Contingency-based Design of Management Control Systems

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The University of St. Gallen, Graduate School of Business Administration, Economics, Law and Social Sciences (HSG) hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St. Gallen, April 2, 2007

The President:

Prof. Ernst Mohr, PhD
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Abstract

In times of rapid changes and increasing competition, the top management, corporate quality managers, controllers, and specifically change managers need to design Management Control Systems (MCS) which help companies to achieve leading positions in terms of operational quality and productivity. Management control is thus becoming increasingly complex across most industries. In some cases, this increased effort seems to pay off in terms of positive financial returns. However, other companies show a short sustainability in enhanced management control practices or initiatives which seemed successful and beneficial for other industries.

The thesis provides a well-founded analysis of situation-specific drivers and limitations to the complexity of Management Control Systems. By describing change management processes using the example of five companies from different industries, a detailed picture is given on how different and changing internal and external challenges can determine the way companies can or should design their MCS. One key outcome from the case studies shows that, with regard to quality targets, some industries often encounter a characteristic trade-off situation between increasing customer satisfaction on the one hand and efficiency of operations on the other.

Moreover, in a second research phase of this thesis, quantitative results based on financial data from Stern Stewart Co. and data on customer satisfaction from the American Customer Satisfaction Index underscored that the way companies can and should deal with a strategic target, e.g. customer satisfaction, differs significantly from company to company, and even more so between industries. In the same way, the complexity of Management Control Systems should differ.

Based on these results, managerial implications are provided for three characteristic success clusters. For companies in some industries, it seems more likely to be successful in a cluster focusing on “High Quality Standards” (Cluster 1). Here, the companies can keep up high quality and efficiency levels with the help of enhanced and broad Management Control Systems.

The clusters “Cost Leaders” (Cluster 2), and even more so, “Analyzing Differentiators” (Cluster 3) characterize companies or industries which are in need of determining the levers of customer satisfaction and operational excellence which do not have a strong negative impact on the operational efficiency of a specific company. Both clusters need to carefully select in what performance areas to invest in costly management control practices. A profound knowledge of measures and drivers of customer satisfaction is one key to success for this group of companies.
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<tr>
<td>ACSI</td>
<td>American Customer Satisfaction Index</td>
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<tr>
<td>ASQ</td>
<td>American Society for Quality</td>
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<tr>
<td>AT&amp;T</td>
<td>American Telephone &amp; Telegraph Corporation</td>
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<tr>
<td>BSC</td>
<td>Balanced Scorecard</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CFI</td>
<td>Claes Fornell International</td>
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<td>COO</td>
<td>Chief Operating Officer</td>
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<td>CRM</td>
<td>Customer Relationship Management</td>
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<td>CSI</td>
<td>Customer Satisfaction Index</td>
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<tr>
<td>Co.</td>
<td>Company</td>
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<tr>
<td>DOD</td>
<td>Department of Defense</td>
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<td>EFQM</td>
<td>European Foundation for Quality Management</td>
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<td>GE</td>
<td>General Electric</td>
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<tr>
<td>HP</td>
<td>Hewlett Packard</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>Inc.</td>
<td>Incorporated</td>
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<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
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<td>MA</td>
<td>Management Accounting</td>
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<td>MAS</td>
<td>Management Accounting System</td>
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<td>MCS</td>
<td>Management Control System</td>
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<td>MIS</td>
<td>Management Information System</td>
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<td>MVA</td>
<td>Market Value Added</td>
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<td>NOPAT</td>
<td>Net Operating Profit After Tax</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>NQRC</td>
<td>National Quality Research Center</td>
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<td>PIMS</td>
<td>Profit Impact of Marketing Strategy</td>
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<td>PM</td>
<td>Performance Measurement or Performance Management</td>
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<td>PMD</td>
<td>Performance Management Design</td>
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<tr>
<td>PMS</td>
<td>Performance Management (or Measurement) System</td>
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<tr>
<td>PST</td>
<td>Process Survey Tool</td>
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<tr>
<td>ROC</td>
<td>Return on Capital</td>
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<td>ROI</td>
<td>Return on Investment</td>
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<td>RONA</td>
<td>Return on Net Assets</td>
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<tr>
<td>SEM</td>
<td>Structural Equation Modeling</td>
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<td>TQM</td>
<td>Total Quality Management</td>
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<tr>
<td>U.S.</td>
<td>United States</td>
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<td>WSCPA</td>
<td>Washington Society of Certified Public Accountants</td>
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Management Summary

Efficient and effective Management Control Systems (MCS) are crucial for corporate success. In times of rapid changes and increasing competition, the top management, corporate quality managers, controllers, and specifically change managers need to design MCS which help companies to achieve leading positions in terms of operational quality and productivity.

Trends seem to indicate that management control is becoming increasingly complex across most industries. Not only has the reporting system itself often incorporated more and more financial and non-financial indicators over time, but also the organic and mechanistic forms of strategic and operational control have gained increased management attention and prioritization.

In some cases, this increased effort seems to pay off in terms of positive financial returns. However, other companies seem to show a short sustainability in enhanced management control practices which appeared to be successful and beneficial for other industries.

The thesis provides a well-founded analysis of situation-specific limitations to the complexity of Management Control Systems. By describing change management processes using the example of five companies from different industries, a detailed picture is given of how different and changing internal and external challenges can determine the way companies can or should design their MCS. One key outcome from the case studies shows that, with regard to quality targets, some industries often encounter a characteristic trade-off situation between increasing customer satisfaction on the one hand and efficiency of operations on the other.

Moreover, in a second research phase of this thesis, quantitative results based on financial data from Stern Stewart Co. and data on customer satisfaction from the American Customer Satisfaction Index underscored that the way companies can and should deal with a strategic target, e.g. customer satisfaction, differs significantly from company to company, and even more so...
between industries. In the same way, the complexity of Management Control Systems should differ.

Based on these results, managerial implications are provided for three characteristic success clusters, as briefly outlined in the following:

**1) High Quality Standards:**
Efficiency and effectiveness seem to be in a synergetic coexistence for this cluster of companies. In general, we can see that this cluster successfully maintains high quality levels with the help of highly enhanced and broad Management Control Systems. The case studies show that the top management of these companies characteristically invests a large amount of time in advancing performance management practices in all key performance areas.

To stand out in the industry, companies here have to consider their specific strengths and develop and market these successfully to the customer base. The challenge here is not only to achieve the highest levels of satisfaction in these performance areas but furthermore, to increase and leverage the impact of these strong practices. The general focus for this cluster is to *strive for effective* Management Control Systems.

**2) Analyzing Differentiators:**
“Analyzing Differentiators” are a success cluster of companies which have difficulties in defining a generally right or appropriate level of customer satisfaction. Even though their main asset is not necessarily to be able to offer products or services at the cheapest prices, they still need to care about negative effects of low customer satisfaction, quality, and trade-off challenges between quality and productivity. These companies need to determine the right levers of customer satisfaction, which do not, or only to a small degree, have a negative impact on the company’s operational efficiency or productivity.

In terms of managerial implications, “Analyzing Differentiators” should ideally analyze customer perceived measures carefully and determine the weights and relevance of different corporate performance areas. Since resources, or more specifically, resources in relation to the financial returns for specific management control practices are limited for companies within this
cluster, a thorough analysis which determines the potential for improvement is crucial. This potential can be seen in terms of customer satisfaction, loyalty, financial output and corresponding costs (financial input) associated with certain management control practices. In general, a key success factor seems to be here to *carefully select* where to invest in costly management control practices.

(3) Cost Leaders:
Companies seeing themselves as being successful cost leaders basically achieve advantages over their competitors through an increased productivity in operations, cheaper sourcing options, and/or leaner structures of corporate processes. (Porter, 1980) These companies need to handle their resources carefully. Operational efficiency is clearly the primary target, whereas high quality is only necessary in areas which are highly important for the customer. With regard to the intensity of their management control systems, these companies should apply high standards in these critical performance areas.

Regarding remaining performance areas, “Cost Leaders” should actually avoid an unreasonably strong focus on performance management practices in areas with low or insignificant impacts on customer satisfaction. Similar to “Analyzing Differentiators”, these companies should therefore carefully analyze the strongest levers on customer satisfaction and loyalty. Ideally, they should follow a form of target costing with regard to their corporate performance areas.

This kind of “Organizational Target Costing” could align the relative performance of each corporate area with the impact it has on customer satisfaction and loyalty. In general, a key success factor seems in this case to be *focusing on efficient* MCS practices.
The thesis underscores the relevance of carefully and specifically designed Management Control Systems as one key element of every change management process. It furthermore delivers generic answers to the question of whether and with what effect the adaptation of certain change management processes and corresponding MCS can be pursued successfully for different groups of companies. A careful cause- and effect-analysis of customer perceived measures can be an important means to provide certain companies (especially Analyzing Differentiators and Cost Leaders) with meaningful information, helping to prioritize MCS-practices in corporate performance areas.

Top managers, change managers, and managers affiliated with quality management and controlling are to be seen as the target audience of this work. Even though these same managers are inundated with numerous trends and statements on ever more complex forms of management control, they should take the results of this dissertation seriously and consider thoroughly what their appropriate corporate targets and targets for their Management Control System actually are, promising highest financial returns.
1. Introduction

“... Do not be awe struck by other people and try to copy them. Nobody can be you as efficiently as you can.” (Norman Vincent Peale, 1898 – 1993)

Within the few last years, the growing level of global competition has intensified the challenges for companies to find more effective ways of achieving competitive advantages and improving performance. The path to initiating and supporting this is through smart vision, adequate strategies, effective organizational structures and efficient Management Control Systems (MCS). A common theme in Management Control Systems research is that changes in an organization’s external environment and resulting changes in corporate business strategies will lead to change in an organization’s Management Control system (Atkinson et al., 1997, and Nanni et al., 1992). This is based on the argument that managers need specific forms of management control, information and practices that support their decisions and assist them in monitoring progress against defined strategies within increasingly uncertain environments.

Specifically, in dynamic and turbulent environments, we see how companies are changing their strategies in response to drastic developments in many markets: liberalization, increased competition, globalization, and new or emerging technologies are only a few of the strong, accruing forces most companies are confronted with. The challenge seems to be here to determine, on the one hand, what business strategy to follow in these new circumstances and, on the other hand, to design efficient and effective Management Control Systems to support these targets. Preliminary interviews with selected companies lead to the critical question of how Management Control Systems need to be defined with regard to changing business strategies. Furthermore, it seems critically important to define the company- and industry-specific appropriateness of a strategy and the corresponding implications for the complexity of a MCS.

In order to leverage returns from MCS, the management needs to focus efforts and define an optimized complexity and intensity of MCS-practices without wasting resources on unappreciated quality or efficiency targets.
1. Introduction

The need for an appropriate fit between a company’s context, its business strategy and its MCS is an underlying assumption of much of the empirical contingency-style management control research (Chenhall & Langfield-Smith, 1998, and Perera et al. 1997). Still, in research to date, there has been limited qualitative and quantitative empirical research examining the nature of the changes in Management Control Systems made in response to environmental changes or uncertainty.

More importantly, it is unclear what companies actually should and what companies just cannot afford to strive for more and more complex forms of management control.

Thus, the usefulness of different forms of MCS with regard to the specific corporate context is put into question. The thesis tries to discuss under what corporate context and more specifically with what certain strategic priorities the broadness and complexity of Management Control Systems differs – and should differ. At the same time, we try to ask whether or to what extent these contingencies limit the reasonability behind more and more complex forms of management control. In this research work, practices from enhanced Management Control Systems are analyzed with regard to the following three dimensions of management control:

(1) the complexity of the reporting system (financial and non-financial information) as well as (2) organic and (3) mechanistic forms of control.

The case studies in this thesis illustrate how dynamic changes of strategic priorities – specifically trade-offs between differentiation and productivity (Porter, M., 1980) – seem to have a significant impact on the way companies make use of the three stated management control categories. In line with prior results from a quantitative study (Anderson, Fornell & Rust, 2001), the thesis furthermore investigates how success positions of certain industries or companies are to some extent predetermined or develop over time with respect to changing strategic priorities. Generic success positions in the field of tension between productivity and customer satisfaction are identified which eventually lead to patterns for the design and appropriate complexity of MCS for certain strategic clusters of companies.

Practitioners as well as the scientific community are aware of the need to provide answers to these challenges. The research questions of this thesis are illustrated in the next paragraph. Following the research questions, the field perspective as well as the theoretical perspective are discussed in order to provide a solid practice- and research-oriented background to the focus and structure of this thesis.
1. Introduction

1.1 Research Questions

Case study research with five European companies offered the opportunity to gain insights into the way MCS are designed effectively with respect to changing strategic priorities. The organizational literature states that improved business performance requires an organizational structure, information systems and management style related to a specific firm strategy (Perera, Harrison & Poole, 1997).

According to this hypothesis, we find evidence showing how our case study subjects design their Management Control Systems and the selection of corporate key performance indicators in order to receive support for their decision needs within changing environments, assisting them in monitoring and managing progress and performance against defined strategies. In literature, researchers are furthermore asking whether changes in organizational environments and corresponding changes in strategic priorities also impact the effectiveness of the organizational design itself. We will look at our three characteristic dimensions of management control (reporting/information systems, mechanistic and organic control) and provide results with the help of qualitative studies, which allow the formulation of certain patterns linking strategic priorities to specific forms and complexities of MCS. Since complex MCS also require resources which sometimes stand in a trade-off to their benefits in terms of higher corporate quality or efficiency gains, we want to discuss and highlight this situation with the help of case studies and, specifically, a follow-up quantitative analysis. In combination, we want to utilize these insights in order to answer the ensuing research question. Research question one is formulated as follows and discussed with the help of the case studies in Chapter four.

**Question 1:** Does the use of more developed elements of Management Control Systems change in order to support certain changing business strategies?

The second research question intends to build on qualitative and quantitative evidence supporting a quantitative study by Fornell and Anderson. Here, we are illustrating success positions of industries in the portfolio or “field of tension” between productivity and customer satisfaction (In line with Porter’s business strategy framework). The theoretical background for research question two will be highlighted in depth in Chapter five.
**Question 2:** Do certain industries at a given point in time imply certain limitations to strategic ambitions and the corresponding appropriate complexity of Management Control Systems?

We discuss how certain industries characteristically differ with their need to prioritize either on productivity or differentiation through quality or customer satisfaction. In line with this analysis, we will try to expand Porter’s strategic framework and define clusters of companies which need to analyze in what performance areas they are urged to differentiate their offerings to the customer. Research question three builds on this analysis and focuses on practice-oriented implications for these companies.

**Question 3:** Are there tools supporting companies’ efforts to
(a) identify their appropriate strategic ambitions
   (specific success cluster)?
(b) maintain a strong position within their cluster in the field of tension between productivity and customer satisfaction?

Specifically for this need, a model is introduced with “Energy Inc.”, which helps to operationalize and (a) prioritize strategic targets for companies as a whole as well as (b) for specific performance areas the customers are confronted with – be it corporate characteristics, service quality, product features, or the actual pricing. On a strategic or even normative level for the whole company, (a) we look for indicators which determine the ideal strategic corporate ambitions promising the highest financial returns. In order to do so, we illustrate and discuss results from action research. In the course of answering research question 3, a tool is introduced which supports companies which are in a specific trade-off position between customer satisfaction and productivity increases. This tool, developed in cooperation with Energy Inc., helps the company to determine the appropriate level of customer focus or satisfaction for specific performance areas on strategic and operational levels. The following paragraphs will illustrate the development and background of this research focus by introducing the field perspective and theoretical perspective on this topic as well as the framework, goals, and structure of this thesis.
1.2 Field Perspective

The corporate focus on “performance” measures on both the effectiveness and efficiency of key processes has grown enormously as evidenced by the large literature on topics such as “benchmarking”, “total quality” measures, and “balanced scorecards”. These embraced financial as well as non-financial measures and, more recently, have focused on measures of an organization’s intellectual capital. In addition, the larger framework of performance management systems or Management Control Systems, broadened the view on performance initiatives which encompass organic as well as mechanistic forms of control. Important to mention are certainly six sigma initiatives at world-class companies like Motorola and General Electrics, but also Business Excellence programs with high-class award-winning companies such as Philips, Siemens, Sulzer, and many others. The increased attention to performance evaluation by managers, consultants, and academics reflects the increased pressure that organizations are confronted with in order to improve performance. Additionally, the falling cost of information technology allows a range of measurements to be made as well as communicated faster and relatively cheaply (Borthick & Roth, 1997; Johnson & Kaplan, 1987; Lynch & Cross, 1992).

A number of researchers report an increased organizational use of non-financial measures for performance evaluations in the last few years (Govindarijan & Gupta, 1984; Ittner & Larcker, 1998; Kaplan & Norton, 1992, 1996, Simons, 1987, 1995). These researchers suggest that the past strong emphasis on traditional performance measures such as return on investment or net earnings distracted from due concern for non-financial factors such as customer satisfaction, market share, efficiency and productivity, product quality, and employee satisfaction. Researchers also argue that non-financial measures may help managers to recognize changes in the business environment, determine and assess progress towards business objectives, and affirm achievement of performance goals (Kaplan & Norton, 1996).

In organizational literature (e.g. Miles & Snow, 1978), we see the general belief that business performance requires more and more organizational structures, information systems and management style related to a certain corporate strategy. Strategically driven performance measures intend to provide both management and employees with the means to identify with the success of the strategy, and track their own contributions to its achievement (Kaplan & Norton, 1996; Lynch & Cross, 1992; Simons, 1995).
Still, strategy implementation does not occur in a vacuum, and other operating environments will have different strategic initiatives as a consequence. This in return may require different management information and control systems in order to enhance organizational performance.

As indicated, the following industry-spanning initiatives indicate a broader utilization and application of management control systems:

**Trend 1:** a steadily increasing focus on scorecard applications in management cockpits on both strategic and operational management levels.

**Trend 2:** an increasing use of non-financial performance measures representing both targets of efficiency and effectiveness.

**Trend 3:** an increased use of ‘organic’ management control, meaning the utilization of social forms of control, training, and frequent interaction between top managers and subordinates in order to establish common values and objectives by, at the same time, leaving room for creativity and personal development for every employee.

Prior studies on the role of a Management Control System in organizations (Govindarijan & Gupta, 1984; Ittner & Larcker, 1997; Simons, 1987) have typically not dealt with the intervening role of the type of performance measures on the relationship between strategic priorities, environmental uncertainty and organizational performance. The contingency perspective of this dissertation investigates the extent to which certain dimensions of Management Control Systems and different types of performance measures help to follow a specific business strategy. The dynamic character of Management Control Systems for certain industries and companies is further illustrated by showing how management control is – and should be – adaptive to changes of business strategies as well as characteristic differences between industries and between different success positions of a single industry in different periods of time.

The top management, quality managers, controllers, and, specifically, change managers face different challenges resulting from various environmental or external settings or changes within their industry. Beyond the organizational setting, organizations are confronted with broader environmental factors as technological, economic, cultural, social, regulatory, and political influences. Modern organizations operate in an increasingly competitive global and liberalized environment, characterized by increasing competition and rapid technological change. Additionally,
they are, regarding to political environment, subject to regional laws, regulations, and ideologies of the governments in power. These factors create uncertainty, to which organizations need to adapt with situation-specific priorities in business strategies in order to survive and be successful.

