in this. They are no longer satisfied with the role of passive suppliers of capital. They want to influence company policy, and that includes having a say in who sits on the board. A study reported in *Harvard Businessmanager* in August 2007 found that "criteria for choosing top managers are increasingly determined by investors and their organizations." Institutional investors, including private equity firms, have a clear idea of the qualities they expect from top managers: practical experience, a convincing track record, a personal network, strategic experience and a shareholder perspective. The air at the top of the company is becoming increasingly thin.

In this difficult environment, what makes successful management? Achieving a balance between strategic and financial thinking, as discussed in our phase-based approach, is crucial.

The increasing pace of change and complexity of the environment mean that another factor is highly important: Companies need to mold their structures and corporate culture in such a way that the organization can internalize the ability to change, and the readiness to do so. Only then can they react appropriately and quickly enough to the changes in their environment. This requires a mentality that can deal with uncertainty. A crucial factor in this is having shared values that apply to everyone in the organization. Such values can serve the company as a form of compass.

The basis for good management is a clear value orientation on the part of top management. We believe that top managers should develop certain cardinal virtues:

- *Trust* – This "soft" factor is often underrated. Yet it forms the basis for successful management, influencing those both within the company and outside it. Trusting in your employees' motivation and abilities pays dividends. It acts like a self-fulfilling prophecy: Trust your employees and they will generally live up to your expectations. Trust also triggers an ongoing process that gathers strength as it goes. In short, trust engenders trust – and that goes for relationships with stakeholders, too
- *Empathy* – The ability to step into other people's shoes is an extremely important quality and is vital for successful personnel management. Empathy allows you to observe and evaluate your own actions objectively, seeing them as an outsider would. This is also essential if you want to view your company from a market or customer perspective
- *Integrity* – This works on two levels. First of all, the laws of compliance must be upheld, especially given the corruption scandals that have come to light in recent years. Top management must do everything in its power to create an organizational environment in which everyone upholds the law and behaves in an ethically correct way. Secondly, managers need to display personal integrity, following the same rules that they impose on others
- *Entrepreneurship* – Optimism and a willingness to take risks are essential character traits of the entrepreneur. But optimism is not the same as wishful thinking. If you close your eyes to reality, you risk self-deception, which can lead you into a dangerous dead-end

- *Courage* – Top managers often have to make decisions that have far-reaching consequences. Defining strategy involves a process of intense discussion in which conflicting points of view are thrashed out. Achieving a consensus is not always possible. For top managers, "courage" means realizing that you can't always please everybody. Sometimes you have to live through the dissension and allow it to continue to exist – all the time maintaining a clear standpoint yourself

Our journey through the four seasons of business has revealed how rich, fascinating and exciting the business process is. It is also constantly developing, and the entrepreneur must continually develop new talents in order to master it.

Part 5: Test Your Understanding

Part 2: Basic Principles

1 The Market and the Firm

Questions

1. What two concepts play a central role in WILLIAMSON's theory of economic contract?
2. Name four different forms of organization.
3. What are the specific characteristics of the firm?
4. What is meant by the "inner" and "outer layers" of the firm?

Answers

1. The level of asset specificity and the effectiveness of safeguards. He also looks at the question of whether ownership is possible.
2. The market, the firm, the state with its rule-based activity and partnerships whose close cohesion is based on implicit contracts, such as within families
3. 1. It has its own legal character and a certain lifespan, so is able to undertake (and finance) longer-term projects. 2. It formulates its policies as a single body due to its hierarchical internal management structure. 3. It can undertake projects involving a high level of asset specificity and operate in situations where external safeguards are ineffective.
4. The inner layers are the early phases and the complex, firm-specific combinations. The outer layers are the later phases and transformations, which generally involve well-known processes.

2 Resources

Questions

1. (a) On what two features is our typology of resources based?
(b) What three categories of resources does the typology distinguish?
2. (a) Are financial calculations possible for non-marketable goods?
(b) What determines the connections between the different types of resources and mindsets?
3. In what phase of the company's processes of transformation do strong externalities typically occur? What mindset is most effective in each phase?
4. (a) What are intra-public goods?
(b) Give an example.
5. How – i.e. in terms of what – can we define *knowledge*?