The following challenges indicate the spectrum of challenges managers are confronted with in this context. Challenge 3 and 4 can be seen as a result or consequence from conflicting targets between challenge 1 and 2. An in-depth discussion of these trends and challenges will be provided in the next paragraphs.

**Challenge 1:** the achievement of superior customer satisfaction in product and service offerings in relation to competitors.

**Challenge 2:** the need to operate with high productivity and efficiency in order to be able to offer products and services at competitive price ranges.

**Consequence / Challenge 3:** identifying the situation- and corporate-specific success position within the field of tension between customer focus and productivity.

**Consequence / Challenge 4:** applying suitable elements of Management Control Systems to maintain a strong position within the identified success cluster.

1.2.1 Trends of Management Control Systems

During the past few years, managers have been inundated with countless articles, books, and seminars on a broader interpretation and utilization of management control or performance management systems (Spencer, 1994). Picking one of many initiatives or management trends, total quality management has been described as a new way of thinking about the management of organizations (Chorn, 1991), as well as a comprehensive way to improve total organization performance and quality (Hunt, 1993). Looking at total quality management this way, we can identify it as a management practice which represents one specific management control system with a strong emphasis on certain elements of fact-based process management, organic management practices, and the integration of critical operational and strategic performance measures. By the mid- to late 1980s, the U.S. TQM movement had developed significant momentum, in part because of the creation of the Malcolm Baldrige National Quality Award by Congress in 1987 and the participation at the award by leading companies, such as AT&T, Motorola, Texas Instruments, Westinghouse, and Xerox (Easton & Jarell, 1998). In a similar way, the European
Foundation for quality management by now encompasses a spectrum of more than 20,000 organizations throughout Europe. 60% of Europe’s 20 largest companies as well as 9 out of 13 European companies of the “Fortune 50’s world’s most respected companies 2001” are very committed members of the EFQM and strongly support the further development of more “holistic” forms of Management Control Systems within their company (EFQM, 2005). In line with these developments, additional management trends, such as balanced scorecard approaches, Six Sigma, stakeholder value management, business reengineering, lean management, and many others contributed in a similar way to the emergence of broader forms of management control surpassing traditional forms of management accounting. The trends illustrated in the following break these new developments down into certain key dimensions of more sophisticated elements of Management Control Systems.

- **Trend 1: scorecards**

Starting from the deficiencies of existing accounting techniques as a basis for strategy development and incentive structures, several researchers from the Institute for Accounting at the Harvard Business School searched for alternatives in 1987 (Bruns, 1992). Kaplan and Norton developed an answer to these stated deficiencies by introducing the *Balanced Scorecard*. The BSC represents a scorecard solution which integrates the financial dimension as one of several perspectives of strategy-derived performance measures. It is intended to have a strong effect on behavioral aspects of employees and combines strategic planning with the control of the status quo. Starting from the formulation of a vision and a strategy, the design of a scorecard follows four steps:

1. Clarification and translation of vision and strategy
2. Communication and linking of strategic objectives and measures
3. Planning, setting of targets, and aligning strategic initiatives

The definition of the vision and strategy follows four characteristic dimensions: financial perspective, customer perspective, internal process perspective, and innovation and learning.

The BSC gained a strong reputation in little time, whereas a large number of companies actually invented the system as a core management instrument. Published articles on the introduction of BSCs can be found for companies like Sears, Roebuck...

With a stronger focus on process quality in operational levels as one aspect of the BSC, Six Sigma is a partly related approach which has the goal to strive for the highest levels of quality in the key operations of a company. Since the 1990s, we can see how many large companies have implemented Six Sigma techniques which are meant to improve the quality commitment of process owners by continually monitoring process quality and setting high stretch targets. Two very renowned examples of companies with a strong Six Sigma expertise and successful outcomes are Motorola and General Electrics.

- **Trend 2: non-financial performance measures**

Most economic theories analyzing the choice of performance measures indicate that performance measurement systems should incorporate any financial or non-financial measure that provides incremental information on managerial effort (e.g. Feltham and Xie, 1994). Despite these models, firms traditionally have relied almost exclusively on financial measures such as budgets, profits, accounting returns and stock returns for measuring performance (Balkcom et al. 1997). Many firms now believe that the heavy emphasis placed on financial measures is inconsistent with their relative importance.

The main objective of non-financial reporting is to remedy shortcomings of traditional accounting in order to provide information of higher quality for both investors and managers. Recent research has identified aspects, such as customer assets, human capital, brand assets, etc., as key predictors of future financial performance. The general belief currently states that traditional, financial, and accounting-based information fails to provide most stakeholders with insights on such indicators. The challenge for the future is to identify methodologies to measure intangible assets according to new accounting standards (Kristensen & Westlund, 2003).

Wm. Schiemann and Associates surveyed 203 executives in 1996 regarding the quality, uses and perceived importance of various financial and non-financial performance measures (Schiemann and Lingle 2005). Their results are presented in the following table. While 82 percent of the respondents valued financial information highly, more than 90 percent clearly defined financial measures in each performance area, included these measures in regular management reviews, and linked
compensation to financial performance. In contrast, 85 percent valued customer satisfaction information highly, but only 76 percent included satisfaction measures in management reviews, just 48 percent clearly defined customer satisfaction for each performance area or used these measures for driving organizational change, and only 37 percent linked compensation to customer satisfaction. Similar disparities exist for measures of operating efficiency, employee performance, community and environment, and innovation and change. More importantly, most executives had little confidence in any of their measures, with only 61 percent willing to bet their jobs on the quality of their financial performance information and only 41 percent on the quality of operating efficiency indicators, the highest rated non-financial measure.

<table>
<thead>
<tr>
<th>Information is highly valued</th>
<th>Financial Performance</th>
<th>Customer Satisfaction</th>
<th>Operating efficiency</th>
<th>Employee Performance</th>
<th>Community/ Environment</th>
<th>Innovation/ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to bet job on the quality of the information</td>
<td>82 %</td>
<td>85 %</td>
<td>79 %</td>
<td>67 %</td>
<td>53 %</td>
<td>52 %</td>
</tr>
<tr>
<td>Measures are clearly defined in each performance area</td>
<td>92</td>
<td>29</td>
<td>41</td>
<td>16</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>Measures are included in regular management reviews</td>
<td>98</td>
<td>76</td>
<td>82</td>
<td>57</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Measures are used to drive organizational change</td>
<td>80</td>
<td>48</td>
<td>62</td>
<td>29</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>Measures are linked to compensation</td>
<td>94</td>
<td>37</td>
<td>54</td>
<td>20</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

**Fig. 1.** Uses, quality, and perceived importance of (non-)financial measures (Ittner & Larcker, 1998).

Perceived inadequacies in traditional Management Control Systems have led many organizations to place greater emphasis not only on non-financial measures, but also on "improved" financial measures. Similarly to an increased focus on operating efficiency, the importance of customer satisfaction measures in strategic planning increased significantly from 1988 to 1991. This importance was expected to increase even further by 1994. The use of non-financial measures such as customer satisfaction and market share became significantly more important in compensation decisions at all organizational levels. However, financial measures such as stock appreciation, profits and cash flows also became more important, reflecting an overall increase in pay-for-performance as well as greater use of non-financial measures.

An additional analysis of IQS data indicates that these trends are not limited to manufacturing practices or North American firms. In each industry and country, customer satisfaction measures became increasingly important for strategic planning.
and non-financial measures such as reductions in customer complaints and process variability played a greater role in assessing process improvements.

The increased emphasis on both financial and non-financial measures is consistent with two trends that have dominated recent discussions on management control: (1) the addition of "new" financial measures that are claimed to overcome some of the limitations of traditional financial performance measures, and (2) a greater emphasis on "forward-looking" non-financial measures such as customer satisfaction, employee satisfaction and defect rates (Ittner & Larcker, 1998).

- **Trend 3: ‘organic’ management control**

Many newly evolving management practices indicate a stronger focus on more organic forms of control. When companies are confronted with the need to establish a company culture which actually supports certain newly formulated business strategies such as total quality management, customer satisfaction or business excellence, companies need to increase commitment to certain operative or strategic targets as well as to strive for the enhancement of the desired capabilities of every employee.

Organic controls are intended to support these targets by focusing on frequent interaction between managers and employees, social forms of control with often self-designed, changing and non-standardized information. Beliefs systems – which represent a strong creation of general values and corporate visions – both support and go hand in hand with interactive and social forms of control.

Taking total quality management as one example of a system of new management practices, we can identify many elements which strongly focus on putting more weight on organic forms of control. The following paragraph illustrates three selected examples.

*Company-wide emphasis as an equivalent to beliefs systems:*

The process concept and the emphasis on improvement are applied throughout the company, including to product development and business support processes. In this context, the role of the senior management is to provide leadership for the development and deployment of quality management as a critical competitive strategy.
Employee involvement and development as an equivalent to interactive and social forms of control:

Employee involvement in improvement, usually through teams, is widespread in TQM-organizations and encompasses a strong emphasis on employee development through training. This emphasis is generally associated with a tendency to drive decision making close to the actual processes and thus to a corresponding increase in employee empowerment.

Cross-functional management as an equivalent to interactive forms of control:

TQM has an explicit emphasis on cross-functional management that includes cross-functional improvement as well as cross-functional involvement in key processes.

Besides in Total Quality Management, we see similar elements of organic control – with individual weights on certain aspects – in many emerging management practices such as six sigma, business re-engineering, lean management, and others. The following picture illustrates the three different dimension and levels of scope within a framework of Management Control Systems.

![Dimensions and scope of Management Control Systems](image)

Even though the trend towards more complex Management Control Systems is obvious, we also see evidence from research and practice showing that these initiatives are not always sustainable.
There is empirical evidence proving that managers often decide to limit their efforts in projects, such as activity-based costing, scorecard systems, and even more organic forms of control as for example employee training after realizing limited or no returns from these projects in relation to the effort and resources these managers allocated for them.

It is crucial to know where to increase and where to lower ambitions. A higher complexity of MCS can be useful. The appropriate level, however, seems to be highly dependent on the specific corporate situation and the challenges the companies are facing. Selected generic challenges these companies face are illustrated in the following.

1.2.2 Challenges Resulting from Changing Business Strategies

As indicated, organizations are nowadays often operating in an increasingly competitive global and liberalized environment, characterized by increasing competition and rapid technological change. These external pressures force them to constantly assess the profitability and reasonability of their involvement in different business areas. Furthermore, companies need to assess, identify, and sometimes calibrate their individual business strategy. Taking Porter’s business strategies as a reference framework, companies need to define how much productivity advantage and differentiation through superior quality can actually be achieved by their company in relation to their competitors (Porter, 1985).

“Change management” is, in this context, an often heard term or initiative, which seeks to achieve intended business outcomes with the help of people management, improved control over processes, and structural changes of the business and its stakeholders. Because change affects so many aspects of a business, it is not surprising that the spectrum of initiatives covered entails a wide area. The topic itself is highly integral and of major importance for top managers, line managers, and HR personnel. The following table provides a first overview of the drivers of change management from the perspective of all three managers (Morton 2004).
As we see from the figure above, for all executives, the need to improve organizational performance is the most important driver. Other drivers reflect specific needs of different levels of executives. Key drivers of these goals changed over the years. Although nowadays, personal elements are increasingly important, there are differences among demographic groups. For example, a study shows that manufacturing companies are more likely to find training, links to missions/visions, trust, and values to be important than companies from the financial service industry or other service organizations. Additionally, softer aspects as sponsorship, trust and values, and “having a burning-platform”, are more important to mid-market companies (< $1 billion in revenue) than to larger companies (Morton 2004). These insights are critically important to our research and will be analyzed in detail later on.

The strategies we want to focus on build on the target to improve organizational performance by looking at higher corporate, service and product quality as well as the target to reduce costs of operations by increasing corporate efficiency.

These selected targets lead to a number of challenges and consequences, which are introduced in the following.

- **Challenge 1: achieving customer satisfaction as a competitive advantage**

Numerous studies support the fundamental logic that customer satisfaction positively influences customer retention (Anderson and Sullivan 1993; Bearden and Teel 1983; Bolton 1998; Bolton and Drew 1991; Boulding et al. 1993; Mittal and Kamakura 2001; Oliver 1980; Oliver and Swan 1989). It is argued that, by increasing retention, customer satisfaction secures future revenues (Fornell 1992; Rust and Zahorik 1993; Rust, Zahorik, and Keiningham 1994, 1995) and reduces...
the cost of future customer transactions, such as the ones associated with communications, sales, and service (Reichheld and Sasser 1996; Srivastava, Shervani, and Fahey 1998). As a consequence, net cash flows should be higher. At the same time, greater customer retention indicates a more stable customer base, which provides a relatively predictable source of future revenue as customers return to buy again. This base is in return less vulnerable to competition and environmental shocks (Anderson and Sullivan 1993; Narayandas 1998).

- **Challenge 2: operating with high productivity and efficiency**

One key driver for customer satisfaction is not only the quality of the product or service itself, but also the ability to deliver a high corresponding value for money. In order to be able to offer products and services at reasonable prices, a company is in the need to work efficiently with a high level of productivity. Several emerging management practices underscore the growing need for companies to reduce costs in their operations. Business re-engineering and lean management have for example been heralded a major innovation in management and have become an essential element in many companies’ attempts to improve their competitive position by achieving dramatic improvements in critical performance measures as quality, service, speed, and, most importantly, cost (Elmuti & Khatawala, 2000). Interpreting productivity as a parallel objective to differentiation through customer satisfaction within Porter’s business strategy framework, we can state that both objectives can, in some cases, be negatively affected by each others’ consequences. Downsizing companies is often correlated with a downward trend of quality in operations and eventually customer focus (Anderson et al., 1997). Especially in mostly service intense industries, a large effort towards achieving high customer satisfaction does not come at no cost. The resulting consequences are major arguments for the following two challenges.

- **Challenge / Consequence 3: weighing productivity with customer focus**

As indicated, there is considerable disagreement regarding the nature of the relationship between customer satisfaction and productivity (Huff et al. 1996). In operations research and production management, it is common to argue for a positive relation between the two aspects. Superior levels of customer satisfaction lead to, according to this argumentation, less need to devote resources to handling
returns, rework, warranties, and complaint management. This in return lowers costs and improves quality (Crosby 1979, Deming 1982, Juran 1988). Even for service industries, there are researchers saying that reducing defects leads to greater loyalty and, in return, to greater productivity via lower costs of making future transactions, favorable word-of-mouth, and eventually a price premium.

Opposed to these arguments, there is equally compelling logic suggesting that the pursuit of customer satisfaction increases costs and thereby reduces productivity. Increasing customer satisfaction by adding raw materials, adding features or service personnel requires increasing the level of product or service attributes as well as correlated costs. This again implies an increased negative relationship between customer satisfaction and productivity. Empirically, the PIMS database failed to find support for neither of the two theories (Jacobsen & Aaker, 1987). It may well be, however, that the nature of this relationship depends on the type of quality under investigation. In this case, it seems highly important for a company to obtain their optimized business strategy and, at the same time, informational support to weigh and prioritize cost- and customer satisfaction-related drivers of business performance.

- **Challenge / Consequence 4: contingency-based design of Management Control Systems**

One clear outcome or message from challenge three is the fact that it is vitally important for the management to possess a clear picture of the customer, the customer’s perception of the product or service offered, and why the customer is acting a certain way. Understanding the customer’s experiences with products and services is best captured through the “voice of the customer”. Measuring and linking these experiences in a cause-and-effect-chain as suggested by e.g. Russ Merz (2004) from the CFI-Group can do two things: (1) explaining the satisfaction response and loyalty behaviors of your customers based on the current level of performance they are experiencing with various interaction elements (e.g., product, service, channel, price, brand, etc.), and (2) allowing the prediction of changes in satisfaction and loyalty should those experiences change.

In order for companies to identify and prioritize measures in the field of tension between customer satisfaction and productivity, statistical models underlying the cause-and-effect-structures in companies should provide a quantification of the
customer experience. It should also indicate the effect a change or improvement will have on satisfaction, retention, productivity, and ultimately financial business results (Anderson et al., 1997).

This thesis argues that companies should be better able to analytically identify priorities of business strategies and, through this means, provide specifically designed initiatives and aligned Management Control Systems. These would furthermore have a direct impact on the usefulness of the three categories or dimensions of control systems we formulated in the previously illustrated trends of Management Control Systems. Cause-and-effect-chain analyses can here provide an action planning roadmap for the changes that need to be accomplished to improve customer satisfaction in balance with productivity and efficiency. However, true changes cannot be manifested until the firms align their Management Control System and processes with the reality represented by the customer’s view of the interactions they experience (Russ, 2004). A detailed discussion and analysis of this challenge will be presented in later parts of this work.

1.3 Theoretical Perspective

The foregoing practical perspectives illustrate several issues which have been subject to a considerable amount of research. The underlying theoretical perspective is therefore focusing on three perspectives as listed in the following.

Of crucial importance are the current research streams on
(1) Management Control Systems,
(2) business strategy frameworks, and
(3) customer satisfaction measurement.
In the following, the theoretical framework considered for the research process is briefly introduced. To do so, we will go through the five areas listed in the field of research illustrated in figure 4. Based on these research areas, we will be able to derive the relevant research questions for this thesis.

1.3.1 Management Control Systems

In our context, we want to look at MCS as systems intended to provide information and means to be useful to managers in performing their jobs and to assist organizations in developing and maintaining viable patterns of behavior. Any assessment of the role of such information therefore also requires consideration of how managers make use of the information being provided to them (Otley, 1999).

We therefore want to consider, on the one hand, the information necessary for organizations in certain situations, but, on the other hand, we also want to take a look at organizational characteristics. These characteristics are distinguished in the
following chapters by the terms ‘organic’ and ‘mechanistic’ forms of control, which may be more or less suited to support the implementation of MCS in different settings.

1.3.2 Contingency-Based Design of MCS

Contingency theory is a core-element here and assumes that the environment or the internal and external context of a system or an organization has a strong impact on the performance and efficiency of the system. It is assumed that there is no such thing as universally applicable systems but often the situation that systems have to adapt to a specific context to be efficient (Schreyögg & Steinmann, 2000). The contingency-based view is a combination between the decision-based approach and the system-theory. The decision-based approach has a very narrow perspective whereas the system theory is strictly formalistic. Resulting from this combination, the contingency theory represents an open system with “if-then”-relationships focusing on relations within and around the corporation as the defined system. Contingency theory is guided by the general hypothesis that organizations whose internal features best match their situation-specific demands will achieve the best adaptation. (Scott, 1967)

Referring to MCS, contingency theory argues that the design of control systems is contingent upon the context of the organizational setting and the strategic focus in which these controls operate. A better match between the control system and the contingency variables is hypothesized to result in increased organizational and individual performance. Contingency theory in this context arose in response to a broad approach which argued that optimal control design can be applied in all settings and firms. This ‘universalistic control’ approach was a natural extension of scientific management theory. Scientific management principles implied there existed one optimal way to design operational processes in order to maximize efficiency. Copley and Taylor (1923) even stated that control was the central idea of scientific management. Applying this operational principle to MCS implies that there must be and that there is only one contingency setting. Many of the portfolio models of strategy formulation and implementation are based on the universalistic view.
(Hambrick & Lei, 1985). On the one hand, given the empirical evidence of contingency control relationships, the universalistic view does not appear to be a valid description of control systems. However, on the other hand, the situation-specific approach argues that the factors affecting each control system are unique so that general rules and models cannot be applied. The research is forced to study each firm and control system individually (Fisher, 1998). The contingency approach is defined to be between these two extremes. According to contingency theory, the appropriateness of different control systems depends on the setting of the business. Different in our approach is only the fact that control system generalizations are intended to be made for major classes of businesses or corporate units (Fisher, 1998).

1.3.3 Business Strategy Frameworks

Lately, numerous researchers have examined the effects of strategic priorities on the design of Management Control Systems. In this context, strategy is somewhat different from other contingency variables. In a sense, it is not an element of context, rather it is the means which helps managers to influence the nature of the external environment, the technologies of the organization, the structural arrangements and the control culture and the MCS. The role of strategy is important as it addresses the criticism that contingency-based research assumes that an organization's MCS is determined by context and that managers are captured by their operating situation.

Notwithstanding the strategic direction selected by the organization, contingency-based research predicts that certain types of MCS will be more suited to particular strategies. The powerful influence of strategy is evidenced by the popular use of terms such as strategies of TQM, the strategic imperative of an empowered workforce and strategic management accounting. Langfield-Smith (1997) provides a summary of research into MCS and strategy.

Several generic taxonomies have been developed including entrepreneurial – conservative (Miller & Friesen, 1982); prospectors – analysers – defenders (Miles &
1. Introduction

Snow, 1978); build – hold – harvest (Gupta & Govindarajan, 1984); and product differentiation – cost leadership (Porter, 1980).

Ideally, the role of strategy is dynamic involving managers in continually assessing the way combinations of environmental conditions, technologies and structures enhance performance. MCS has the potential to aid managers in this process by assisting them in formulating strategy related to markets, products, required technologies, and appropriate structures for specific business units. MCS can then be implicated in the implementation and monitoring of strategies. Here, MCS can provide feedback for learning and information to be used interactively to actually formulate strategy, not only implement strategy. Few studies have investigated these issues (see e.g. Simons, 1987), rather most have been restricted to identifying MCS that are appropriate for different strategic archetypes.

The following paragraphs will focus deeper on this specific issue, with a focus on potential trade-off situations between Porter’s business strategies on differentiation and productivity.

1.3.4 Trade-Off Theories on Differentiation and Productivity

As mentioned previously, the nature of the relationship between a target on differentiation through customer satisfaction on the one hand, and productivity on the other hand, is rather ambiguous. Different from the defined strategic archetypes, we seem to find evidence showing that the defined strategy is very much dependent on the current situation of a company, as well as its industry characteristics. Only for specific situations, the positive relationship between the two strategies can actually be verified in practice. In many other situations however, we seem to find situations where increasing customer satisfaction goes very much at the cost of lower productivity scores and vice versa (Anderson et al., 1997). For these situations, companies are in the strong need to weigh both strategies for each business unit and to identify the strongest levers for customer satisfaction with little impact on productivity drops. In
order to determine their optimized business strategy, there is a strong need for more analytical analyses of key drivers of customer satisfaction (Merz, 2004).

1.3.5 Analytical Customer Satisfaction Management

Recently, a new research stream has erupted based on quantitative evidence from customer satisfaction data. Especially from the National Quality Research Center in Michigan, numerous papers were published in the recent years with previously unknown quality in the quantitative evidence. The ACSI (American Customer Satisfaction Index) is by now a very renowned set of performance measures in the United States and includes a significant share of companies and industries. Based on this data, the NQRC (National Quality Research Center; with the key authors Claes Fornell, Eugene Anderson, and Michael Johnson) worked on topics as:

- The relation between non-financial performance measures (especially customer satisfaction) and measures of corporate success (e.g. shareholder value, profit, market share, etc.)
- The relevance of management control with non-financial performance measures, specifically with the use of structural equation models as an integral part of management information systems
- The relation between different strategic priorities and corporate success for different industries
- Etc.

In addition to the new research stream, more and more companies rely on detailed analyses of customer satisfaction to support their performance management process as well as their formulation and calibration of business unit strategies. According to Merz (2004), managers need a process that can help them to manage their customer assets in this environment. As companies offer customers more ways to manage the interactions they have with the firm (information seeking, purchasing, and servicing interactions), there is a concomitant need to better understand the experiences customers have as
they use the tools offered, how satisfactory those experiences are, and what management actions are required for optimal performance (Merz, 2004).

1.4 Research Focus

The focus of our research can logically be divided into two main topics. On the one hand, we want to analyze the (a) characteristics and (b) limitations of appropriate MCS-practices in different strategic settings. This is done by looking at evolving change management targets as well as implications from company or industry characteristics. On the other hand, we want to make use of the findings from this analysis and discuss possibilities for companies to receive analytical feedback on their strategic priorities.

Key topics covered within these phases were defined with the help of the research questions. The following figures illustrate briefly the content of the three research aspects in the context of our theoretical perspective. In order to illustrate the focus of our work within the first phase of the research plan, we want to make use of the following figure:

Fig. 5. Focus of phase one of the research framework.

Based on theoretical insights and the results from our main case studies on an energy provider, an insurance company, and electronics manufacturers, we focus on the way business strategies follow the corporate context. Moreover, looking at turbulent changes within the context of the case study objects, we are asking how these changes have or had an impact on the Management Control System. Building on our three characteristic dimensions of MCS derived from theory, we are focusing on mechanistic as well as organic forms of management control. In addition, we are asking how, or if, specific types of non-financial performance measures are applied in certain strategic phases.
Furthermore, we go one step further and ask whether there are actually performance measures which can provide companies with additional information in order to align their business strategy with optimized business results.

To do so, we will investigate characteristic developments in industries and specifically our case study objects. In line with these results, we will discuss trade-off situations between foci on customer satisfaction and productivity specific to different industries.

Following this research phase, we want to transfer the results of our analysis and discuss them from a ‘macro’-perspective, which means by analyzing characteristic differences between whole industries. The quantitative insights are expected to provide us with valuable generalized findings.

In addition to these findings, we expect to discuss related results from action research, which illustrate how certain analytical customer satisfaction management approaches help to provide valuable information for strategic decisions.

**Fig. 6.** Focus of phase two of the research framework.

Here, the feedback loop from customer-focused information is in the center of interest for the top management: Taking Porter’s business strategies as the reference framework for strategic directions, we are asking how customer perceived measures can be an integral part of a MCS. We want to know how these measures provide information which helps to revise and operationalize selected strategic priorities, for a company as a whole, as well as for specific, single performance areas or business units. Moreover, action research in collaboration with an energy-provider underscores the relevance of this approach within the last part of our research framework.
1.4.1 Research Goals

Ragin (1994) identified seven goals as general, main objectives in social research. In line with his work, the thesis intends to elaborate three of these objectives which can be summarized as:

(1) the identification of general patterns and relationships
(2) the testing and evaluation of theories and model hypotheses
(3) the advancement of social theory in managerial models and implications.

(1) As a first objective, this work intends to comprehend and identify general patterns behind the contingency-based design of Management Control Systems. More specifically, we want to identify how organic and mechanistic forms of control, as well as selected financial and non-financial performance measures, help companies to support their business strategy in specific contextual settings. In addition, we will try to identify the dynamic development of success clusters for our case study subjects over time. In line with Eisenhardt (1989), the goal is to develop an explanatory model which discusses and explains the dynamic development and characteristics of certain business strategies for different companies and industries.

(2) The results from the case studies are a starting point for the definition of more generic insights into the dynamic development of success clusters for industries. In order to test and refine an explanatory model, we use quantitative data which enables us to validate our previous findings by descriptive, quantitative findings on a larger scale.

(3) For the dynamic success clusters identified by the help of the first two research objectives, we furthermore intend to develop an action model in order to formulate management recommendations and tools supporting the companies’ needs within the defined situations (Ragin, 1994). Specifically for companies, which are in the strong need to weigh their product and service quality efforts with their corporate productivity, we plan to illustrate types of customer satisfaction analyses which support the companies’ performance management process as well as their formulation and calibration of business unit strategies.
1.4.2 Structure of Contents

Following the introduction in the first chapter, a theoretical foundation for the research approach is provided in Chapter two. The main terms of key topics, such as Management Control Systems, business strategy frameworks, (2.1) and contingency-based approaches (2.2), are explained and defined. Furthermore, the current state and deficits of recent topic-related research projects will be highlighted (2.3).

Following the theoretical foundation in Chapter two, the structure of the process that guided the research is introduced in chapter 3 (3.1), along with the applied research methods (3.2), and the research sample of both the case studies as well as the quantitative results (3.3).

Chapter four will start out with the in-depth illustration of three case studies. These cases will illustrate the dynamic development of the business strategies of an insurance company, an energy-provider, as well as insights from electronics manufacturers. In parallel, the cases highlight the changing design of the companies’ key elements of their Management Control Systems (4.1). Based on these results, generic qualitative insights are developed describing generic patterns on the basis of the case study objects (4.2).

The following chapter will focus on quantitative results based on data from the National Quality Research Center in Ann Arbor from the University of Michigan. Industry-specific figures on customer perceived measures provide the opportunity to observe the findings from our case studies in detail from a macro-level perspective. On the basis of this large data-set, we are, on the one hand, describing and comparing characteristics and differences between industries (5.1). On the other hand, we are providing a detailed analysis of the major quantitative findings (5.2). These findings should eventually be aligned with the case study outcomes and are intended to support selected findings from our qualitative analysis (5.3).

Generic results will in the ensuing chapter provide the foundation for the definition of industry-specific strategic success clusters within our business strategy framework (6.1). These success clusters will in return be the key element of our implications for practice: the objective is here to determine MCS-practices and performance measures which are relevant in specific strategic clusters (6.2). Moreover, specifically for one crucial, newly defined cluster, we develop an “analytical customer satisfaction management tool” which enables the management to calibrate and prioritize business unit-specific strategies (6.3).
Chapter seven contains the conclusion of this thesis. It comprises key findings of the research and provides an answer to our main research questions. Additionally, the limitations to this work (7.1), as well as the implications for further research, are pointed out (7.2).

Fig. 7. Structure of contents.
2. Theoretical Foundation

The following chapter will describe the theoretical base for this research. Different concepts of literature, research results on the topics of Management Control Systems, context, and business strategy, as well as different types of performance measures are highlighted. The goal is here to provide a survey of the relevant research area, and to make use of already gained insights and solidly developed constructs in order to provide a foundation for the empirical research of this work. Moreover, the contingency-based view is described as the perspective applied in order to analyze the dynamic and situation-specific behavior of companies.

2.1 Definition of Key-Terms Related to Management Control Systems

When talking about levers of control a company employs to pursue and support a defined goal or strategy, one often runs into various terms which often stand for very familiar concepts. The terms management accounting (MA), management accounting systems (MAS), Management Control Systems (MCS), performance management or measurement (PM) are sometimes used interchangeably. MA represents a number of practices such as budgeting or product costing, while management accounting systems refers to the systematic use of MA to achieve some goal. Performance Measurement is in this respect a very familiar term evolving from the disciplines of controlling, management accounting and quality management. Similar to MCS, Performance Measurement has a focus on the creation and application of several indicators of different dimensions (e.g. time, cost, innovativeness, customer satisfaction, etc.), which are considered as means to assess the effectiveness and efficiency of performance and potentials of different objects in companies. The definition of performance measures through a PMS intends to create transparency and improve performance on all levels by effectively contributing to planning- and steering-processes. Additionally, a Performance Measurement approach shall improve communication-processes across and within performance levels in order to enhance employee motivation as well as additional learning-effects (Hirimoto, 1988). Performance measurement represents an extension of mainly department-related goal-formulations. It supports a stakeholder- and performance-level-appropriate formulation of goals as well as a better operationalization and quantification of strategies. A system
with more indicators, a so called performance measurement system “...can be defined as the set of metrics used to quantify both the efficiency and the effectiveness of actions. “ (Neely et al., 1995) Performance management is in this context often used similar to the term performance measurement. Still though, the former term is somewhat super-ordinate and includes, within a fictitious control loop, not only the measurement, but moreover the determination of requirements as well as the planning and the fixation of measures for improvement. Performance measurement represents a central element of performance management. (Neale, 1991) Last but not least, also total quality management (TQM, or in new terms Business Excellence) is a familiar concept, and has been described in the early 1990s as a new way of thinking about the management of organizations (Chorn, 1991), and a comprehensive way to improve total organizational performance and quality.

With a broader view of Control practices in the field of management accounting and controlling as well as TQM, the just defined concepts merged into a research area which is highly similar in its focus and research prospects. The following paragraph provides definitions of all previously mentioned terms.

**Performance Measurement:**
Performance measurement is a management tool for enhancing decision-making and accountability. Performance measurement as a strategic process is used to assess accomplishment of organizational strategic goals and objectives. The following quote provides a good definition on the reasoning behind performance measurement from the standpoint of the Department of Defense (DoD).

“The use of objective, quantifiable indicators of program effectiveness and efficiency to assess progress against stated goals and objectives. A balance of financial and non-financial indicators should be used to measure performance, such as cost per output, cost per outcome, customer-oriented indicators of quality, timeliness and customer satisfaction. Program accomplishments in terms of outputs and outcomes are integral elements of performance measurement.” (Dod-Encyclopedia, 2005)

With a familiar focus, performance management encompasses the elements of performance measurement. However, the term comprises broader aspects and is defined as follows:
Performance Management:
“Performance management is a process that builds on performance measurement approaches, such as the balanced scorecard. Whereas the balanced scorecard offers a framework for the collection of strategic information, performance management ensures that results are used to influence the selection of strategic actions and to foster the renewal of dynamic, competitive strategy. Unlike most tools and techniques, performance management is a continuous, enterprise-wide process, rather than a one-time, isolated event.” (Consultacton, 2005)

Since terms related to Management Control Systems and performance management are seen as originating both from the field of management accounting as well as the field of total quality management, the following two definitions should provide more clarity on how these terms are related to the overall topic.

Management Accounting:
“Reporting designed to assist management in decision-making, planning, and control. Also known as Managerial Accounting” (WSCPA-Encyclopedia, 2005)

Total Quality Management:
“TQM is a management approach focusing on long-term success through customer satisfaction. TQM is based on the participation of all members of an organization in improving processes, products, services, and the culture they work in. TQM benefits all organization members and society.” (ASQ, 2005)

Moreover, TQM is defined as a Management Control System (!) that substantially addresses the following criteria: a strong process focus, an objective on systematic improvement, company-wide emphasis, customer focus, management by fact, employee involvement and development, cross functional management, supplier performance management, and, last but not least, the recognition of TOM as a critical competitive strategy (Easton & Jarrell, 1998).

Influenced by these two research areas, the definition of MCS has evolved over the years from a focus on more formal, financially quantifiable information to assist managerial decision making, to a much broader focus. Within this scope, one includes
external information related to markets, customers, competitors, non-financial information related to production processes, predictive information, as well as a broad array of decision support mechanisms and informal personal and social controls. In literature, MCS can be seen as passive tools providing information to assist managers as well as approaches following a sociological orientation with a focus on the empowerment of individuals. Already here, we see that organizational control often cannot be fully covered by relying only on accounting controls. Especially in contingency-based research, we find evidence for this thesis. For example, a study with a focus on formal budgeting systems may argue that these systems are not useful in uncertain operating conditions. However, it may be that successful organizations operating in uncertain conditions have formal budgets. These are systematically combined with open, flexible, and informal communications between managers. Simons (1987, 1991, 1995, and 2000) showed that formal budgets can provide interactive controls in uncertain conditions, whereby the budgets generate intelligence data to build internal pressure to break out of tight search processes, and encourage the emergence of new strategic initiatives. Chapman (1998) also argues that in uncertain conditions, effective organizations can apply formal accounting. This should take place within a situation, which involves intense verbal communication between organizational groups. Similarly, the use of other important areas of MCS, such as sophisticated integrated and structured control mechanisms, social controls, or the application of non-financial performance measures, are topics which need to be the focus of research. For that reason, the following definition of MCS is used and relevant throughout this paper.

Definition of **Management Control System:**

“Means of gathering and using information to aid and coordinate the process of making planning and control decisions throughout the organization and to guide employee behavior.” (Pearson-Encyclopedia, 2005)

As we will see from the case studies later on, the change management process is strongly linked to the design of most MCS elements. Because change affects so many aspects of business, it is not surprising that the kinds of initiatives that fall under its auspices touch a wide range of areas. Change management is known to affect people’s
behavior, business processes, and structures. These dimensions are almost congruent with the scope we defined for MCS-practices. A thorough definition of change management is therefore necessary and provided in the following:

**Definition of Change Management:**

“Change Management is a process and driver used to manage the people, processes, or system factors of change to achieve intended business outcomes.” (Morton, 2004)

The design of Management Control Systems is a major driver for change management projects. A way of addressing the question of a contingency-based design of MCS is to identify a variety of control taxonomies and to consider how they relate to various aspects of MCS. One such taxonomy involves classifying controls as ranging from mechanistic to organic. Furthermore, the information incorporated in performance measurement and reporting practices has been subject to discussions and ranges from pure, ‘traditional’ and accounting based figures to a broad range of strategic and operational financials and non-financial figures. We will discuss organic control, mechanistic control, and the use of sophisticated reporting schemes with specifically non-financials as three major dimensions of control which were subject to recent developments and initiatives in many companies. These major dimensions of control are lately subject to research in the areas of TQM, MCS and PMS. The following three paragraphs will provide a detailed description of these aspects.

**Dimensions of Control**

- **Organic Control**

Organic MCS are more flexible, responsive, and involve fewer rules and standardized procedures. In order to provide a good survey on the facets of organic control and mechanistic control in MCS, we want to broadly describe the characteristics based on the aspects of information collection, analysis and dissemination, incentives and capability enhancement. These dimensions or aspects are not fully selective, but
nonetheless broad enough to cover and include most relevant features of control systems in our ensuing taxonomy.

One criticism related to the nature of accounting controls, going along with the nature of organic control, is that it is often seen as, only, a part of broader control systems (Chapman, 1998; Brownell, 1987). Generic information dimensions focus little on broader elements as clan controls, informal controls, or integrative mechanisms. Simons (1995) showed that interactive controls are, in this context, one means to encourage continuous search activity and create information networks inside the organization to scan and report critical changes. Accordingly, interactive control systems have four defining characteristics:

1. Information generated by the system is an important and recurring agenda addressed by the highest levels of management.
2. The interactive control system demands frequent and regular attention from operating managers at all levels of the organization.
3. Data generated by the system are interpreted and discussed in face-to-face meetings of superiors, subordinates, and peers.
4. The system is a catalyst for the continual challenge and debate of underlying data, assumptions, and action plans. (Simons, 1995)

Organic control is furthermore characterized by self-designed, changing and non-standardized diagnostic information. In fast-changing technologies for example, we have the situation that product-life cycles are so short that production techniques frequently become outmoded before they have had the chance to settle into well-understood routine-oriented practices. Here, not the specification of appropriate measures is the focus of attention, but much more the enhancement of experimentation and independent thinking (Sitkin, Sutcliffe & Schroeder, 1994).