Answers

1. (a) Is the resource marketable or not? Is the resource a private or a *public* good?
(b) Category (1) – private, marketable goods; category (2) – non-marketable, private goods that are both produced and used internally; and category (3) – public goods. See Summary 2-1 in Part 2.
2. (a) Non-marketable resources may involve all three mindsets: purely financial, strategic and financial, or purely strategic.
(b) The level of externalities that the resources exhibit.
3. Typically, strong externalities occur in the early phases and less strong externalities in the later phases. In the early phases, strategic thinking is most effective, in the middle phases, strategic and financial thinking combine, and in the later phases, financial calculations are the most effective tool. See Section 2.1.6.
4. Intra-public goods are goods that are freely available everywhere within the company, like public goods. However, they are protected from the outside world, like private goods. They include the majority of the knowledge within a company. Another example is the basis of trust underlying internal cooperation.

5. We define knowledge in terms of:
 - a. Its breadth (more or less information)
 - b. The context in which it is valid and where it can be of practical use
 - c. The medium in which it is conveyed

3 Transfer Pricing

Questions

1. True or false?
 - (a) SCHMALENBACH believes that transfer prices should be oriented to marginal costs, not full costs.
 - (b) Total costs equal fixed costs plus variable costs.
 - (c) The marginal costs are always lower than the full cost of a unit of output
 - (d) Opportunity costs represent the extra profit that downstream points in the organization can achieve if they receive a greater quantity of the resource in question.
2. (a) What are the four phases of the business process?
 (b) What decisions must the company make in each phase?
 (c) What resources does each phase produce, as input for the following phase?
3. What is meant by the following statement: "Companies often find that, in practice, there are no paths leading from the roots of the tree to a particular leaf"?
4. What three reasons make it impossible to use dynamic optimization to value resources internally?

Answers

1. (a) True (b) true (c) false (d) true.
2. See Figure 3-3.
3. See Section 3.2.2.
4. The reasons given in Section 3.2.5 are as follows:
 - a. The internal resources have externalities, synergies, or are intra-public goods

- b. The full range of possible developments is not known at the beginning of the business process
- c. Errors in the projected cash flows can undermine the backward recursion

4 Think Strategically

Questions

1. True or false?
 - (a) A company's strategy is often based on the vision of its founder.
 - (b) Strategy always begins with an analysis of the situation, the environment and possible impacts on the firm.
 - (c) The company derives a strategic course of action on the basis of microeconomic calculations, using a price-demand function.
 - (d) The capital market judges projects according to their strategic fit.
 - (e) Strategic management focuses on (sales) markets.
2. What is meant by the statement that "structure follows strategy"?
3. What are the key points of the three paradigms of strategic marketing?
4. Where, according to PENROSE, are the roots of the firm's competitive advantage?
5. According the resource-based view (RBV), in what way should companies be active?
6. How does the concept of a *unique selling proposition* (UPS) come into strategic management?
7. In what way does the *St. Gallen Management Model* take a more comprehensive view of strategy?

Answers

1. (a) True (b) true (c) false (d) false (e) false.
2. Many writers have examined the connection between strategy and organization (structure). CHANDLER stresses (1962) that the organization is subordinate to strategy, i.e. "structure follows strategy".

If the strategy changes, the setup of the company must also change. See Section 4.1.2.

3. First paradigm: The four Ps must be seen as a whole and optimized together. Second paradigm: Find as many customers as possible, as this leads to economies of scale and rapidly falling costs in production. Third paradigm: Build lasting relationships with key customers.
4. PENROSE turns the spotlight away from marketing and onto the transformation processes within the firm. It is the *heterogeneity* of resources that makes each firm unique. Firms must be aware of the specific nature of their resources, as only with this knowledge can they develop them and transform them into competitive advantage.
5. The RBV states that companies must be proactive, rather than simply adjusting themselves to the situation they find themselves in (as recommended by earlier strategic approaches). Firstly they should convert the potential formed by combining various resources into competitive advantage. They do this by means of their transformation processes. And secondly they should actively protect and cultivate their resources, as well as building up new ones. This requires dynamic capabilities.
6. The RBV focuses on resources that give the company a lasting, unique capability. Naturally this should be a competency that will be economically profitable for the firm, a valuable and distinctive characteristic – in other words, a *unique selling proposition* or USP.
7. The St. Gallen Management Model doesn't tell companies how to act in a concrete situation in order to achieve a specific improvement that can be described in terms of its content. "Strategy" is not a one-off treatment for a specific situation viewed in an isolated way, it is a comprehensive approach to all areas. The firm's strategy must provide the answers to the following questions:
 - What do we offer?
 - What is the focus of our value creation?
 - What are our core competencies?
 - What fields do we cooperate in?
 - What stakeholder groups must we consider (concerns, needs, forms of communication)?

5 Think Financially

Questions

- True or false?
 - FISHER looks at projects that are interdependent, i.e. resources without externalities.
 - In Fisher's approach, projects are described in terms of their cashflows, as the beneficiaries and the decision-makers are both financially motivated.
 - If the capital market functions properly, all securities have a net present value of zero.
- A company can generate a cashflow by spending EUR 1,500 today ($X_0 = -1,500$). In a year's time, this cashflow will produce a forecast return of $X_1 = \text{EUR } 400$, in two years' time $X_2 = \text{EUR } 500$, and in three years' time $X_3 = \text{EUR } 600$. The risk-adjusted discount rate is $r = 10\%$.
 - Calculate present value (PV) and net present value (NPV).
 - Should the company try to generate the cashflow?
- In a separate case, the interest rate is 3% and the risk premium of the market is 5%, as in equation (5-4). Using the CAPM, an analyst calculates that the rate of return for shares in Company X will be 9%. What is the beta of the shares?
 - Is the cost of capital the same for all of a company's projects?
- What is EBITDA?
- Which describes the free cashflows better, EBIT or EBITDA?

Answers

- (a) True (b) true (c) true.
- $PV = 364 + 413 + 451 = \text{EUR } 1,228$
 $NPV = -1,500 + 1,228 = \text{EUR } -272$
 - NPV < 0, so the company should not acquire the cashflow.
- $\text{Capital cost} = \text{interest rate} + \text{beta} \cdot 5\%$. Thus $9\% = 3\% + \text{beta} \cdot 5\%$. This means that $6\% = \text{beta} \cdot 5\%$ and $\text{beta} = 1.2$.
 - The beta of a company can differ from the beta of one of its divisions or projects. Every investment has its own cost of capital, depending on its level of risk.

4. EBITDA stands for *earnings before interest, taxes, depreciation and amortization*. It is often used to express the profitability of a company's operations.
5. For the sake of simplicity, we consider only cases where profit equals cashflow plus depreciation/amortization. As long as depreciation/amortization is equal to the budgeted investments, free cashflow (i.e. cashflow less budgeted investments) equals profit. In this case, EBIT less interest payments and taxes equals free cashflows. EBITDA thus reflects the cashflows (from operations) rather than the free cashflows.

Part 3: The Four Seasons of Business

1 Establish the Basics and Choose a Position

Questions

1. When does a sector's Thünen ring lie close to the center?
2. Does HOTELLING's approach to location strategy, based on game theory, lead to an optimum for the economy as a whole?
3. Modern location planning investigates positions along a number of different dimensions. Do these dimensions relate only to cost and revenue?
4. What Kondratiev wave occurred around 1990?
5. What is "organic" growth?
6. How can you tell if a company is trying to make a completely new start?

Answers

1. When the level of revenue per unit of land is higher (and also higher than the transport costs, i.e. the costs of being further out), the optimal position is as close to the center as possible.
2. No. The optimum for the economy as a whole would be if all parties were positioned such that the sum of the distances was minimal. In HOTELLING's approach, by contrast, stable positions are achieved when both parties try to position themselves in the center.
3. No, they also include emotional dimensions.
4. K5, featuring basic innovation in information technology and the communications sector.
5. Organic growth is growth that is possible even if the company distributes its profits in full each year. See equation (1-7).
6. It spends the cash generated by depreciation of fixed assets to buy different assets.

2 Develop and Build

Questions

1. True or false?
 - (a) For innovation, a *complex, dynamic* environment is more productive than a simple, static one.
 - (b) According to SCHUMPETER, innovations require an industry or a large research department for their realization; according to KIRZNER, a company and a team are all that is required.
 - (c) Internal capital markets help companies choose projects within the company, and increase the transparency of the selection process through unstructured and free organizational and communicational activities.
 - (d) Internal capital markets and target costing are essentially forms of inquiry: in the first case, the entrepreneur asks members of his own workforce, in the second case, he asks external customers.
 - (e) Target costing comprises five stages: 1. Value engineering. 2. *Kaizen* costing. 3. Activity-based costing. 4. Activity-based management. 5. Just-in-time process engineering.
2. How can you tell if a company (or division) is currently in the "develop and build" phase?
3. (a) Name four factors that favor the creation of new business ideas. (b) Can you think of a fifth factor?
4. What does *calibrating* a business idea mean?
5. What do SCHUMPETER's and KIRZNER's definitions of innovation have in common, and what are the implications for financing?
6. What are the seven steps that follow the creation of a business idea?
7. What are "out-of-competitor" and "out-of-company" approaches and how do they differ?