In this case, the driver for unit and employee performance is not performed through a constant monitoring of key processes, but more through general values and judgment, in Simons’ (1995) terms through the application of Beliefs Systems. The primary purpose is here to inspire and guide organizational search and discovery. Upcoming problems with the implementation of strategies are dealt with the formulation of general values or visions (Simons, 1995). Managers attempt to define the values and direction of the organization by asserting uniqueness, providing prestige to group membership, and using formal beliefs as symbols of what the organization presents. These actions are intended to increase commitment, provide a core of stability, and
reinforce the distinctiveness of the organization (Merchant, 1985). In line with the major element of capability enhancement in organic MCS (especially for non-routine work situations of business units), it is stated that bureaucratic output or results controls are not effective for controlling performance. Here, professional or collegial structural arrangements are required which go along with training of professionals, their socialization based on a collegial model of control, which regulates behavior mainly through self and peer group control processes. Organizations operationalize these self- and group- controls by making use of selection and training policies which ensure that key employees are being exposed to appropriate training and socialization processes (Abernethy & Brownell, 1997). The following definition states how organic control is understood in this thesis.

<table>
<thead>
<tr>
<th>Definition of Organic Management Control:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Organic Management Control has a focus on self-designed, changing and non-standardized information. Frequent interaction and social controls intends to enhance the commitment to corporate goals. At the same time, employees have a large amount of freedom in the way they handle their tasks. This again supports the overall goal of capability enhancement.”</td>
</tr>
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- Mechanistic Control
Mechanistic controls rely on standardized operating procedures and routines, which in return allow the application of sophisticated and statistical control information, advanced performance feedback, and increased effectiveness in control over processes, products and services. Concerning the possibility to implement processes of information collection, analysis and dissemination, we can state that mechanistic models typically strive for a use of standardized, highly developed statistical control information. This definition does not necessarily encompass only top-management information on financials. It can go beyond this by making use of process control (Chenhall, 1997), monitoring of intangible performance drivers as customer loyalty, satisfaction or the behavior of employees. Diagnostic control, which represents one of four levers of control from Simons´ (1995, 2000) model of Management Control Systems, is defining activities which are highly familiar with the ideas of mechanistic control. He describes these measures of control as “… the formal information systems
that managers use to monitor organizational outcomes and correct deviations from preset standards of performance. “Three features are characteristic for diagnostic control systems:

1. the ability to measure the outputs of a process,
2. the existence of predetermined standards against which actual results can be compared, and
3. the ability to correct deviations from standards (Simons, 1995).

In ideal conditions, diagnostic control systems can encompass intangibles, such as customer and employee satisfaction, process quality, or brand awareness. The high relevance of these assets is nowadays known and receives more and more focus of top-management attention (Westlund et al., 2003; Low & Kalufat, 2002). The conditions, under which the application of such ‘holistic’ MCS actually shows to be useful, is subject to a further separate analysis in this research work.

The control-oriented focus underlying mechanistic control systems stresses the continuous enhancement of the degree to which an organization is able to efficiently and effectively exploit a firm’s existing capabilities and resources. Mechanistic control recognizes that quality improvement requires changes throughout a more broadly defined system, and therefore an increased involvement of stakeholder satisfaction, loyalty, or performance (Sitkin, Sutcliffe & Schroeder, 1994). Capability enhancement of employees or managers is supported through the application of incentive schemes, which often focus on the achievement of fixed targets or the error reduction in corporate key processes. Highly formalized procedures with low uncertainties are here environments which supposedly support the application of mechanistic controls (Sitkin, Sutcliffe & Schroeder, 1994).

Definition of
Mechanistic Management Control:
“Mechanistic Management Control has a focus on standardized, highly developed statistical control information. Incentive schemes are based on this information and intend to enhance existing capabilities and the effectiveness in control over processes, products and services.”
The following table provides a group of elements of MCS and control types commonly found in research, focusing on the organic and mechanistic nature of control. This taxonomy is in particular useful for addressing concerns discussing how MCS relate to broader control systems and, with respect to the focus of our research, dimensions of uncertainty corporations are confronted with.

<table>
<thead>
<tr>
<th>Information Collection, Analysis &amp; Dissemination</th>
<th>Organic MCS</th>
<th>Mechanistic MCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Interactive Controls</td>
<td>(Simons, 1995, 2000; use of performance evaluation for strategic planning)</td>
<td>Diagnostic Controls (Simons, 1995, 2000; use of control to provide feedback on operations)</td>
</tr>
<tr>
<td>Low reliance on accounting controls</td>
<td>(Brownell, 1987)</td>
<td>Sophisticated controls (Brownell, 1987 (accounting control); Low &amp; Kalułat, 2002 (intangibles); Westfund et al. 2002 (intangible accounting)</td>
</tr>
<tr>
<td>Self-designed, changing, nonstandardized diagnostic information</td>
<td>(Sitkin, Sutcliffe &amp; Schroeder 1994)</td>
<td>Use of standardized, highly developed statistical control information (Sitkin, Sutcliffe &amp; Schroeder 1994)</td>
</tr>
<tr>
<td>Sophisticated integrative mechanisms</td>
<td>(Abernethy &amp; Lillis, 1995; task forces, meetings, etc.)</td>
<td>Process controls (Chenhall 1997)</td>
</tr>
</tbody>
</table>

| Incentives                                       |                                                                             |                                                                                 |
| Learning related feedback                        | (Sitkin, Sutcliffe and Schroeder, 1994)                                     | Performance Feedback (Sitkin, Sutcliffe and Schroeder, 1994)                     |
| Leadership support for independent thinking and calculated risks | (Sitkin, Sutcliffe & Schroeder, 1994)                                       | Role models, mentoring and emphasis on constructive conformity (Sitkin, Sutcliffe & Schroeder, 1994) |
| Social Controls                                  | (Merchant, 1985; Rockness & Shields, 1984; input controls - social controls & budgets) | Budget constrained performance evaluation style (Rockness & Shields, 1984)        |
| Evaluation through general values and judgement  | (Sitkin, Sutcliffe & Schroeder 1994)                                         | Evaluation through precise standards (Sitkin, Sutcliffe & Schroeder 1994)         |

| Capability enhancement                           |                                                                             |                                                                                 |
| Personnel controls                               | (Merchant, 1985, selection, training, culture, group rewards, resources)    | Output and results controls (Macintosh, 1994; outcomes or effectiveness)         |
| Socialisation & training                         | (Abernethy & Brownell, 1997)                                               | Training for specific skill improvement (Sitkin, Sutcliffe & Schroeder, 1994)     |
| Increased effectiveness in learning and capacity enhancement | (Sitkin, Sutcliffe & Schroeder 1994)                                         | Increased effectiveness in control over processes, products and services (Sitkin, Sutcliffe & Schroeder 1994) |

**Fig. 8.** Taxonomy of organic and mechanistic MCS.

**- MCS with Non-Financials**

Besides the organizational aspect behind MCS, one key dimension is certainly to be seen in the information utilized. Traditionally, this information solely relied on financial figures on both strategic and operational levels. Through TQM, a stronger focus on operational, process related figures lead to more attention on non-financial reporting in interaction with process owners. However, even strategic management levels are more and more relying on non-financials in order to receive a full picture of
a company’s performance. In fact, the one main purpose of non-financial reporting is to remedy some of the shortcomings of traditional accounting measures (Ittner & Larcker, 1996, Kristensen & Westlund, 2004). Both, performance reporting as well as management control are therefore benefiting from non-financials as described in the following.

**a) Increased importance of non-financial reporting:**

Non-financial performance indicators have gradually become an increasingly important indicator for competitive strength. Whereas internal performance measurement seems to improve the knowledge and picture of the top management of the real issues and performance of a firm, also more and more stock analysts and traders rely on figures which are not part of the balance sheet or the profit- and loss-statement. Reasons for that can additionally be supported by statistics from the stock markets: comparing the value of intangibles in relation to the book value of a company, one can see an increase from 50% in 1970 to up to 80% in 2003. The general belief is that: “... how skilfully companies manage key non-financial areas of performance and then communicate related successes to outside constituencies, as shareholders and investors, will have a powerful effect on how they are valued. In fact, the more analysts use non-financial measures, the more accurate their earnings forecasts become. ...” (Bierbusse et al., 1997)

The following figure illustrates a comparison of a ranking of non-financial performance measures based on studies pursued by Ernst & Young (Low & Kalufat, 2002), Coleman and Eccles (1997), and Dempsey (1997). The ten most important factors are compared covering dimensions as the ‘management’, the ‘customer’, the ‘process’, and the ‘development’ perspective. It seems obvious that all three studies show the increasing importance or perception of non-financial performance drivers. Even though the order and ranking of comparable drivers differ significantly, we have to acknowledge the general relevance for corporate reporting standards.
Fig. 9. Comparison of the most important ‘non-financials’ according to three studies.

*a) Improved performance through management control with non-financials:*

The leading character of non-financial performance measures in comparison to traditional accounting figures can help to provide up-to-date information to help managers reach informed economic decisions, and to motivate users to aim and strive for organizational change, improved resource management and a gradual incline in organizational performance (Horngren, 1995; Eskildsen, Westlund & Kristensen, 2003). Ittner and Larcker (1996), as well as Sim and Killough (1998), both found a significant positive interaction between TQM practices, holistic management accounting information, and performance. In particular, non financial measures were positively associated with future, rather than current, revenues and profit (Daft & Lengel, 1986, Ittner & Larcker, 1998).

Still, this research community also states that, in line with the central ideas and propositions of this work, organizational strategy, the type of technology, and the structural and environmental factors confronting the organization additionally influence the use and performance consequences of a reliance on non-financial performance (Daft & Lengel, 1986, Ittner & Larcker, 1998)
2. Theoretical Foundation

2.2 Contingency-Based View

Contingency theory assumes that the environment or the internal and external context of a system or an organization has a strong impact on the performance and efficiency of the system. It is assumed that there is no such thing as universally applicable systems but often the situation that systems have to adapt to a specific context to be efficient (Schreyögg & Steinmann, 1987). The contingency-based view is a combination between the decision-based approach and the system-theory. The decision-based approach has a very narrow perspective, whereas the system theory is strictly formalistic. Resulting from this combination, the contingency theory represents an open system with “if-then”-relationships focusing on relations within and around the corporation as the defined system. Contingency theory is guided by the general hypothesis that organizations whose internal features best match their situation-specific demands will achieve the best adaptation. (Scott, 1967)

Looking at the conclusion that a Management Control System has to respect the corporate needs as well as the environmental and contextual circumstances, the idea behind the contingency-based view has more and more gathered acceptance. The contingency-based view is therefore utilized as “theoretical glasses” through which we can tie up to the scientific discussion and the theoretical foundation provided in the previous chapter.

The leading thought of contingency-based approaches is the claim that different formal organizational structures can be explained by the difference in its specific contexts. The motivation for the contingency-approach was mainly the insight, that there is no such thing as the “one best way”. Starting in the 60s in the U.S., and followed by Staehle’s situation-specific approach in Germany in 1973, the new thinking intended to determine, if and how given interrelations between independent contextual factors and dependent variables actually exist.

Companies were agitating in very different market situations. Caused by their diverse historical developments, many have also developed very unique and different organizational structures. Most scientists nowadays agree that there is neither such thing as the “one best way” for organizations, nor one type of organizational type being equally successful for all conditions (Ginsberg and Venkatraman 1985, p. 421). The contingency-based theory is based on this fundamental insight, and suggests according to Harvey (1982, p.81), that “… one optimal strategy exists for a given combination of organizational and environmental conditions.”
Ginsberg et al. suggest a two-stage scheme in order to analyze this topic. The first stage is conceptualized as a process model and is illustrated in the previous figure. It consists of the four contingencies environmental conditions, strategy, organizational characteristics, and performance. In this model, the environmental conditions are interpreted as the input, whereas organizational characteristics are looked at as the process, and the performance as the output of the system. The strategy has a specific role in this model: in relation to the other factors, it represents a certain “pattern of response” (p. 423), and furthermore influences the organization and its performance. Based on Ginsberg’s model, we can differentiate between four relations between the contingencies. Three of these describe the impact of the other contingencies on the formulation of strategy; the fourth represents effects of strategy implementation on the organization.

On the second level of their scheme, Ginsberg et al. operationalize the dimensions of analysis further. Besides the contingencies, the strategy level (corporate-, business-, and functional strategy), as well as the measurement of performance, they specifically discuss how and what relations between independent variables, context variables, and an independent variable can actually occur. Instead of searching for direct correlations between two variables, more of one means more of the other, there might also be specific best solutions for certain situations or combinations of contingencies (p. 425).
The contingency-based view is chosen as the ideal theoretical background in our case since
- the research questions of this work are directly tied to the impact of contextual parameters
- the contingency-based view is widely used within the research on Management Control Systems; a connection to current research streams is therefore easier to pursue.

2.3 State of the Art in Research

Research on Management Control Systems in their organizational and environmental context has been pursued for about twenty years. Initially, calls for such research came from Australian and British scholars (Hopwood, 1972; Chenhall, 1986; Otley, 1980; Otley, Broadbent, & Berry, 1995). However, North American scholars have also started to recognize its importance (Kaplan & Norton, 1993). Although recent reviews of theoretical premises of Management Control Systems (Merchant & Simons, 1986; Otley et al., 1995; Whitley, 1999), reviews of specialty topics such as the use of budgetary criteria in performance evaluation (Briers & Hirst, 1990), and the effects of national culture on management controls (Harrison & McKinnon, 1999) have appeared, a comprehensive review of management controls in their organizational and strategic context has not been conducted to date. Even though Simons (2000) focused on relations between specifically the corporate strategy and the Management Control System of a company, the dimensions of MCS were in his research papers strictly limited to mechanistic and financial items. Also, similar research results with a focus on MCS in the context of changing strategic priorities have either a deficit on the strategic side while focusing only on one selected strategic target or limitation on the factor-side describing the design of MCS. Dekker et al. (2005) presented first insights from a study on primarily Dutch companies and their broad application of different MCS tools in combination with altering applications of either business strategies on differentiation, innovation, or productivity. The quantitative empirical results are the first to deliver answers to this topic on a quantitative basis, and promised interesting insights for follow-up research (Dekker et al., 2005).

In reviewing the past 20 years of contingency-based research, we have to consider the full body of literature relating MCS to elements of context. Since we assume that
the appropriate design of MCS will be influenced by the context in which a company operates, we can identify several sections of research talking about the relationship between

- MCS and the external environment,
- MCS and main technology focus, structure, and size of the organization,
- MCS and organizational culture,
and, last but not least,
- MCS and strategy.

On the basis of past empirical findings, propositions are offered which relate contextual variables to MCS, offering the opportunity to consider shortcomings in contingency-based research, and identifying the extent to which progress has been made in addressing these issues and noting opportunities for future directions. The following two tables should illustrate major results on research relating to the area of contingency-based design of MCS.

This work will focus on MCS in the context of changing business strategies and different industry environments. The literature review reveals first empirical results to this specific topic.

As we can see from the research projects pursued to date, we find little research results focusing on potential downsides of too complex and detailed MCS-practices for specific industries or companies. To some extent, this is not surprising since the data needed to provide evidence for this assumption is hard to obtain. As utilized in later parts of this work, one outcome indicator for more-developed MCS-practices driving quality initiatives is customer satisfaction. Since this data was in our case easily accessible from the National Quality Research Center, the use of such a broad and suitable data base as the American Customer Satisfaction Index database promises to deliver new insights from our quantitative analysis in the second phase of our research.
### Table 1. Selection of contingency-based research on MCS. (a)

<table>
<thead>
<tr>
<th>Study (Year)</th>
<th>Research Design/Method</th>
<th>Sample Type/Size</th>
<th>Variables</th>
<th>Major findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchant (1984)</td>
<td>Empirical/Study</td>
<td>19 manufacturing organizations in US/170 managers</td>
<td>Budget system characteristics, Size Function, Automation, Departmental performance</td>
<td>Larger organizations tended to use more administrative budgeting, more formal communications, and greater participation than smaller organizations. Performance higher when this fit existed.</td>
</tr>
<tr>
<td>Gordon &amp; Narayanan (1984)</td>
<td>Empirical/Study</td>
<td>34 profit-oriented, medium-sized, midwestern domiciled firms</td>
<td>Perceived environmental uncertainty, Organization structure, External/nonfinancial/ex-ante information system</td>
<td>Information systems both show to be a function of the environment. However, it does not appear that an organization's system and structure are significantly related to each other.</td>
</tr>
<tr>
<td>Brownell (1985)</td>
<td>Empirical/Study (Case)</td>
<td>Large multinational organization (R&amp;D) and marketing/61(2) managers</td>
<td>Budget participation, Environmental uncertainty, Function, Managerial performance</td>
<td>Participation had greater effect on performance in R&amp;D than in marketing. Reduced reliance on accounting information appropriate in complex environment.</td>
</tr>
<tr>
<td>Chenhall (1986)</td>
<td>Empirical/Study</td>
<td>Data collected from 68 managers</td>
<td>External environmental uncertainty, Organizational interdependence, Perceived Usefulness of MAS (Scope, Timeliness, Aggregation, Integration)</td>
<td>Decentralization was associated with a preference for aggregated and integrated information; perceived environmental uncertainty with broad scope and timely information; organizational interdependence with broad scope, aggregated, and integrated information, effects of perceived environmental uncertainty / organizational interdependence were indi-rect through decentralization.</td>
</tr>
<tr>
<td>Simons (1987)</td>
<td>Empirical/Study</td>
<td>Senior managers from 76 firms, 171 answered questionnaires</td>
<td>Control system attributes, Strategy</td>
<td>Prospector firms seem to attach a great deal of importance to forecast data in control systems, setting tight budget goals, and monitoring outputs carefully. Defenders seem to use their control systems less intensively.</td>
</tr>
<tr>
<td>Abernethy &amp; Stoelwinder (1991)</td>
<td>Empirical/Study</td>
<td>4 large non-profit hospitals in Australia/192 managers</td>
<td>Budget system characteristics, task uncertainty, System goal orientation, Departmental performance</td>
<td>The fit between task uncertainty, budgeting, and system goal orientation related to improved performance.</td>
</tr>
<tr>
<td>Alexander (1991)</td>
<td>Theory/ Empirical Survey</td>
<td>CEOs of 257 multihospital systems listed in the 1982 American Hospital Association</td>
<td>Centralization, Environmental uncertainty, Organization Size, Geographic dispersion, Organizational age, System ownership, Initial control strategy</td>
<td>Organizations generally practice selective decentralization under conditions of increasing uncertainty. Organizational age, dispersion, and initial control arrangements significantly moderate the direction and magnitude of such changes.</td>
</tr>
<tr>
<td>Sitkin, Sutcliffe &amp; Schroeder (1994)</td>
<td>Research Proposal</td>
<td>Literature-based</td>
<td>Task Uncertainty, Product/Process Uncertainty, Organizational Uncertainty, TQM Principles, Control vs. Learning, Effectiveness</td>
<td>The propositions say that there is a need to distinguish between control-based and learning-based TQM. Hypothesized direct effects on the TQM effectiveness are challenged with assumed interactional effects with task uncertainty, product/process uncertainty, and organizational uncertainty.</td>
</tr>
</tbody>
</table>
The chapter describes the approach selected for our research. Furthermore, they outline research methodologies and major findings. The following chapter describes the approach selected for our research.

### Table 2. Selection of contingency-based research on MCS. (b)

<table>
<thead>
<tr>
<th>Study</th>
<th>Research Design/Method</th>
<th>Sample Type/Size</th>
<th>Variables</th>
<th>Major findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abernethy &amp; Steolwinder (1995)</td>
<td>Empirical/Survey</td>
<td>Large hospital in Australia/91 physicians and nurse subunit managers</td>
<td>Professional orientation, Control environment, Role conflict, Subunit performance, Job satisfaction</td>
<td>Role conflict between professional and bureaucratic norms and values reduced when high professional orientation not combined with administrative output controls. Reduced conflict related to higher job satisfaction and performance.</td>
</tr>
<tr>
<td>Buegener et al. (1996)</td>
<td>Theory/Empirical Survey</td>
<td>U.S. Air Force: From 25 senior commanders, 121 deputy commanders, and 399 squadron commanders: N=121</td>
<td>Task routineness, Workflow interdependence, Training complexity, Environmental uncertainty, Internal process value, Human relations value</td>
<td>Results confirm competing values at work in organizations and also suggest that value sets differ from unit to unit. Certain patterns of values appear to exist within particular environmental and technological contexts.</td>
</tr>
<tr>
<td>Abernethy &amp; Brownell (1997)</td>
<td>Empirical/Survey</td>
<td>158 senior research officers in the R&amp;D divisions of a major Australian company and a major US scientific organization</td>
<td>Performance, Task characteristics, Accounting controls, Behavior controls, Personnel controls</td>
<td>Non-accounting controls, especially personnel forms of control, contribute to organization effectiveness, particularly where task characteristics are not well suited to the use of accounting-based controls. “Programmed” types of control appear unsuitable where number of exceptions in tasks is high.</td>
</tr>
<tr>
<td>Waterhouse &amp; Svendse (1998)</td>
<td>Empirical/Survey</td>
<td>114 CEOs and board members in Canadian corporations</td>
<td>Strategy, Performance measures</td>
<td>Some fit between performance measures and strategic priorities in operations and environmental issues but need for them in innovation and external reporting.</td>
</tr>
<tr>
<td>Simons (2000)</td>
<td>Theory</td>
<td>Literature-practice-based</td>
<td>Organizational process systems, Interactive Control Systems, Beliefs Systems, Boundary Systems, Core Values, Task uncertainty, Organizational Structure, Size, Strategy, Culture</td>
<td>The paper provides a structure which describes dimensions or control levers a company can apply to follow a selected strategy. Four levers are defined which represent solutions to different managerial challenges.</td>
</tr>
<tr>
<td>Chenhall (2003)</td>
<td>Theory</td>
<td>Literature-based</td>
<td>Environment, Culture, Strategy, Choice of Performance Measures, Type of use of MCS, CFO satisfaction</td>
<td>CFO’s satisfaction with the system for performance measurement is driven by the type of use. The impact of the type of use on CFO-satisfaction is moderated by environmental uncertainty, organizational culture, and strategic orientation.</td>
</tr>
<tr>
<td>Banker et al. (2003)</td>
<td>Empirical/Survey</td>
<td>Pilot test with managers in 4 companies, Responses in actual survey from 173 of 1,000 CFOs</td>
<td>Competitive environment, Changes in strategy, Organizational design, Changes in technology, Advanced management accounting, accounting practice (AMAP), Non-financial MAI, Changes in technology, Organizational performance</td>
<td>Increasingly competitive environment leads to an increased focus on differentiation strategies. This, in turn, influences changes in organizational design, advanced manufacturing technology and advanced management accounting practices. These practices lead to a greater reliance on non-financial accounting information which leads to improved organizational performance.</td>
</tr>
<tr>
<td>Baines &amp; Langfield-Smith (2005)</td>
<td>Empirical/Survey</td>
<td>General managers of 700 manufacturing organizations/141 usable responses.</td>
<td>Environmental Uncertainties, Strategic Priorities, Use of Non-Financial Performance Measures, Organizational Performance</td>
<td>As hypothesized, the results reveal the existence of a significant and positive association between management’s strategic choice and performance acting through management’s high use of non-financial measures for performance evaluation. On the other hand, the study finds no evidence of a significant relationship between environmental uncertainty and performance through management’s use of non-financial performance measures.</td>
</tr>
</tbody>
</table>
3. Research Approach

After determining the research question and research goals in the first chapter, an appropriate research process and adequate research methods have to be selected. In the following, the research process guiding this work (3.1), as well as the research methods that are deployed throughout this work (2.2) is presented. These sections are followed by a brief description of the research samples and by an overview of the data collection (3.3).

3.1 Research Process

This doctoral thesis follows the research tradition of the University of St. Gallen. Ulrich and Krieg (1974), Ulrich (1981) and Bleicher (1992) are the originators of this approach, which underscores the relevance of applied research focusing on topics relevant to business practice, delivering design models relevant to the application context. As an applied social science, management theory is impelled to remain in close contact with practice and contribute to solving practical problems. In this context, organizations are understood as ‘complex, open, social systems’. The systems are influenced by the environment and subjects which, in turn, influence various transformation processes and eventually lead to a certain output. Especially contingency-based research – as applied in this thesis – is subject to these central elements of system-theory.

Recently, various scholars have called for research designs that combine qualitatively- with quantitatively-oriented approaches (e.g. Mayring, 2001; Bonoma, 1985). The antagonism between qualitative research and quantitative research is increasingly seen as an artificial separation which limits research efforts and research impact. Researchers have argued that qualitative research is the appropriate way to identify, describe, and understand the problem of investigation, and that quantitative research is advantageous in validating and generalizing findings. Therefore, following both Ulrich’s applied research tradition and the Anglo-Saxon empirical approach on this project combines both approaches in an integrated research design, making use of multiple methods to collect and interpret data.

Following Kubicek (1977) and Tomczak (1992) in this context, the research process of data collection and interpretation is highly iterative (see Fig. 4)
Instead of validating hypotheses created solely upon theory, the targeted new knowledge covers questions from reality which are based both upon theory and practice (Kubicek, 1977). The image or reality that is created through the initial data collection is critically reflected in order to achieve differentiation, abstraction, and changes in perspective. The new theoretical understanding leads to new questions about reality through the contingency-based-view (Nadler & Tushman, 1999). Consequently, the research process is stopped pragmatically when publishing results. Potential open questions at this point of the research process are to be made explicit as part of the results.

Looking at the research questions, we have, on the one hand, a focus on both the relevance of certain MCS-practices under different changing strategic priorities and, on the other hand, more generic questions on a macro-level concerning the dynamic development of strategic success positions in different industries.

In the course of this work, we can interpret Kubicek’s and Tomczak’s iterative learning process with the following three phases.

The overall research framework is illustrated in the following graph. Phase one is expected to identify the key issues from practice and align these with the latest research areas in MCS. The definition of research question one can be seen as an outcome of phase one, namely, desk research, exploratory interviews, and the kick-off workshop within a series of workshops on performance management design. The second phase contains the preparation and execution of the workshops on performance management design as well as the qualitative elaboration of case studies with five selected participants. The outcome of phase two of our iterative learning framework –

Fig. 11. Research as an iterative learning process. (Tomczak, 1992)
namely, the taxonomy of insights into strategic priorities and corresponding changes in MCS-designs – should provide answers to research question one and its sub-questions. (See 1.1)

Phase three represents the part of the research framework pursued at and in collaboration with the University of Michigan. The foundation of the quantitative analysis is here the ACSI-data provided by the National Quality Research Center.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review and Exploratory Interviews</td>
<td>Qualitative Elaboration of Results / Case Studies</td>
<td>Macro level Analysis and Implementation of Results</td>
</tr>
<tr>
<td><strong>Working Package</strong></td>
<td><strong>Objective</strong></td>
<td><strong>Method</strong></td>
</tr>
<tr>
<td>Identification of latest research areas related to MCS</td>
<td>Alignment of research focus with key topics from practice</td>
<td>Desk research</td>
</tr>
<tr>
<td>Exploratory Interviews with corporate representatives</td>
<td>Development of a framework for following workshops</td>
<td>Semi-structured interviews</td>
</tr>
<tr>
<td>Collection of corporate data</td>
<td>Knowledge-transfer from practice</td>
<td>Follow-up interviews</td>
</tr>
<tr>
<td>Preparation of standardized Company presentations</td>
<td>Qualitative elaboration of the research focus</td>
<td></td>
</tr>
<tr>
<td>Workshops on various topics in MCS:</td>
<td>Taxonomy on MCS-practices in turbulent environments and over changing strategic phases (e.g. Strategic Objectives as Growth, Synergy, Quality, Productivity, etc.)</td>
<td></td>
</tr>
<tr>
<td>Qualitative analysis:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fig. 12.</strong> Phases of iterative learning.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.2 Research Methods

In order to accommodate multiple goals of social research, various methods have evolved, which each constitute a way of linking ideas and evidence (Ragin, 1984). This work intends to answer this twofold focus as indicated with the application of both qualitative research in accordance with Eisenhardt (1989) and Yin (1994) as well as an Anglo-Saxon quantitative approach.

#### 3.2.1 Qualitative Research

Qualitative research is often appropriate when providing a new or broader perspective on an already explored research topic (Yin, 1994; Eisenhardt, 1989). Nearly all qualitative research seeks to construct representations of observable
elements and their interrelations. Often, it deploys research on case studies and is founded on in-depth knowledge gathered in cooperation with companies.

The results from case study research can be, on the one hand, a new or refined conceptual model accompanied by propositions or hypotheses about certain interrelations. On the other hand, qualitative research can serve well in order to improve and enlarge data on a specific topic by supporting a quantitative study or conferring a deeper understanding with the help of context-rich descriptions.

A roadmap for building concepts from case study research is provided by Eisenhardt. In the following, the steps of Eisenhardt’s process are portrayed. However, it is important to recognize that deploying the process involves a constant iteration back and forth between the different stages (Eisenhardt, 1989).

I. At first, a well-defined focus has to be defined, which is important in order to gather specific data systematically. This focus helps in order not to become overwhelmed by the data volume.

II. The selection of cases specifies a population which will define the set of entities from which the research sample is drawn. Moreover, since cases are chosen for theoretical and not statistical reasons, the step comprises theoretical, and not random, sampling.

III. Data collection. Multiple data collection methods can be combined for theory building. Interviews, observations, and the use of archival sources are typically common.

IV. Data analysis. Cases are analyzed individually, allowing the unique patterns of each case to emerge. Afterwards, investigators generalize patterns across cases, developing tentative concepts or constructs, and proposing relationships between variables.

V. The shaping of hypotheses involves a sharpening of constructs and an understanding of the dynamics underlying the proposed relationships. An essential feature of qualitative research is a comparison of the emergent concepts, theory, or hypotheses with the extant literature. This involves examining literature that discusses similar findings as well as literature that conflicts with the emergent theory.

Eisenhardt’s process for conducting qualitative research is directed towards the development of testable hypotheses and theory which are generalizable across settings,
and is thus in accordance with the research goals of this project. It was therefore chosen as an appropriate additional research path during this work and serves moreover as a foundation for the quantitative work.

From the four basic types of case-study design, this research follows a multiple-case design with both MCS and corporate context-factors as two units of analysis (Yin, 1994). The foundation here consists of three in-depth cases; a further integration of small extracts from insights from other companies and industries are applied additionally to cope with specific challenges and detailed issues. This process can help to deepen the understanding of a subject under study (Gassmann, 1999).

Additionally to our exploratory qualitative research, the application of a broad empirical survey is intended to back up or verify general knowledge or developed hypotheses. Quantitative research uses methods that are designed to ensure objectivity, generalizability and reliability. In order to answer our general hypotheses concerning, for example, our contingency-based trade off between quality and efficiency, this approach seems to be a reasonable approach for our second research path. Here, the researcher is considered external to the actual research, and results are expected to be replicable no matter who conducts the research. The strengths of the quantitative paradigm are that its methods produce quantifiable, reliable data that are usually generalizable to some larger population.

3.2.2 Quantitative Research

The quantitative research of this paper builds on extensive data from the American Customer Satisfaction Index. In order to support or reject selected hypotheses derived from the case study insights, the index in combination with financial data provided by Stern Stewart & Co. offers the unique opportunity to benchmark industries with respect to their relative level of customer satisfaction, product or service quality, and at the same time the impact of these factors on customer loyalty and eventually financial returns (Fornell et al., 2005). Looking at one of our core questions from the case studies, we intend to answer the question of whether there are significant differences between the focus on differentiation through quality – which we intend to measure through customer satisfaction – in different contextual environments or settings. At the same time, we want to highlight whether the “best” or optimum level of customer satisfaction promising the highest returns differs across companies or industries. This, in return, implies a potential downside of exaggerated service and product quality.
To be able to answer these questions, we need to look at a far broader research sample, preferably very large with selected groups of diverse industries. The following chapter will define the actual sample of companies selected for both the qualitative as well as the quantitative work.

The quantitative approach behind the ACSI is a methodology with two fundamental properties. First, the methodology must recognize that a CSI is a customer evaluation that cannot be measured directly. Second, as an overall measure of customer satisfaction, the CSI must be measured in a way that not only accounts for consumption experience, but is also forward-looking. For ACSI to be forward-looking, it is embedded in a system of cause- and effect relationships as shown in the following figure. The model makes the CSI the centerpiece in a chain of relationships running from the antecedents of customer satisfaction, such as expectations, perceived service or product quality, value, and loyalty. Since relatively recently only, causal networks can be applied to customer satisfaction data. Both (a) distributional skewness, as well as (b) multicollinearity, are extreme in these types of measurements and make customer satisfaction difficult to analyze. Since it is now possible to observe and measure these within a system of equations representing the illustrated model structure, it is now feasible to measure previously unobservable factors and eventual drivers of financial return.

Fig. 13.   ACSI-measurement model.

Structural equation modeling is the approach chosen to determine the factors within the ACSI-model. The SEM-technique cannot draw causal arrows in models or resolve
causal ambiguities by itself. Theoretical insights and judgments by the researchers behind this structure are highly important and certainly a key to the quality of the ACSI.

The measurement model deals with latent variables and indicators, whereas it considers, within a confirmatory factor analysis unmeasured covariance between each set of latent variables, straight arrows from the latent variables to their respective indicators, straight arrows from the error terms to respective variables, but no direct effects connecting latent variables. The ACSI relies on partial least square techniques to achieve a validation of the structural model.

Due to the availability of the ACSI-data, the research in this work is able to rely on readily available and operationalized constructs with highest standards in terms of reliability, validity, precision, and robustness. The measurement of the constructs is pursued with a very high number of customers. The 10-point Likert-scaling as the means to translate perceived customer measures into quantifiable measures, items, and constructs, is in line with newest research.

The overall goal was to identify patterns and relations between certain factors of the ACSI-model and financial performance, measured through the Return on Capital figure provided by Stern Stewart. To analyze and illustrate these relations, we will primarily make use of, on the one hand, linear and quadratic regression analyses, and, on the other hand, descriptive statistical techniques.

Regression analysis is pursued in order to
- identify and explain relations, and
- predict the value of dependent variables.

Since, different from discriminant analysis, regression analysis defines relations with a defined direction and strength, it needs to be used for research on an independent and a dependent variable. This is clearly given with the presumed relations between, on the one hand, different factors relating to customer satisfaction and, on the other hand, measures for financial performance.

### 3.3 Research Sample

The research sample can be divided into two groups relating to, on the one hand, the qualitative analysis of the case studies and, on the other hand, the quantitative analysis of data derived from the American Customer Satisfaction Index.
Concerning the sample of companies included in three case studies, we looked at (a) larger companies which have a significant amount of personnel involved in the active design and development of Management Control Systems, and, at the same time, (b) companies who experienced relevant and significant changes in their environment and corporate strategy resulting in changes of their business strategy.

We conducted 32 semi-structured interviews and follow-up interviews with 17 companies from various industries as e.g. Insurance, Electronics Manufacturing, Energy, Logistics, Pharmaceutical Production, and Consumer Goods. The set of companies was based in Europe, namely in Switzerland, the Netherlands, and Sweden. Our interview partners were primarily from top management, group controlling, corporate quality, or business development positions. In addition, we conducted a foregoing action research project on the design and integration of top management information through structural equation models of non-financials; specifically through the integration of perceived measures of customer and employee satisfaction. Last but not least, we pursued a series of four workshops on topics related to several aspects of management control or performance measurement, such as strategy deployment, operationalization, and external/internal reporting. The following table provides an overview of the data collection during research phases one and two:

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Interviewees/Participants</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-structured interviews and follow-up interviews</td>
<td>January 2004 – June 2005</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>4 Workshops on Performance Management Design</td>
<td>July 2004 – December 2004</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Best-Practice-/Expert-Presentations in PMD-Workshops</td>
<td>July 2004 – December 2004</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Action Research on Customer / Employee Satisfaction Management</td>
<td>June 2003 – May 2004</td>
<td>16</td>
<td>1</td>
</tr>
</tbody>
</table>

Fig. 14. Overview of empirical data set from research phases 1 and 2.
The eventual case study research was conducted with a Swiss insurance company, a Swedish Energy provider, and two (German and Dutch) manufacturers of electronics goods.

Additionally to our exploratory qualitative research, the application of a broad quantitative analysis on the basis of ACSI-data is intended to deliver macro-level insights or patterns for certain groups of companies and industries. By answering the second research question, we consequently intend to develop the qualitative evidence further on a more generic level and additionally try to derive certain implications for practice. In general, for quantitative types of analyses, the researcher is considered external to the actual research, and results are expected to be replicable no matter who conducts the research. The strengths of the quantitative paradigm are that its methods produce quantifiable, reliable data that are usually generalizable to some larger population. The quantitative research used here applies methods that are designed to ensure objectivity, generalizability, and reliability.

The ACSI uses customer interviews as the input to a multi-equation econometric model developed at the Stephen M. Ross Business School at the University of Michigan. Talking about the quantitative size of the research sample, we are initially confronted with a spectrum representing a substantial portion of the US economy, accounting for about 30% of the GDP. Even though these companies are covered through a much larger amount of industries, this research limits the results to be discussed to four industries which provide the most significant and most relevant results related to our case study insights.

The thesis analyzes 10 years of data from four industries, namely
- energy service providers,
- food manufacturers,
- phone service providers, and
- financial service companies.

The data for these four industries is covered by a set of 42 companies. All companies have in common, that they have various direct interfaces with the customer. They are all relatively large due to the nature of the ACSI: to be present in the empirical analysis, the companies need to amount for a significant customer-share of the industry (approx. >= 5%).
In order to provide answers to the contingency-based focus of the research, the industries are additionally diverse in aspects as, for example, its complexity, service or product orientation, and industry competitiveness.

The customers considered for the ACSI are customers with recent experience as purchasers and users of specific products, services, companies, and agencies. These customers are identified by screening a randomly chosen adult (age 18-84) in telephone households selected by national (or for some industries, regional) random-digit-dial probability samples. Those who qualify are interviewed by telephone; interviews are conducted throughout the year at an assigned quarter for each of our four industries.