Answers

1. (a)-(d) true, (e) false.
2. Indicators:

- a. Ideas and the potential generated in the first phase are found, but as yet no products or prototypes. Products are under development, or may have already been announced, but they are not ready to be tested.
 - b. The division has few tangible assets but a great amount of knowledge, plus an information advantage.
 - c. A large part of the entrepreneur's work is carried out in teams: teams for surveying customers, teams for internal pre-selection, etc.
 - d. The sought-after complex and dynamic environment sometimes gives the impression of being rather chaotic.
 - e. The budget focuses on development; income is generated only on exit.
 - f. The entrepreneur no longer acts as charismatic leader, but rather as team coach.
3. (a) An environment in which many different things come together (complex), where changes take place (dynamic), where something is produced, and where there are people with creative, practical and analytical skills who have creative sparks.
(b) A technology park or university where people from different faculties come together to exchange ideas.
4. Calibrating a business idea means shaping it precisely to fit a market or market segment, so as to ensure that there is demand for it when it is ready. This requires a disciplined approach. Studies show that chaotic inventors do less well in the innovation process than their methodical counterparts.
5. SCHUMPETER and Kirzner both consider that the entrepreneur has a knowledge or information advantage. This makes it difficult for the entrepreneur to find people willing to finance his project, as these individuals only have an average level of information. Those supplying the capital therefore demand considerable rights of control, which they then make use of.
6. The seven steps are as follows:
- a. Build a team
 - b. Add substance to the idea – develop a prototype
 - c. Prepare the market
 - d. Check out any legal restrictions
 - e. Integrate key customers early on
 - f. Calibrate the idea
 - g. Contact potential manufacturers

7. They are both ways of gathering information for target costing. The "out-of-competitor" approach looks at the costs experienced by other competitors in the market segment. The "out-of-company" approach looks at the costs that the company does not face as yet, but which it could face if it fully exploited its technical and business potential.

3 Grow

Questions

1. True or false?
 - (a) The entrepreneur is the best leader for the growth phase because he has intimate knowledge of the product.
 - (b) For growth, resource management is vital, whereas risk management is less important.
 - (c) A wide variety of resources are used to support growth, so the entrepreneur must think in an integrated and therefore strategic fashion. Financial thinking is only of limited use in the growth stage.
 - (d) The tasks faced in the growth phase go from placing the product, to overcoming the problems associated with competition and market saturation.
 - (e) The external partners that the entrepreneur must build relationships with in the growth phase are as follows: providers of capital, suppliers, distribution partners and service partners.
2. How can you tell if a company (or division) is currently in the growth phase?
3. What four principles underlie process reengineering?
4. A question relating to the sales process – equations (3-3) and (3-4). Today, at $t = 1$, the total quantity sold is $x(1) = 10$ (million items). In the coming periods $q(1) = 2$ and $q(2) = 2.1$ will be sold.
 - (a) Calculate the proportionality factor a and the saturation level s .
 - (b) Predict $q(3)$.
5. What is meant by (a) *brand*, (b) *brand image*, and (c) *brand identity*?
6. Which are preferable in practice, incentive schemes or bonus systems?
7. (a) In what situations might one combine a system of transfer prices with the motivation scheme formerly practiced in the Soviet Union? (b) What would such a combination look like in practice?

Answers

1. (a) False (b) false (c) false (d) true (e) true.
2. There are many different types of resources, an enormous amount of resources are used, and at the same time resources are always in short supply (plus there are great risks that are often overlooked). Everything blossoms, different external groups are encouraged to become involved, and yet there the company risks overstretching itself.
3. The four principles underlying process reengineering are as follows:
 - The company concentrates on processes
 - It uses IT wherever possible
 - It goes back to the drawing board and designs new processes
 - It carries out the necessary changes top down
4. (a) $x(2) = 12$. The desired parameters must satisfy the two equations $2 = a \cdot 10 \cdot (s - 10)$ and $2.1 = a \cdot 12 \cdot (s - 12)$. Here, we can use Microsoft Excel's Solver tool (which allows only a single target variable) to minimize the equation:
 $(2 - a \cdot 10 \cdot (s - 10))^2 + ((2.1 - a \cdot 12 \cdot (s - 12))^2$.
 It follows that $a = 0.0125$ and $s = 26$.
 (b) Since $x(3) = 14.1$ and
 $q(3) = a \cdot x(3) \cdot (s - x(3)) = 0.0125 \cdot 14.1 \cdot (26 - 14.1) = 2.1$.
5. (a) The *brand* is the expression of the company's *value proposition* in its name, a logo, a signal or the actions of its employees.
 (b) The *brand image* is the way the brand is seen by outsiders, i.e. how external target groups perceive and evaluate the value proposition.
 (c) The *brand identity* is the way the company sees the brand and how it expresses this in its formulation of the value proposition.
6. The two systems are complementary. Companies should design them at the same time and harmonize them with each other.
7. (a) The two systems could be combined where there is a principal-agent relationship, typically characterized by uncertainty and asymmetrical information (the head office doesn't have all the information available to the division).
 (b) First a consensus would be reached over planned volumes. Then transfer prices would be set, say at the level of marginal costs. Later on the company would calculate the actual transfer price, adjusting it down slightly if the true quantity was smaller or greater.