The ACSI in total is based on about 65,000 interviews annually, with 250 to 260 interviews completed per company/agency. Industry sample sizes vary from 750 to 10,000, depending on the number of companies in each industry. Since our research relies on the results of 42 companies, we can estimate the customer sample size as approximately 13,000 customers per each year and 130,000 customers or interviewees in total (numbers of customers interviewed for the data set utilized in this research).

3.4 Research Model

The research model of both the qualitative and the quantitative research approach is based on the ideas underlying the structure of the American Customer Satisfaction Index. As described previously, the ACSI makes the CSI the centerpiece in a chain of relationships running from the antecedents of customer satisfaction – expectations, perceived service or product quality, and value, to the resulting and financially relevant factor customer loyalty.

What we are investigating in our qualitative research is the way how different companies focus on either increased customer focus and quality or increased efficiency. At the same time, we want to look at the way these targets impact the focus on more developed MCS-practices. The benefit of these strategies has to eventually be linked to financial returns. This cause-and-effect-link should ideally be discussed in relation to already existing and proven structures used for the ACSI.

The main argument for the relevance of the ACSI-model is the fact that customer satisfaction is a direct driver of loyalty and financial returns. With the help of our approach, we can see this link in a broader context, and discuss potentially hidden or
unknown cause-and-effect-relations which link quality and efficiency targets with customer perception and eventually financial outcomes. So far, the ACSI has proven that customer loyalty has a certain, depending on the industry more or less significant, impact on financial returns. At the same time, we know or assume that a maximization of quality targets or customer satisfaction is sometimes not equivalent to a maximization of profits. To discuss performance links, trade offs, and drivers of financial performance in relation to quality targets, more developed MCS, and customer perception, we make use of a generic structure illustrated in figure 15.

The figure illustrates that an increased customer focus eventually leads to more developed MCS-practices, and an increased level of corporate quality. However, how these effects impact the factors within the ACSI-model has to date never been thoroughly discussed. In the context of the ACSI, we assume a direct relation between customer loyalty and financial performance. In conjunction with quality targets and more developed MCS practices as key drivers to increased customer loyalty, this relation might look a little more complex. Higher corporate quality supposedly impacts the customers’ perception of product and service quality, the perception of the value, as well as the efficiency of a company. The case studies should help to provide better insights and answers to black box 1 within our more generic research model.

![Fig. 15. Research model one with a focus on increased customer satisfaction and quality.](image)

Whereas the foregoing model links quality targets with our ACSI structure, the second research model brings together efficiency targets with the ACSI model-structure and
financial returns. Similar to the other model, we assume certain relations leading to increased profitability.

**Fig. 16.** Research model two with a focus on increased efficiency/productivity.

An increased focus on efficiency and productivity is here supposedly working in two ways: on the one hand, companies seem to achieve this target by focusing on process reorganizations and leaner corporate structures. On the other hand, companies intend to achieve this objective by focusing on more developed MCS supporting efficiency targets. Both practices undoubtedly impact certain performance factors within our ACSI model. Moreover, they should also, similar to the model focusing on the quality objective, have a direct or indirect impact on financial performance. Just as for the first model, the structure and links within this second extended cause-and-effect-model is to be analyzed with the help of our case studies. Furthermore, in the quantitative part, we want to focus on an in-depth discussion of the first research model (Fig. 15).

The case study results of three different industries are illustrated in the following chapter.
4. Exploratory Case Studies

The qualitative analysis of three selected companies is following an exploratory approach. In general, the goal is to gain insights into the first set of research questions, which are asking for connections between strategic changes in different corporate settings and corresponding changes in Management Control Systems.

The focus of the case studies is therefore to provide
- a detailed analysis of the strategic change process,
- a categorization of elements of management control which are utilized to support each strategic phase, and
- the qualitative observation of eventual connections and causalities in this context.

The case studies were developed with the help of both, results from workshops, as well as insights from specific interviews pursued with each company. The results from the workshops and the interviews were always structured with similar patterns structuring the cases according to the following topics:
- general information about the company
- context of the company
- development and changes in the corporate context
- development and changes in the corporate and/or business unit strategy
- results of strategic changes
- changes in the concomitant MCS
- perceived efficiency of selected MCS elements.

The analysis of the data from the workshops and the interviews furthermore follows a scheme of Miles and Huberman (1994), who suggest a number of methods for the evaluation of case studies, as listed in the following:

- the compilation of the case studies,
- the elaboration of categories for the formulation of theories, and
- the comparison of the case studies.

The results of these research steps are illustrated in the following.
4.1 Case Studies

This chapter describes case studies of an energy provider, an insurance company, and electronics manufacturers. Further case study insights on a passenger traffic business unit, the energy provider, as well as the financial service industry is provided in the appendix. The following case studies on companies or groups of (two) companies describe the organization of the companies, the change of the corporate or business strategy over time, as well as the adaptive processes leading to changes in the MCS in a comparable pattern. Each case study closes with an evaluation and illustration of case-specific particularities. The companies’ names are not used in the following as agreed upon with the participating interviewees. All results are referring to interviews pursued in the years 2004 and 2005.

4.1.1 Case Study – Energy Inc.

- **Characterization of Energy Inc.**

  The company is currently Europe’s fifth largest generator of electricity and the largest producer of heat in the region. In 2004, the corporate group amounted for sales of approx. EUR 12 Bio. Within its operations in mainly the countries of Sweden, Finland, Germany and Poland, the company employs 35,000 employees. The wholly state-owned company is active in all stages of the value chain in the energy industry: production, trade, transmission, distribution, and sales (Annual Report 2004). These operations were in the beginning essentially local. The nineties changed these circumstances drastically, Energy Inc. had to become a viable company acting in an open market and, nowadays, plays an important role in opening up the energy markets for competition and efficiency. Experiences from the home market provide a solid foundation for a considerable streamlining of all business units, and an efficient design of appropriate Management Control Systems in a growing organization (Interview from 11/2004).

- **The Growth Period**

  Starting out in the 1990s, Energy Inc. transformed from a state governed authority into a state-owned company. Reasons for this change in governance can be seen in the
desire to be perceived as a highly transparent company. Additionally, the goal was to change the corporate image, moving away from the public perception of a state authority towards the role of a competitive market player (Company-presentation 4th workshop, 11/2004).

Strategic targets on group level were, during this period, international growth and the expansion of the business base. Looking at the hard facts of the company, it in fact encountered a continued and very strong growth. Energy Inc. tripled in size and created advantageous market positions for a continued growth in Europe. The new organizational structure is illustrated in the following figure. Three regional business units represent the group in different parts of Europe, namely the Nordic region, central Europe, and Poland as a separate region.


**Fig. 17.** Organizational structure of Energy Inc. after growth by acquisitions (Company presentation 2004, Annual Report 2004).
 Emerging targets, conflicts, opportunities, and threats

Talking about essential reporting indicators on top management level, one can say that, within these years, the main focus was, first of all, on the number of businesses outside the core business of Energy Inc. and, secondly, on the total amount of customers. Growth was the key in the 1990s. So far, the strong set of annual accounts shows that Energy Inc.’s strategy to grow within the European markets is the correct path to follow. Benefits from this strategy can be seen mainly in the

- more effective use of resources,
- a broader knowledge base for more efficient solutions, and
- a more effective design of processes and improved customer offerings.


Similar to changes in the home country of Energy Inc., other countries followed the trend to deregulate the energy-markets in the nineties and the following years. This again opened new market opportunities in the area of the core business of Energy Inc. Since the beginning of the extensive acquisition process in 1999, the company has focused on the completion of the business unit integration and the utilization of new synergies. Still though, the focus had to be even stronger on profitability in order to increase the equity-asset ratio and, by this means, allow additional acquisitions. Therefore, the RONA-(Return on Net Assets) figure remained a highly important key indicator for business unit performance and profitability. At the same time, talking about portfolio strategies, the company tried to sell non-profitable businesses, as well as businesses outside the core portfolio. Even though, especially during the growth period, a large part of strategic ambitions of Energy Inc. were founded on the management of the business unit portfolio, these targets can still be seen as the origin for changes in more operational strategies on business and process levels. Taking the increased RONA-target as a result from Energy Inc.’s portfolio management strategy for its business units, we clearly see a strong impact on the business management level, in particular with regard to the strong focus on cost efficiency in its operations. As a result from this, again productivity and cost reductions in key processes became a highly important target throughout the organization (Company presentation 4th Workshop, 12/2004).
Now being well on the way towards achieving the defined RONA-targets for most of its business units, new strategic ambitions are included in addition: differentiation strategies with a look on customer and employee satisfaction, as well as a better handling of environmental aspects, are now added to the strategic ambitions. Summing up the development of Energy Inc., we can identify three strategic priorities for our case study subject. As illustrated in figure 18, we want to distinguish between a priority on growth, consolidation, and differentiation.

![Strategic priorities of Energy Inc. over time.](image)

**Fig. 18.** Strategic priorities of Energy Inc. over time.

The following paragraph illustrates measures taken in order to work towards the achievement of the new objectives.

- **New performance management initiatives**
  - **Synergy initiatives**
    Several measures were initiated and planned in order to improve the grip on the cost situation throughout the group. So far, efficiency in key processes and the rationalization of unnecessary sub-tasks were core objectives. The main benefits were achieved in business processes within the areas purchasing and risk management, but also in support processes as, for example, IT(Interviews 11/2004).
    The optimization and concentration of units in the group is almost complete by now, and generated, so far, also the by far highest benefits. A remaining major
challenge is to make greater use of synergies within the key operations of the group. Expected benefits are here to be seen in aspects as economies of scale, and knowledge base advantages, which can, for example, be realized within the areas risk management and maintenance. In the latter, efficiency and quality are intended to be benchmarked and improved over time. Especially considering the corporate growth by acquisitions, the standardization of these processes leads to further improvement potential: benchmarking and best practice comparisons of relatively similar processes across business units is possible and can lead to substantially improved performance.

- **Process Management / Mechanistic performance management**

In line with these plans, a stronger process orientation is necessary and desired by Energy Inc. in order to obtain more mechanistic, standardized and quantifiable, operations. Key performance indicators are intended to be identified for a large number of operations including

- generation (maintenance and production planning)
- heat (e.g. control of meters, waste to energy)
- distribution
  (e.g. operations centers, customer process & IT, workforce management)
- sales (e.g. customer service, customer management, SAP-implementation).

(Company presentation 4th workshop, 12/2004)

As illustrated in the following graph, we can state that Energy Inc. follows certain characteristic steps in the development of its Management Control System. Within its “business performance” program, step one describes the improvements achieved mainly with the cost leadership initiatives. On a strategic level, a broad balanced scorecard perspective in the top management reporting system was reduced to figures representing efficiency in operations and cost performance of business units. This reduction in information quantity was additionally accompanied with benchmarking opportunities within the grown organization. However, comparability of financial and non-financial data, such as customer and employee satisfaction, was here additionally a major challenge for Energy Inc. New opportunities were previously described as a broader knowledge base and benchmarking opportunities for more efficient solutions, as well as more efficient processes and customer offerings. In order to obtain these
new opportunities, different projects were initiated, which are represented by point three and four in the following graph (Company presentation 4th workshop, 12/2004).

![Diagram of project initiatives]

**Fig. 19.** Development of performance management at Energy Inc. in four phases. (Based on Interviews in 2004)

- **Management of non-financial performance – customer and employee satisfaction**

  Together with the ‘cost-cutting’ priority, Energy Inc. advanced its strategic ambitions in the direction of becoming a leading European energy company. Besides the focus on continued growth by acquisitions and the utilization of cross-border synergies, Energy Inc. added the goals to become
  - number one for the customer,
  - number one for the environment, and
  - the employer of choice.

  In order to substantiate these goals in the organization, several projects were initiated. Besides projects focusing on an improved design and monitoring of key processes, the goal was to determine measures, which were comparable across the larger group of business units within Energy Inc. and, additionally, provided a reliable and valid measure of performance and progress in the newly defined areas. Furthermore, the company had to define models which showed the relevance of certain operational and strategic performance aspects for the stated long-term goals. The
answer to this challenge was an approach focusing on non-financial performance measures (1st action research project, 2004).

Taking customer satisfaction as one example, the company identified several requirements that had to be met. The new non-financial performance measures should support strategic and operational decisions, as well as a facilitation of incentive structures strongly linked to new targets. Cause-and-effect-structures, which in this context mean the design of information with links among operational non-financial parameters and in the end the financial outcome or benefit is the approach intended to indicate the relative importance of single performance aspects. Based on findings from interviews, discussions and workshops, suggestions were developed containing a design of a partly aligned measurement model of customer satisfaction at Energy Inc. Often, and also in our case, one is confronted with a set of interrelating aspects. For example, what determines satisfaction, and how does affect the loyalty of the customer? Also, one is primarily interested in knowing how certain aspects of operational performance affect the overall performance and perception of the customer in relation to the impact of pricing alternatives (Initial guidelines for the 1st action research project, 2004). The applied structural measurement approach, which ideally represents real cause-and-effect structures defined by managers from practice, promises to provide highest precision of the results. (Kristensen & Westlund, 2004)

Similar to the approaches with the focus on customer satisfaction, Energy Inc. introduced non-financial performance measures which supported further competitive elements of the organization. To be the ‘Employer of Choice’ is one additional, clear goal, which intends to attract and develop people with leading competence.

The three main goals within this framework were formulated as:

- Ensure first class management planning and leadership.
- Ensure access to expertise that meets our long-term needs.
- Ensure strong employee commitment.

(2nd action research project, 2004)

In addition to the employee satisfaction analysis, the employee survey itself is here intended to be a strong basis to initiate dialogue for discussions and improvement measures. Even though surveys have been pursued previously, a large room for improvement was also identified in the design of this analysis. Important is here again that requirements concerning the empirical approach are carefully met: while
previously, three core outcome factors were measured separately, the new approach promotes a structural measurement approach similar to the customer satisfaction analysis.

- **Changing strategic priorities over time**

The company of this case had to face drastic changes in its external environment which in return lead to changing strategic priorities over the period of the last decade. The following illustrations shows how, starting out from a monopoly situation, Energy Inc. turned towards a strong growth target and focused on increased RONA expectations for its business units. The cost focus was pursued with the help of two initiatives: On the one hand, we see a strong priority on a synergy-focused re-engineering of the organization. On the other hand, we encounter, in the long run, a growing focus on improved efficiency in key processes, as well as an effective prioritization and design of customer and employee related operations. Key performance indicators on process levels in combination with customer and employee satisfaction measurement models are initiatives which intend to support these new targets. Strategically spoken, the company follows, in its own words, the goal to become the ‘no. one for the customer’, and the ‘employer of choice’.

<table>
<thead>
<tr>
<th>Year</th>
<th>During 1990s</th>
<th>2000</th>
<th>2000 - 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger</td>
<td>Market liberalization 1996</td>
<td>Deregulation of energy-markets in numerous European countries</td>
<td>Synergy driven management</td>
</tr>
<tr>
<td></td>
<td>Transformation from state-governed to state-owned company</td>
<td></td>
<td>Price pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Need to create a group brand &amp; common values</td>
</tr>
<tr>
<td>Main Target</td>
<td>Growth</td>
<td>Focus on the core business</td>
<td>Consolidation</td>
</tr>
<tr>
<td></td>
<td>Expansion of the business base (telecom, waste, regional)</td>
<td>Cost focus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consolidation</td>
<td></td>
</tr>
<tr>
<td>Essential Indicators</td>
<td>Volume (Customer figures)</td>
<td>Rate of Return, here: Return on Net Assets (RONA)</td>
<td>Definition of ‘Close the Gap’- indicator</td>
</tr>
<tr>
<td></td>
<td>Number of businesses outside the core business</td>
<td></td>
<td>Customer satisfaction measurement models</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Employee satisfaction measurement models</td>
</tr>
</tbody>
</table>

Table 3. Changing triggers, targets, and indicators over time.
(Company presentation 3rd workshop, 12/2004)
The previous table summarizes the corporate development with its main triggers of change, the key objectives of the management at a certain point of time, and essential performance indicators. Over a period of 15 years, we differentiate between three main strategic phases.

As we can see in the following qualitative chart, a more synergetic and efficient use of human and organizational resources between old and acquired business units and functions was achieved relatively fast. In order to achieve and substantiate a sustainable focus on both quality and productivity, the long term investments in financial and non-financial performance indicators on operational and strategic levels should provide positive outcomes. A better prioritization of customer related processes, as well as a more efficient design of these processes should enable Energy Inc. to anchor and expand its focus on differentiation and quality throughout the group (Company presentation 3rd workshop, 12/2004).

![Strategic priorities and corresponding MCS-practices at Energy Inc. over time.](image)

**Fig. 20.** Strategic priorities and corresponding MCS-practices at Energy Inc. over time.

The following paragraph will briefly sum up the key insights of this case study with a focus on the most important changes in the MCS during the strategic development over time.
• Summary

This case study describes an Energy company which pursued significant strategic changes due to a continued phase of liberalization of energy markets in many European regions. These strategic changes implied a continued and peerless growth by acquisitions, an ensuing focus on lowering costs and increasing quality throughout the group and, last but not least, the goal to establish Energy Inc. as a company renowned for high quality, professionalism, and reasonable pricing.

Within this study, one can see how these changes have an impact on

• the way Energy Inc. makes use of synergies across old and new business units
• the long term objective to anchor efficiency in key processes throughout the organization
• the way Energy Inc. follows the goal to achieve a stronger focus on environmental issues, as well as a higher satisfaction of its shareholders, customers, and employees.

Regarding our first research question, we asked specifically if, and how, companies add and change certain, more developed, practices of Management Control Systems in order to follow new objectives or business strategies. Energy Inc. went through various significant changes within the last years. One can say with high certainty that, in this case, our company adapted and changed a number of practices with regard to new management objectives.

The main case-specific changes with regard to the sub question of our first research question are summarized in the following:

• business re-engineering of processes as well as the rationalization of unnecessary sub-tasks lead to higher productivity; the increased process focus can be categorized as mechanistic control to support productivity

• the optimization and concentration of units lead to higher productivity and efficiency
4. Exploratory Case Studies

• future benchmarking opportunities within the larger group intend to support both
  o the awareness of the importance of high efficiency and quality (organic control)
  o the mechanistic monitoring and increased control of efficiency and quality

• a future focus on standardizable and quantifiable operations should lead to a
  o stronger process orientation (mechanistic design of processes in order to support efficiency)
  o definition of standardized KPIs across business units (broader base of reported information)

• the goal to find the right level of scorecard complexity by weighing reporting benefits with reporting effort, costs, and acceptance by employees, should increase the acceptance level of the operational reporting system (trade-off situation on the informational dimension of management control)

• a broader information base by reporting data on customer and employee satisfaction supports new corporate targets (mainly service quality and corporate quality)

• the discussion of employee and customer satisfaction furthermore serves as an interactive platform to communicate corporate targets across all business units (organic management control in order to support corporate quality)

Summing up, several MCS elements can be identified at Energy Inc. which surpass traditional forms of control in order to increase efficiency of operations, quality of services, employee focus, and corporate quality. In the long run, a more standardized and transparent organization of key processes is in support of all these targets. Moreover, the company had and has to face a trade off between the level of acceptance and the utilization of more complex and broader scorecard applications in corporate key processes. The creation and communication of corporate quality objectives is supported through a combination of a broader usage of management information, as well as the interactive management and communication of these targets.
4. Exploratory Case Studies

4.1.2 Case Study – Insurance Inc.

- **Characterization of Insurance Inc.**

Insurance Inc. is a medium sized insurance company with approximately 4,800 employees. The company is mainly active in Switzerland, where it generates about 60% of all premiums. A period of international growth expanded the companies activities throughout 5 European countries over the last years. With 40 branch offices only in Switzerland, Insurance Inc. offers services for corporate and private customers as well as contractual partners and asset customers. The company evolved from a merger between a company active primarily in life insurance and a previous partner active in life- as well as non-life insurance areas. (Annual Report 2004, Kick-off workshop, 8/2004)

- **The External and Strategic Development and changes in the Management Control System of Insurance Inc. over time**

(The following case refers specifically to the developments in Switzerland. Developments and changing strategic priorities in other countries are excluded.)