4 Earn

Questions

1. True or false?
 - (a) The third phase effectively passes on a customer list – a ready-tapped market – as a resource for use in the fourth phase.
 - (b) In the fourth phase, various parameters must be "fine-tuned" to optimize the way in which value is added.
 - (c) In various publications, RAPPAPORT formulates a method of putting a value on a company's future performance.
 - (d) The economic concept that underpins residual income valuation notionally splits the value of a company into reported equity and goodwill.
 - (e) The difference between earnings and interest on the book value of a company is its residual income.
 - (f) The sum of the present values of all historic residual income is the value of goodwill.
2. How can you tell when a company (or one of its business units) is currently in the fourth season, in the phase of earnings and profitability?
3. What five conditions indicate the state of corporate health that can be described as a "mild crisis"?
4. Imagine a world in which the whole of the market is always in perfect equilibrium and in which complete transparency exists. Can a company "beat the market" and earn a higher return in this world?
5. For what insight did WIESE gain acceptance in 1930?
6. When valuing a company, is its substance or are its profits of no importance?
7.
 - (a) How can an efficiently organized company slip into insolvency?
 - (b) Is management to blame if this happens?
 - (c) What can be done to remedy the situation?

Answers

1. (a) through (e) are true. (f) is false. The following statement is correct: The sum of the present values of all *future* residual income is the value of goodwill.
2. Indicators that a company is currently in the fourth season:
 - a. Faster growth and a mindset focused on growth, sales and market penetration have given way to a focus on value orientation.
 - b. The company's configuration and structure are aligned with its financial orientation.
 - c. Sales may not grow faster, but earnings should.
3. Conditions that indicate a "mild crisis":
 - a. Total output is sufficient to satisfy employees and customers in line with market conditions.
 - b. Dividends are paid to shareholders and the banks receive agreed interest payments.
 - c. The government receives tax revenues.

When all these needs have been met, however, there is nothing left over. In other words, the company has no money left to maintain – let alone expand – its production of goods and services. Despite dividend payments, capital providers are not happy because the value of the company is not increasing.
4. The good news is that, yes, this can be done, in three ways:
 - a. The company must reduce inefficiencies to an *above-average* extent.
 - b. It must exploit synergies to an *above-average* extent.
 - c. It must develop innovative products to an *above-average* extent.

The bad news is that the market catches up with every company sooner or later. Other companies – now by definition below average – *must* and *will* catch up. That is why these three possibilities are means but not ends. You never arrive.
5. The realization that a capital investment is only worth as much as the *cash* it generates in future, and that the value of the company is therefore determined by its future cashflows.
6. The value of a company can be determined directly neither from the value of its substance nor from its profits. These figures can, however, contribute to a more accurate forecast of future cashflows, which do directly determine the value of the company.
7. (a) Problems with product liability, damages arising from operational risks and the loss of receivables due to default.

(b) Bad luck is more to blame than management. Having said that, more effective risk management might have helped the company to avoid insolvency.

(c) Since the company is efficiently organized, it should, from a macro-economic perspective, be kept alive. Creditors and shareholders must reach agreement on a reorganization of its finances. Risk management may need to be improved.

Appendix

1 Index of Persons

ARMEN A. ALCHIAN. Argues that hold-up can be mitigated by vertical integration and the acquisition of property (Part 2, Section 2.2.6).

ARISTOTLE (384-322 B.C.). Taught that economics is a type of prudence that helps an economic entity provide for itself. Furthermore, resources must be apportioned on the basis of sustainability (Part 2, Section 1.1).

KENNETH J. ARROW (awarded Nobel Prize in 1972). His book *The Limits of Organization* indicates the limitations of the market mechanism (Part 2, Section 1.3).

RICHARD BELLMAN (1920-1984), mathematician. Discussed with reference to backward recursion and the technique of dynamic optimization used to calculate the internal value of non-marketable resources.