During the last 8 years, Insurance Inc. went through three major strategic changes. The first phase can be characterized with the target to become an all-industry insurance company. The merger between two companies with foci on either non-life or life-insurance was pursued for mainly two reasons.

One reason is, that the general market situation was highly attractive for an increased volume of premiums. A high yield on capital due to the good performance of financial markets spoke in favor of growing customer bases and growing numbers of premiums. The merger intended to support growth and an increase of market share, and was accompanied by several national and international partnerships and acquisitions. (Presentations on 3rd and 4th workshop, 2004)

The second reason is, that the integration of different insurance industries (e.g. non-life- and life-insurance) promised to generate further synergy-effects: cross selling potential was supposed to increase market share in complementary insurance-
industries. In the long run, the goal was to be active as a true all-industry insurance provider with new opportunities to sell products from non-life to life customers and vice versa. Different to many other companies in merger situations, Insurance Inc. did neither expect, nor pursue high reductions in operative costs within the first years after the merger. (Quote from an Interview in 2/2005: “Until today, it is hard to measure the effects from the merger in terms of cost reductions.”) Still, a new segmentation of customers and a new organizational grouping of industry-branches aimed to reduce costs especially in administrative functions.

- **Organizational changes within and after the merger period**

**Project ‘A’ (Tempo)**

Parallel to merger related projects, another project (project ‘A’) intended to reorganize the company with a focus on customer segments. Here, the main objective can be seen in the desire to form an organization, which enhances the cross selling objective by aligning business functions with customer segments. Especially distribution and sales were certainly the most interesting areas, since the starting point for premium sale opportunities can be identified within these functions. In the long run, these targets implied a more flexible organizational structure which had the potential to lower costs, while at the same time improving the competitive position in the market. Certainly, the goals can be defined as challenging and implied quite drastic changes for the organization. The following illustration lists the main objectives, as well as three areas of activity within Project ‘A’.

(Interview 2/2005. Project ‘Tempo’ stands for the creation of specialized “fabrics” life and non-life (single & collective) to create “volume”; the administration remained separate from “fabrics”)
4. Exploratory Case Studies

Fig. 21. Targets and main areas of activities in project ‘A’ (“Tempo”).

The key activity to put these objectives into practice was, within project ‘A’, the transformation to an all-industry insurance, focusing on higher customer proximity, customer use, and customer satisfaction. The way to do this was seen in replacing the existing organizational segments “life” and “non-life” into the more customer-oriented segments private customers (PG), companies (U), investment partners (A), and contractual partners (VP). The core of the organization can be seen in the areas PG and U. A centralized net of distribution channels intended to offer an integrated service spectrum to the newly defined and divided customer groups PG and U.

Fig. 22. New organizational structure according to project ‘A’ (“Tempo”).
(Tempo-Trends, 7/1996)
4. Exploratory Case Studies

As illustrated in figure 22, market share and increased profit from cross selling ambitions, and an increased customer-focus were targets and areas of activities. The new customer segmentation was able to support the focus on innovation and change, and lead to a modernization of customer specific product offerings. (Interview, 2/2005)

However, apart from previously stated efficiency targets, the real merger-related benefits from cross selling ambitions were, or still are, hard to identify. Also, similar to other cases, we frequently see that reorganizations often come along with additional difficulties and efforts for the integration of new corporate business units: previously existing management information systems (MIS) were, also at Insurance Inc., hard to align and lead to the initiation of another project focusing on the improvement of the corporate data warehouse and CRM. (Quote from Interview in 2/2005: “Especially after the reorganization, the management information was far from sufficient to identify long-term cross selling benefits.”)

In the long run, the cost situation for Insurance Inc. deteriorated further, leading to the initiation of another project ‘B’ (“Dynamo”). Again, this project lead to a whole new organizational structure. (Interview in 2/2005)

• **Changes during the starting financial crisis**

Following the post-merger phase, Insurance Inc. tried to move towards being an all-finance provider, searching for the integration of real banking products into the offered insurance-product portfolio. Similar to efforts pursued by competitors, the all-finance initiative did not last long. Among other reasons or issues, certainly, the starting financial crisis was one key problem which deterred Insurance Inc. from continuing the all-finance initiatives from this period. Citing a quote from an interview taken in 2/2005, “...The bad investment/market situation lead to huge decreases in terms of capital earnings, therefore, certainly also the integration of banking products became more and more unpopular.”

Over time, Insurance Inc. revised its decision to reorganize functions according to customer segments.
Project ‘B’ (Dynamo)

The main reason for the new project ‘B’ (“Dynamo”) can be seen in the weakening financial market, a correlated increase of claims (especially in invalidity, which is related to the weaker economic situation and unemployment rate), as well as an increase of costs. (Project Dynamo was, and is, different from project Tempo, only relevant for the national business units of Insurance Inc.)

Looking at functions as the production (meaning in insurance terms the elaboration and definition of insurance products), the controlling, as well as administrative functions as accounting or IT, Insurance Inc. revised the customer focused organization by pooling them according to life- and non-life segments. According to a management statement, “... the reorganization achieved a new leadership structure and leaner processes, as well as heavily concentrated, area-spanning support functions.” (Interview, 2/2005)

Project ‘B’ was initiated in May of 2000 and followed a twofold goal-setting which is illustrated in the following figure.

![Diagram](image)

**Fig. 23.** Goals of Project ‘B’ (“Dynamo”). (Project Documentation, 2000)
The illustrated growth impulses in figure 23 were initiated, whereas, at the same time, cost reductions in the amount of CHF 60 Mio. were achieved already in the first year after the project. Altogether, Project ‘B’ achieved a constant cost reduction of around 15% within the reorganized functions or areas (Management Report, 2001). With increasing pressure from low-performing financial markets, a reduction of operative costs was, more and more, a priority among the most important management targets, and successfully pursued in the second phase of the project. This phase encompassed the following tasks or objectives.

- Restructuring and reorganization
- New focus and organization in distribution and sales
- Installation of an AD-Management (external agents)
- Optimization of the areas P, U, and non-life
- New competence and broker centers
- New growth initiatives.

(Project Documentation (Dynamo Programs), 2000)

One key to reduce costs was the re-organization of the sales and distribution channels. Within the national organization, sales and distribution made up for one third of total operative costs. Distribution and sales were restructured with reductions in infrastructure, sites, and personnel. (Interview 2/2005) However, the functions remained customer centered, still leaving room for potential cross-industry sales between the merged companies and other partners, as well as acquired business units. Nowadays, the organizational structure is divided into the units distribution management, as well as the market areas “risk provision” for companies, “risk provision private”, non-life, and e-business/contractual partners. The divided distribution channels merged into one central unit as mentioned previously (Dynamo Project Documentation, 2000).

The following illustration shows the organizational structure after the implementation of Project ‘B’ (Dynamo).
Fig. 24. New organizational structure after the implementation of project ‘B’ ("Dynamo"-Project-Documentation, 2000, Annual Report 2003).

- **Illustration of the Development of Key-Financials over Time – the growing relevance of operative costs**

As described, growth was in general attractive during the merger phase, since the margin between premiums and annuities was still substantial in the markets at that time. Moreover, the high and growing yield on capital promised higher benefits resulting from a rising capital base. The benefits of a high yield on capital decreased to around zero during the crisis of financial markets (Interview 2/2005). In addition to that, further effects burdened Insurance Inc. in parallel:

The insurance figures of invalidity cases rose drastically due to high unemployment rates, which in return can be considered as an effect of the economic crisis (‘Doubled negative effect’). Different from past experiences, the share of people who, justified or not, actually

(a) applied for invalidity insurance, and

(b) were granted annuities,

was significantly higher. This in return caused high additional costs for the company (Interview 2/2005).
Resulting from these new circumstances, the equity backing of insurance premiums was critical in 2002. Additional growth in premiums was therefore not possible, even reductions were needed to fulfill the equity requirements. The following graph qualitatively illustrates the development of four important key financials of Insurance Inc. over time: premiums, annuities, operative costs, and yield on capital (Interview 2/2005)

Fig. 25. Qualitative illustration of selected key financials at Insurance Inc. over time (Interview 2/2005).

Looking at the graph from the figure above, we see that in the new described situation, not only growing numbers of premiums were not desirable or even no option at all, but also capital earnings were decreasing or at a very low level. Within this situation, “operative cost” was the only control lever left which promised to improve the corporate situation. The realization of lower operative costs was initially pursued, as described, through organizational changes or reorganizations within Project ‘B’ (Interview 2/2005)

After the achievement of higher organizational efficiency, the company had the possibility to generate new growth in its customer base. In the long run, it seems obvious that a large and growing number of customers represents a success driver of an insurance company. According to statements from Insurance Inc., the “... number
one driver for customer attraction is in this industry the price level of the insurance. A cheaper insurance is a major driver for customers to select this specific provider. ...” Lower operative costs through business re-engineering and a more efficient use of resources make these low priced offerings possible.

- **Relevance of Customers Satisfaction and Quality – The Target ‘Service Excellence’**

Apart from the strong priority on the pricing aspect, Insurance Inc. intends to additionally focus, more and more, on the customer with the help of quality initiatives. According to statements from the management, new aspects are planned to be an increased focus of attention in future Management Control Systems.

These aspects encompass for example:
- the quality of interfaces with the customer
  (distribution, sales, complaint handling, etc.)
- service availability (e.g. quality of telephone hotlines)
- complaint management
- other non-financial measures with a focus on customer satisfaction.
  (Interview 2/2005)

Looking at the strategy definitions over time, we see that customer focused elements were a core of Insurance Inc.’s vision and long-term strategic ambitions.

The current strategic goals are defined as follows:
- “We want to be known as a dynamic provider of premium insurance products and financial services.”
- “We want to be known for high quality and personal service”
- “We want to perfectly satisfy the needs of our customers in terms of sustainability and growth of values, as well as the protection of risks”
- “In the long run, we want to increase the service quality for our customers, we want to increase the asset value and the earnings value for our shareholders, and we want to increase the satisfaction of our employees.”
In order to reach higher quality levels in distributions, Insurance Inc. increased the effort for the education of external sales managers and the responsible managers of the office staff. The objective was here as mentioned to achieve “... more satisfied customers and employees in order to achieve sustainable success in the years to come...” (“Service Quality as a Trademark”, extract from a management report from 2002). The educational requirements for key employees were increased by pursuing certification programs for provision-based consultants. Education in risk management was provided to selected specialists of the topic “insurance against damage”.

Additionally to the previously mentioned projects, the company continues to pursue an “Excellence”-approach for the last three years with the target to become a quality and service leader. Three key activities within this program are listed in the following:

- The execution of a broad customer survey with the goal to determine expectations and satisfaction levels of customers with the service quality and customer processes. Main objective of this activity is to determine potential areas and measures for improvement.

- The design and introduction of process management in order to continuously improve costs, quality, and timeliness or speed of customer related (Corporate Portrait 2004: “Towards better Corporate Quality”).

- The implementation of a systematic complaint management system in order to satisfy customers on the one hand, and, on the other hand, to detect and fix internal grievances as fast as possible. According to a company statement, these and similar initiatives should be a “... prerequisite and success factor in more and more deregulated insurance markets of the future.” (Management Report 2002)

**Changing Strategic Priorities and Selected Corresponding Performance Measures at Insurance Inc.**

The insurance company had to go through significant external turbulences as well as – often correlated – changes in strategic priorities. The external turbulence was mainly impacted by the boom and the following crisis of financial markets. Certainly, the growth and merger strategy, as well as a continued effort to improve service quality and especially operational efficiency, are, in part, results of these changes. In this context, it is interesting to see how main corporate objectives vary from phase to phase. A brief survey of external and internal turbulences or “triggers”, changing
corporate objectives, and selected corresponding essential performance indicators for the Insurance company in different phases is illustrated in the following graph.

<table>
<thead>
<tr>
<th>Year</th>
<th>1996</th>
<th>1999</th>
<th>2000</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trigger</strong></td>
<td>Merger between non-life and life-insurance</td>
<td>Boom of financial markets</td>
<td>Beginning of crisis</td>
<td>Sustained crisis in financial markets</td>
</tr>
<tr>
<td><strong>Main target(s)</strong></td>
<td>Establishing of Insurance Inc. as an “all-industry” insurance</td>
<td>Participation at market growth</td>
<td>Cost-reduction</td>
<td>Profit before growth</td>
</tr>
<tr>
<td></td>
<td>Use of Synergies</td>
<td>Realization of the goal to become an “all-finance” provider</td>
<td>Resessment of portfolio structure</td>
<td>Focus on core-competencies</td>
</tr>
<tr>
<td><strong>Selected Essential Indicators</strong></td>
<td>Market share in all industries</td>
<td>Market share</td>
<td>Cost of operations</td>
<td>Insurance-related results</td>
</tr>
<tr>
<td></td>
<td>Cross selling rate</td>
<td>Premium growth</td>
<td>Distribution costs</td>
<td>Cost-reduction</td>
</tr>
<tr>
<td></td>
<td>Figures on distribution and sales (number/Density of ADM / agents)</td>
<td>Asset-volume</td>
<td>Damage-rate</td>
<td>Market-share</td>
</tr>
<tr>
<td></td>
<td>Growth rate</td>
<td>Capital earnings</td>
<td>Insurance-related results</td>
<td>Equity-needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Service quality</td>
<td>Capital-earnings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Service Quality</td>
</tr>
</tbody>
</table>

**Table 4.** Change of strategies and selected essential performance indicators at Insurance Inc over time (3rd workshop, 11/2004).

The graph shows, how in many cases, the selection of performance indicators is a result from external changes and strategic changes. Whereas in phase one and two, external indicators for market share and growth dominated the selection of essential performance measures, phase three and four are dominated by a much stronger view on internal aspects and operations. Here, mainly costs of operations and distribution and sales seem to be a strong new priority in the reporting cockpit. Within these settings, these indicators continue to dominate aspects of customer satisfaction and service quality (3rd workshop, 11/2004).
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• **Illustration of Changing Strategic Priorities**

Looking at corporate strategic objectives during the four phases, one can consider the

• growth target, the
• cost-leadership target through increased productivity, as well as the
• differentiation through increased quality

as three important elements.

The following figure shows these three selected changing priorities at Insurance Inc. over time. Similar to the previous table, we depict the changes in light of the four phases we described during this case study. The qualitative graph illustrates, how lower operative costs become, more and more, the focus of management attention over time after the growth initiatives were stopped due to the beginning and sustaining financial crisis. After a successful implementation of productivity measures, the better cost structures seem to lead to new options for growth potential, not only in terms of acquisitions (due to a better equity-asset ratio): also the ambition for organic growth through newly acquired customers with the help of an increased focus on differentiation through service quality or “service excellence” is visible in the qualitative illustration of strategic priorities. Still, the illustration also shows that Insurance Inc.’s strategic priorities have a strong “cost-roof”. The focus on the customer is growing, by at the same time keeping in mind that, within the insurance industry, in most cases the pricing of the service offerings is one of the strongest levers supporting the acquisition of new customers.
Fig. 26. Qualitative illustration of strategic priorities at Insurance Inc. over time.

- **Summary**

This case study offers information on an insurance company which was confronted with a number of external turbulences and related strategic changes during the recent past.

Within this study, one can see how these changes impact
- the development of the company’s key financials over time, including the lower yield on capital and the increasing importance of operational efficiency and low cost of operations,
- organizational changes and restructurings, as results from situation-specific settings,
- changing strategic priorities, as well as related
- changes in the use or prioritization of performance measures, as well as performance management initiatives and projects.

Looking at our first research question, we wanted to know how Insurance Inc. added or changed certain practices of Management Control Systems in order to follow new objectives or business strategies. Similar to the energy provider in our first case study, Insurance Inc. went through various changes within the last years which are summarized in the following.
The corresponding changes in organizational settings and the company’s Management Control System can be summarized as follows:

- The creation of “fabrics” for the areas “life”, non-life’, and “services” lead to a higher specialization, standardization and process orientation
  - The management information system was hard to align in the new organizational structure of Insurance Inc.
  - Benefits from more mechanistic and standardized structures therefore came along with additional effort to update the CRM data warehouse
- Project ‘B’ strived for leaner processes and a new leadership structure to foster corporate growth and efficiency
  - The targets were, among other changes, achieved through additional reorganizations in a distribution and a sales unit
- The mission statement communicates, more and more, the importance of high quality and personal service. This is targeted with the following implications:
  - Education and training of external sales managers
  - Communication of quality and “excellence”-objectives (organic management control)
  - Execution of customer surveys to determine expectations and satisfaction levels of customers with service quality and customer processes
  - Introduction of mechanistic process management in order to continuously improve customer-related processes in terms of costs, quality, and time

In sum, we can see that reorganization played an important role through different phases of change at Insurance Inc. Whereas the advantages through a more efficient organizational structure were pursued in some phases, the management information system deteriorated in both major reorganizations. Being now closer to a streamlined, process- and customer oriented organization, Insurance Inc. now approaches more and more the target of service quality and customer focus.

Even though the management strongly communicates the new quality objectives and plans to initiate a broad set of management control initiatives, the long-term execution still has to prove that it outweighs the industry-specific importance of operational efficiency and cost-advantages.
4.1.3 Case Study - Electronics Manufacturers

**Introduction**

Managing performance improvement in large and multinational manufacturing companies over a longer period of time is a complex and difficult task. Representative for many other examples of these companies, the following case describes essentials from two companies of related electronics manufacturing industries. The case focuses on their initiatives to strive for productivity in operations and satisfaction of customers. Especially in this industry, executives in multinational companies are reinventing and constantly improving their quality and productivity initiatives. Certain comparable characteristics can be defined, which are representing developments for most companies within this industry.

**Characterization of Electronics Manufacturers**

The development of large electronics manufacturers typically follows a three stage development:

- Stage 1 is internally focused, with projects not connected to the strategy.
- Stage 2 is more externally focused, and basically driven by the need to conform with customer demands and requirements to the products.
- Stage 3 is about managing business improvement directly linked to business results. This stage concerns the efficiency of key processes.

(Documents from company one, 2004)

Essentially, one can say that product conformance and in this way also customer satisfaction, is, in most cases, the most important challenge. In the long run, manufacturing companies tend to improve the way the company is organized, focusing more and more on efficiency of operations.
In order to illustrate and underscore this pattern, we can find plenty of examples:

- At Hewlett-Packard, the 1979 Total Quality Control movement changed to ‘Total Quality Management’ (TQM) in the 1980s.
- Motorola’s original ‘Six Sigma’ program from 1987 was integrated in the Performance Excellence initiative from 1998.
- GE’s ‘Six Sigma’ program, which was initiated in 1995, was later on accompanied by initiatives as the “Change Acceleration program” and the “Work-Out”-initiative.