ALFRED D. CHANDLER. Stresses (1962) that organization is subordinate to strategy: "structure follows strategy". If the strategy changes, organization must also change (Part 2, Section 4.1.2).

RONALD H. COASE (awarded Nobel Prize in 1991). Argues that resources lose their marketability due to *transaction costs*. Firms and other economic organizations and institutions therefore exist because agents find it a useful manner of minimizing transaction costs (Part 2, Section 2.2.2).

JOEL DEAN. His classic work on capital budgeting (1951) is mentioned in the discussion of finance-based thinking (Part 2, Section 5.4).

PETER DRUCKER (1909-2005), management guru. Describes knowledge as the key resource of the modern firm (Part 2, Section 4.1.4).

IRVING FISHER (1867-1947), economist. The *Fisher Separation Theorem* states that the maximization of the present value (of cashflows) is a valid criterion for decision-making (Part 2, Section 5.4).

ERICH GUTENBERG (1897-1984). Contributed to management theory through his extensive research, particularly in the area of the production function. His influential three-volume work on the principles of management is divided up according to *function*, with separate volumes on production, sales and finances (Part 2, Section 3.1.6).

MICHAEL HAMMER and JAMES CHAMPY. Their *Reengineering the Corporation – A Manifesto for Business Revolution* (1993) proposes a concept for radically rethinking firms and business processes (Part 3, Section 3.2.3).

HARALD HOTELLING (1895-1973), American statistician and economist. Developed an analysis of location strategy based on game theory (Part 3, Section 1.1.3).

ISRAEL M. KIRZNER. In his post-1973 work stresses economic development through *smaller* innovations. The Kirzner entrepreneur creates differentiated products and variants (Part 3, Section 2.2.3).

NIKOLAI D. KONDRATIEV (1892-1938), Russian economist. Discovered and investigated the long-term investment cycles and shifts in demand known today – following SCHUMPETER – as *Kondratiev waves* (Part 3, Section 1.2.1).

WILHELM KRELLE (1916-2004), German economist. Investigated the reasons for returns to scale (Part 3, Section 4.1.4).

FRANCO MODIGLIANI (1918-2003) and MERTON H. MILLER (1923-2000), developed *irrelevance theorems* some 50 years ago. The theorems demonstrate that actions taken by an entrepreneur or a manager bring no additional value if the same actions could also be taken by the market

participants themselves. Both received the Nobel Prize – MODIGLIANI in 1985 and MILLER in 1990 (Part 2, Section 1.3).

ROBERT A. MUNDELL (awarded Nobel Prize in 1999). Developed a theory of the optimal size of currency areas (Part 2, Section 1.1).

EDITH PENROSE. Explains (1959) the success of a firm by the quality of its internal *resources*, thus laying the foundation for the resource-based view (RBV) of strategic management (Part 2, Section 4.1.4).

GABRIEL A. D. PREINREICH. Postulates residual income as a basis for measuring a firm's value. In 1936 he clearly recognized how goodwill can be measured using residual income, demonstrating this finding with diagrams (Part 3, Section 4.2.5).

MICHAEL E. PORTER, globally recognized authority in strategic management. Derives practical recommendations for firms on the basis of micro-economic models of monopolistic competition. Author of the well-known recommendation that firms should either pursue a path of *differentiation* (more valuable product characteristics) or of cost leadership (lower costs). (Part 2, Section 4.1.3).

ALFRED RAPPAPORT. In various papers from around 1980, argues in favor of the discounted cash flow model, at the same time showing which value drivers can influence the value of the company (Part 3, Section 4.2.2).

DAVID RICARDO (1772-1823). Explains how countries specialize in certain resources when trading with other nations. Recognized that *relative* productivity is more important than absolute productivity (Part 2, Section 4.1.4).

EUGEN SCHMALENBACH (1873-1955), founding father of business administration as an academic discipline in Germany. Recognized in 1909 that transfer prices should be set equal to marginal costs, not full costs (Part 2, Section 3.1.5). Also mentioned with reference to his book *The Dynamic Balance Sheet*, (Part 3, Section 4.2.1).

JOSEPH A. SCHUMPETER (1883-1950). In his analysis of capitalism, examines innovate and radical reforms that have a powerful knock-on effect and *upset the economic equilibrium*. The Schumpeter entrepreneur is a combination of outstanding inventor and great industrialist (Part 3, Section 2.2.3).

WILLIAM F. SHARPE. In parallel with other investigators, developed the *Capital Asset Pricing Model* (CAPM). The model describes the relation between the expected rates of return and risk in a capital market. Awarded the Nobel Prize in 1990. the CAPM and the beta are discussed in Part 3, Section 4.

ADAM SMITH (1723-1790). Showed the advantage of exchanging goods, in that each side can realize advantages for itself through specialization (Part 2, Section 1).

JOHANN HEINRICH VON THÜNEN (1783-1850). In *The Isolated State*, developed the first economic location theory that says that companies from different sectors settle in "Thünen rings" around a center (Part 3, Section 1.1.2).

HANS ULRICH (1919-1997). Developed an integrated view of the firm, its environment and its dynamic aspects, based upon the idea of the firm as a system. Creator of the since extended St. Gallen Management Model (Part 2, Section 4.1.5).

ROBERT F. WIESE. In 1930 helped convince the business world that a capital investment is worth exactly the money it produces in the future (Part 3, Section 4.2.2).

OLIVER E. WILLIAMSON. In his economic contract theory, describes firms as hierarchical governance structures that are superior to other forms of organization in the event of asset specificity and ineffective external safeguards (Part 2, Sections 1.2, 1.3 and 2.2).

2 Glossary of Terms

Beta – The beta measures the risk that cannot be further diversified, i.e. that part of the fluctuations in share prices and returns that remains even in a well diversified portfolio. This is known as the systematic risk of the investment or firm. The beta is the relationship between the systematic risk of the firm in question and the risk of the market portfolio. A beta of greater than 1 indicates above-average risk in the firm in question. A beta of less than 1 indicates that the firm enjoys below-average risk.

Calibration – Calibrating a business idea means shaping it precisely to fit a market or market segment, so as to ensure demand.

CAPM (Capital Asset Pricing Model) – The CAPM describes the relation between the expected rate of return and risk of an investment. It focuses on the difference in return between the expected rate of return and the interest rate. This is the *risk premium*. The CAPM explains the differences between different firms' risk premiums. The CAPM also looks at diversification options and shows how the "risk" should be measured in situations where the expected rate of return is commensurate with the risk. According to the CAPM, the risk premium of each individual firm is proportionate to its beta.

Cashflow – The cashflow for a year consists of cash inflows (such as from sales revenues) minus cash outflows (salaries, advance payments) for the period. Non-cash income (such as capitalized expenses or credit sales to customers) do not increase cashflow. Non-cash expenses (such as depreciation and net transfers to provisions) do not reduce cashflow. Cashflow therefore differs from profits where the latter include non-cash components in the accounting period in question. As a rule of thumb, cashflows equal profit plus deprecation/amortization.

EBIT – Earnings before interest and taxes. The EBIT shows the firm's overall profit or loss.

EBITDA – Earnings before interest, taxes, depreciation and amortization. EBITDA is often used to express the earning power of a company's operations. In practice, for the purposes of EBITDA, profit is limited to that arising from the regular operations of a company. In other words, financial results and extraordinary items are ignored. In particular, non-operating financing costs and depreciation/amortization are excluded from EBITDA.

Economies of scale and scope (EoS) – The extra cost savings that a company can realize due to higher output or separate products sharing facilities, at various stages of the value-creation process. EoS are the efficiency gains that a company enjoys when it achieves critical mass in its business operations.

Entity value – The total value of a firm for its equity investors and debt financiers.

Equity value – The value of a firm for its equity investors.

Financial distress – A tense financial situation in which there is low liquidity, often combined with a high level of debt. If the situation worsens, financial distress can lead to insolvency and even bankruptcy.

Fisher Separation – Where a capital market exists, the overall problem of selecting investments and forms of financing breaks down into individual sub-problems or choices. For every project, irrespective of the results of the choices for other projects and actions, it is necessary to check whether the net present value of the cashflows is positive ($NPC > 0$). These individual checks, which are simple to perform, create a budget made up of those investment projects, plans and financing actions that, taken together, have the highest total value, i.e. lead to total cashflows of the highest value. FISHER demonstrates that this selection rule leads to maximum benefit for the beneficiaries. This insight and the capital budgeting approach that it leads to – in which companies take on the projects and actions for which individual checks show positive net present values – is known as a Fisher Separation.

Free cashflows – Free cashflows are cash inflows less cash outflows for budgeted investments, plus any income from divestments.

Goods, intra-public – We use this term to mean resources that are public within the firm, but are not for external use or consumption.

Goods, private – Goods are considered private if their consumption or use by one party prevents them being used by other people or in other locations.

Goods, public – Public goods differ from private goods in two respects. Firstly, third parties cannot be excluded from their use (or can only be excluded at great expense). Secondly, there is no rivalry over their use or consumption. Public goods can be used by various people and in various locations, without being eroded or entirely consumed.

Growth, external – This refers to a firm's strategies for achieving growth by means of externally produced resources. Two types of external growth exist: mergers and acquisitions, and cooperative ventures.

Growth, organic – In internal or organic growth, the firm expands using its own energy and resources. Strictly speaking, internal growth occurs without mergers or acquisitions. However, minor takeovers – such as the purchase of sales organizations or production facilities – are usually considered part of an organic growth strategy.

Hedge fund – Pooled financial investments that are invested by a manager with few legal restraints as to investor protection. The manager has a great deal of freedom and is subject to very little control. Hedge funds frequently involve short selling and a very active investment policy, often involving derivatives.

Innovation – New or significantly improved products and services that a firm brings to market. Innovation is the productive implementation and marketing of an invention as a commercial solution.

Insolvency – Excessive indebtedness, where assets are no longer of sufficient value to cover liabilities. Not to be confused with illiquidity, which is the inability of a firm to meet its financial obligations.

Invention – Generating new knowledge or combining existing knowledge to create new solutions.

Knowledge – Knowledge is used to mean a body of information that is interconnected (and hence meaningful), coherent, and valid within a specific context. As the definition implies, knowledge can be understood in a narrower sense (less information) or broader sense (more information). Furthermore, knowledge is defined by the context in which it is valid and where it can be of practical use. The definition also implies that knowledge, as a result of the information it is made up of, is bound to a specific medium. Physical signs or configurations are necessary for recording, processing and transferring this information.

Present value – The current value of all future payments. Present value is calculated by discounting future payments to determine today's value and adding them together.

Resources – The means used in producing goods and services. Resources appear in the transformation processes involved in business activity as inputs or outputs that are passed between the different stages of interlinked processes.

Specificity – Specificity arises where a resource is so company-specific that it can only be used in the internal processes of the company in question.

Synergies – A term derived from the Ancient Greek *synergia*, meaning two or more agents acting together to their mutual advantage. In business, "synergy effects" are where companies or parts of companies achieve cost or efficiency gains as a result of cooperation.

Target costing – A "reverse" costing approach used in product development. The starting point is the target market and the product characteristics demanded by customers, and a price based on the competitive situation and customers' willingness to pay. The company then works backwards, determining – on the basis of the product's characteristics and price – how the product should be designed and what it can cost.

Transaction costs – The costs relating to coordinating business activities. The bigger a firm is, the greater its coordination costs. Beyond a certain point, the coordination costs outweigh the economies of scale. However, in recent years there has been a trend toward falling transaction costs, principally due to progress in information and communication technology (ICT). Key transaction costs include the cost of identifying business partners, negotiating conditions, agreeing contracts, establishing quality standards, coordinating transfers and carrying out payment transactions.

Transfer prices – The prices set for evaluating resources within a firm. By setting transfer prices, firms try to quantify indirectly the internal usefulness of a resource. Companies derive the internal value or transfer price from the results that other parts of the organization further down the production chain can achieve by using the resource in question.

About the Authors

PROFESSOR DR. BURKHARD SCHWENKER (born 1958) is Chief Executive Officer of Roland Berger Strategy Consultants. Following his studies of mathematics and business administration, he worked in both science and industry. In December 1989 he began his career in consulting with Roland Berger Strategy Consultants. He was elected Partner in 1992. In 1994 he became head of the Corporate Development Competence Center and in 1998 was chosen to join the Executive Committee. Today, PROFESSOR SCHWENKER is CEO of Roland Berger Strategy Consultants worldwide. He took over this function from the company's founder ROLAND BERGER in July 2003. SCHWENKER regularly lectures at several business schools and universities, where he is also a member of the Board of Trustees. He writes regularly on business questions and is the author of a number of specialist business publications. His most recent book investigates business growth strategies.

PROFESSOR DR. DR. H.C. KLAUS SPREMANN (born 1947) has been teaching finance at the University of St. Gallen since 1990. In addition, he is a director of the Swiss Institute of Banking and Finance. SPREMANN studied mathematics at the Munich University of Technology, achieving the degrees of *Dipl.-Math.* in 1972 and *Dr. rer. nat.* in 1973. In 1975, he completed his *habilitation* at the University of Karlsruhe. From 1977 to 1990 he was Professor of Economics at the University of Ulm. He has also held several visiting professorships in North America and Asia. PROFESSOR SPREMANN has carried out various practical projects dealing with transaction risks, returns to scale, activity-based costing and the cost of capital.