• **Brief description of Electronics Manufacturer 1 & 2**

**Electronics Manufacturer 1:**

One of the two companies we are looking at has its headquarter in the Netherlands. It is one of the world's biggest electronics companies, as well as the largest in Europe, with 160,900 employees in over 60 countries and sales in 2004 of EUR 30.3 billion (Annual Report, 2004).

Active in over 60 businesses, and with more than 115,000 registered patents, the company is currently number 1 in global markets for lighting, electric shavers and DVD recorders. Furthermore, it is number 2 in medical diagnostic imaging worldwide. Within the cyclical goods market, Dow Jones recently ranked the company the global leader in sustainability.

The company developed the vision to “… bring simplicity and easy handling to consumers with advanced, easy to use products that are designed specifically to meet their needs.” These targets are put into practice with a focus on the three business units “Healthcare”, “Lifestyle”, and “Technology”.

**Electronics Manufacturer 2:**

The second company is a global powerhouse in electrical engineering and electronics. The company has 434,000 employees which develop and manufacture products, design and install complex systems and projects, and tailor a wide range of services for individual requirements. The company provides innovative technologies and comprehensive know-how to benefit customers in 190 countries. Founded more than 150 years ago, the company is active in the areas Information and Communications, Automation and Control, Power, Transportation, Medical, and
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Lighting. In fiscal 2004 (ended September 30), the company had sales of € 75.2 billion and a net income of € 3.405 billion (Annual Report, 2004).

The unit we are looking at in this case study is active in the Netherlands, where the company generates approximately €1.5 billion of revenue with around 4,000 employees and an EBIT-margin of 5 % (Company presentation 4th Workshop, 2004).

- **Characteristic Development of the Companies’ Improvement Programs**

![Characteristic initiatives at electronics manufacturers over time](Presentation company one, 4th workshop, 2004).

Looking at the initiatives both companies pursued over time, we see that the ISO standards were, for these and most other companies, and especially for electronics manufacturers, a necessity from the end of the 80s on. The main objective behind this ISO-“wave” was the need to conform with internal and external product requirements issued by business customers.

In order to achieve this goal, many organizations moved towards improving the monitoring and design of key processes within the operational units. Companies take advantage of this restructuring process or “business re-engineering” by developing towards better organizational structures and more efficient production systems.
Certainly, the monitoring of processes is also a key driver to achieve high output-conformance with customer requirements.

Characteristic examples of initiatives are, for example, the six sigma programs which focus on the improvement of processes through employee training and strict monitoring of process quality (Documents from company one and two).

A next step was for many companies that other TQM related approaches, such as “top+” from one of our case studies or “BEST” from the other case, intend to develop these ideas further.

These programs seem to be, according to management statements from our two manufacturing companies, the logical successor to a number of improvement programs which have previously been in place for some time. These current initiatives typically embrace a selection of tools which were considered as good for the business, covering not only the management and measurement of process performance. Moreover, they cover the enablers and results dimensions of corporate performance, be it customer and employee satisfaction, as well as even broader dimensions as sustainability, the corporate impact on the society, and the active management of partnerships and resources.

An important learning from companies like General Electrics and Motorola is, in this context, also the fact that a strong focus on the implementation through training and frequent interaction with employees on the new initiatives are major drivers to anchor and substantiate improvement initiatives. These aspects help managers to ask the right questions and, thus, drive cultural change, which was recognized as a priority in order to constantly improve quality.

A broader management model represents an answer for the managers of our two companies which looked for an approach

- that covered all aspects of the business
- and made the performance of business enablers measurable.

(Company presentation 4th workshop, 2004)

The following elements represent cornerstones of models which embed a continuous improvement cycle at our two companies within this case.
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- **Characteristic Elements of the Management Control Systems**

  **Mechanistic Management Control**

  At company one, process survey tools were applied with increasing intensity throughout the organization since middle of 1999. All divisions are by now using the tools to assess the maturity levels of their key processes, although the levels of implementation still differ.

  The success of the original six generic PSTs (ITE/PCP, Demand Generation, Supply Chain Management, Manufacturing Process Management, Manufacturing Maintenance, and Purchasing) for key processes has created a spin-off in the form of more PSTs covering a broader range of applications. The inclusion of additional PSTs developed since then serve a wider range of specific needs, and are used to assess and improve processes.

  Using generic PSTs throughout the company has the advantage of allowing comparisons and benchmarking with other organizations. The figure below shows a sample chart scoring generic versions of PSTs. Not all PSTs are yet fully implemented. The original PSTs were all designed to cover specific processes, so the elements are all part of the process flowchart. We now see more examples of PSTs in which the elements form the key processes of a particular discipline. This indicates that PSTs are also suitable for assessing and improving a group of processes. Not only specific organizations, but also functions and perhaps even departments could therefore use the PST approach to improve their processes (Project documents company one, 2004).
In addition to PST, Balanced Scorecard approaches follow a similar goal to support businesses in deploying and monitoring their strategy by providing an easy access to the scorecard results, trend analysis, and explanations of deviations.

The Balanced Scorecard is therefore not only a meaningful extension of traditional reporting figures, but delivers moreover a better support for monitoring business improvements, an improved involvement of employees, and the communication of targets. A graph of elements of the Balanced Scorecard will be described in a following paragraph (Project documents company one, 2004).

**Organic Management Control**

According to management statements, the use of the HR process survey tool has also helped in recognizing the importance of key performance indicators and improving the interaction between subordinate managers and employees.

The interaction takes place through the communication of the results in daily business meetings of regular staff and strategic units, personal magazines (best practice sharing and interviews), so called “corridor” presentations, regular meetings, and, last but not least, training programs in all levels of the organization (Presentation company one, 2004)
One critical issue to be resolved is often the fact that a number of new management development policies, processes and tools are developed, however, the knowledge of these processes and the awareness of their existence is often not at the required level. For this reason, company one, for example, introduced mandatory self assessments according to elements or topics which are most strongly linked to the key elements in the specific business strategy. Results from this reporting process are included in management reviews and shared across regions. The perception of these practices is clearly that they build bridges between related communities and contribute to the identification and the exchange of best practices. In order to capture and exchange valuable experience, the two companies both apply organic forms of management control which foster interaction, social controls, and exchange of know-how in work groups, between managers and the next management level. The work teams intend to consolidate and share experiences, as well as plan further improvements:

‘Action learning workshops’ are one structured way to deal with these objectives: the companies organize regular workshops which are lead by the management leaders, which in return build commitment to common goals. Participants in a workshop at the top level typically become workshop leaders for their own team in a workshop at the next level. Deployment by managers guarantees unity of purpose and prevents conflict between “normal” work and improvement work. (Project documents company one, 2004)

Fig. 29. Use of interactive and social forms of control.
(Project documents company one, 2004)
Knowledge management, furthermore, expands the last step of the so-called Plan-Do-Check-Act Cycle (also: ‘Deming’-Cycle) into “sharing the lessons learned and learning from the lessons others learned”. The aim of knowledge management programs at both companies is to use and leverage knowledge throughout the company and accelerate learning. Information technology is an important enabler. However, the leadership characteristics are mentioned as being an important driver as well in order to create a collaborative milieu in which people are eager to share their knowledge (Project Documents Company one, 2004).

**Non-financial Indicators**

The utilization of non-financial indicators of performance is ensured at both companies with the help of, on the one hand, the dimensions or different assessment criteria of excellence models and, on the other hand, balanced scorecard applications. At company one, apart from process quality, self assessments are pursued every year, employee satisfaction, image research and management review every second year, and customer satisfaction four times a year.

The strongest focus at both companies can be seen in efficiency targets related to process indicators. The following graph illustrates an example of a balanced scorecard application in company two. Here, all four dimensions are broken down into process levels with objectives, descriptions and risks related to certain measures.

*Fig. 30. Example of balanced scorecard applications.*
However, a broader vision, compared to the performance areas looked at within the scorecard, is ensured by incorporating aspects relating to R&D-processes, customers and employees in addition to traditional financial indicators.

- **Broadening strategic priorities over time**

Looking at the initiatives pursued over time, we can say that, in general, a development over three stages took place at our two sample companies as well as most electronics manufacturers and many other mature manufacturing industries. These achievements basically followed and to some extent or in some companies still follow – as illustrated at the previous chart – characteristic levels of quality management objectives as there are product quality, process quality, and corporate quality.

![Fig. 31. Broadening Management Control objectives at electronics manufacturers over time. (Company presentation 4th workshop, 2004)](image)

Business excellence approaches combine corporate targets on efficiency as well as on effectiveness and leverage the satisfaction of customers and the productivity of the company at the same time. Companies with a large share of mainly non-standardized service offerings seem to have difficulties in implementing very broad Management Control Systems. In the specific manufacturing industry illustrated within this case study, the strong and broad application of tools and techniques aimed at improving productivity and customer satisfaction – more generally spoken the efficiency and effectiveness of key operations – seems to be very common and successfully applied.
The following figure illustrates the development of these objectives over time. Three characteristic initiatives, namely the ISO-programs, Six Sigma, and lately the movement towards Business Excellence are represent the growing and increasingly developed common targets and drivers of success within this industry.

**Fig. 32.** Developing strategic objectives over time at Electronics Manufacturers.

This result is actually relatively known in publications and describes a common path towards achieving ‘business excellence’ in organizations. As we can see from the chart, customer satisfaction remains the primary target in the organization. Looking at the time-axis, this challenge was characteristically mastered relatively quickly in this industry by achieving high product conformance standards with customer requirements. The secondary, just as important target, became more and more an equally urgent strategic priority over time. Successful companies in this environment typically master both challenges and are benchmarks in their industry in both quality and productivity.
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**Summary**

This case study offers information on the development of characteristic business strategy objectives at many companies within the industry of electronics manufacturers over the last two to three decades. Both described representative sample companies have developed similar patterns in designing elements of management control in response to broadening strategic objectives: starting out with a target on strict conformance with the customers’ product requirements, the companies moved towards improving efficiency and productivity while at the same time keeping an eye on holistic drivers or enablers of corporate performance. This characteristic trend can be seen in other industries as well. Still, companies like Motorola and General Electrics were certainly the forerunners and show that this type of industry with mainly standardized product offerings is the ideal ground to successfully combine high levels of quality / customer satisfaction, and productivity.

Summing up, this study shows how

- successful electronics manufacturers develop(ed) and broaden(ed) objectives for business strategies over time
- different mechanistic and organic forms of management control are applied to substantiate the business strategies
- the successful combination of targets on customer satisfaction and productivity actually seems to be possible within this certain industry.

The selected – exemplary – implications for Management Control Systems within this industry can be summarized as follows:

- The wave of ISO-9000 certifications represented a starting point for the standardization of key processes
  - The primary targets of these measures can be described as both the achievement of high quality conformance as well as operational efficiency
• TQM-related approaches stress the importance of corporate quality
  o The constant iteration and communication of new performance initiatives serves in our companies as a platform to ensure the commitment of all employees – it can be understood as an iterative application of organic forms of control to support corporate quality

• Process Survey Tools help to increase the mechanistic form of control throughout the organization, in many ways quite similar to the effect of extensive balanced scorecards
  o As an extension of traditional reporting figures, these tools deliver a better support for monitoring business improvements, and, moreover, a stronger involvement of employees

• Various forms of organic management control seek to improve the quality of the organization as well as products and processes; examples for this are in the following:
  o Frequent interaction between subordinates and employees on PST-discussions, best practice sharing, ‘corridor meetings’, training programs, and ‘action learning workshops’ on all levels of the organization

• The utilization of non-financial performance measures in reporting ‘cockpits’ furthermore helps to focus attention of the management and employees on critical performance objectives as customer and supplier relations, risks, etc.

Judging from these examples, we can say that the industry of electronics manufacturers, in some ways representative for many manufacturing companies in general, nowadays has the opportunity and capability to pursue and apply a broad range of Management Control Systems. On the one hand, the competitive situation requires these companies to be successful in terms of product conformance and quality. On the other hand, pricing is more and more an issue leading to an increased need to operate with high productivity and efficiency. Apparently, our case study subjects succeed in combining both targets on productivity and product quality with the help of broad and sophisticated Management Control Systems.
4.2 Summary of Case Studies

The case studies primarily serve the objective to analyze how management control practices support an increased focus on certain business strategies. Looking at the different stages of the development for all case studies, we are asking

(a) with what tools the companies pursue(d) or intended to pursue changes

and

(b) whether the implied changes show(ed) to be sustainable over time.

As illustrated in the following tables, we can state that productivity improvements were strong objectives in all case studies. Apparently, an increasingly competitive situation (price pressure at Electronics Manufacturers, liberalization in energy markets), as well additional moderators (crisis of financial markets for Insurance Inc.), lead to several initiatives, which incorporated a broad spectrum of management control practices driving productivity and operational efficiency.

Whereas the main target (reorganization and leaner structures, rationalization) was achieved by all companies, other objectives showed varying degrees of implementation success or sustainability. For example, we are talking about mechanistic forms of management control which typically incorporate frequent monitoring of standardized processes with detailed reporting structures. In manufacturing companies, these practices were accompanied by organic forms of control, such as employee training and best practice sharing with a focus on process management and improvement. The sustainability of improvements with a focus on productivity were generally high. An 'over-engineering' of performance measurement objectives was the only potentially problematic aspect which was encountered

(a) in a first phase of Energy Inc. prior to the liberalization of energy markets,

as well as,

(b) in the business unit operating passenger traffic. (See the appendix, p. 157.)

Energy Inc. failed to install a Balanced Scorecard approach with roughly 200 measures as a type of “management cockpit” on strategic levels. Similar to the trade off situation at Operating Passenger Traffic, Energy Inc. encounters the difficulty to weigh advantages of increased performance transparency with lowering the focus and organizational acceptance for complex reporting systems. The following chart illustrates key points discussing management control practices with productivity targets.
4. Exploratory Case Studies

Fig. 33. Compilation of improvements of time, methods and sustainability of improvement in all case studies with focus on productivity enhancement.

Customer satisfaction and operational quality is the second dimension we want to discuss. Whereas continuous improvements in productivity were encountered in all case studies over time, an improvement in operational quality through a utilization of advanced management control practices was sometimes sustainable, but often highly dependent on the corporate setting. Whereas electronics manufacturers applied a broad combination of organic and mechanistic performance management approaches, the degree of implementation differed strongly for Energy Inc. and, in particular, for Insurance Inc.

Fig. 34. Compilation of improvements of time, methods and sustainability of improvement in all case studies with focus on quality enhancement.

Insurance Inc.’s objectives unambiguously indicated that operations quality was the management’s clear second target behind cost improvement objectives. Different to typical manufacturers, we encountered critical trade-offs between quality improvements and operational efficiency for companies in this industry.
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4.2 Implications for the Research Model

Looking at the research model we introduced in Chapter 3, we now have to look at specific case study results in order to discuss potential structures behind either of the two black boxes we discussed earlier. For that purpose, we want to interpret and list, in the following, trade-off considerations and cause-and-effect-structures, which are tied to and impact the model structure. All case study subjects were, apparently, trying to increase customer satisfaction and corporate quality with the help of advanced forms of management control. Specifically our manufacturing companies developed very broad and sustainable practices, which intended to increase the level of corporate quality. In a similar way, this intention was visible at Energy Inc. with the goal to gain effectiveness in customer focused operations by implementing non-financial performance measures into the strategic management cockpit. Also, operating passenger traffic (see appendix) and Insurance Inc. considered more developed MCS as a means of supporting corporate quality. The following graph illustrates this cause-and-effect-chain.

Even though this structure is valid in all case studies, we have to recognize the fact that, especially for Insurance Inc. (and financial services in general) and Energy Inc., the higher target on corporate quality comes along with the fear that it potentially affects the corporate cost target as well as the efficiency of operations. In other cases, one also encountered a trade-off between improving product and service quality with, for example, broader reporting systems and potentially decreasing organizational acceptance levels for increased reporting complexity. Therefore, we want to illustrate these findings as follows, indicating a potentially negative impact of high quality targets and more developed MCS practices on corporate efficiency and productivity.

Certainly, this negative impact is not necessarily given for every company or case. However, the companies that intend to avoid a drop in efficiency with the help of exaggerated corporate quality targets have primarily two concerns.
Taking Insurance Inc. as an example, the management fears that it has to either increase internal process costs and loose on operational efficiency and competitiveness (illustrated as option (a)), or, that less efficiency has to lead to an increase of resulting pricing levels or customer fees (illustrated as option (b)).

This twofold consequence is affecting our research model in two ways: whereas an increased pricing level of products and services is affecting the perceived value and loyalty of customers, the increase of internal costs is, certainly, directly impacting the financial return of the company.

Also, an eventual drop of customer loyalty by increased prices eventually affects the financial return of a company negatively. A careful understanding of customer perception helps to minimize the negative impact on corporate financial returns. The following graph helps to consolidate these findings, and illustrates the full structure behind the black box of our research model from Chapter three.

Fig. 35. Resulting structure of the research model with MCS supporting Q-targets.
The ACSI-structure within both foregoing graphs is a valid and reliable structure linking perceived quality, customer satisfaction, and loyalty to financial targets. In conjunction with strategic quality objectives and corresponding MCS-practices, we have to look at a broader model, which entails the existing structure from the ACSI. This model is, in addition to the ACSI-structure, also able to identify and explain potential trade-offs between quality, efficiency, and financial returns.

We want to look at structural relationships behind efficiency targets, MCS, and relations to the ACSI structure within our second research model (Fig. 16). Within our case studies, we encountered two main strategies supporting the objective to increase the focus on efficiency and productivity: on the one hand, for example Insurance Inc. tried to primarily reorganize business units and processes and, by this means, achieve leaner organizational structures. On the other hand, both manufacturing companies mainly implemented MCS with a focus on efficient operations.

Whereas both means eventually improve operational efficiency, they still work in different ways with potentially different consequences for our research model. As described for Energy Inc. and Insurance Inc., efficiency-gains through a synergy-focused reorganization of business units or functions often comes along with a drop in process transparency, as well as reporting quality. The following figure indicates this trade-off consideration.

An increase or decrease of quality or productivity levels works in ways similar to the prior research model structure: whereas product or service quality has a positive impact on the perceived quality of our offerings, increased corporate productivity can be utilized to increase the resulting pricing level of our products or services. Alternatively, lower internal costs are directly impacting corporate financial returns.
As illustrated in the following graph, we can now consolidate these findings as well, and illustrate them in a full structure in line with our second research model from Chapter three (Fig. 16).

**Fig. 36.** Resulting structure of the research model with MCS supporting efficiency-targets.

This model illustrates our assumed structure behind Black Box two. Efficiency targets can be achieved by either focusing on process reorganization, or more developed MCS supporting efficiency. Both alternatives have complex connections to the ACSI-structure. Eventually, an appropriate selection of a strategic focus should help to maximize financial returns.

In the following, we want to take a closer look at our first model with a focus on quality targets and corresponding, more developed MCS-practices. In order to discuss, and possibly verify, our hypothesized trade-off considerations between quality objectives, operational efficiency/productivity, and customer loyalty, we want to make use of an industry-spanning, quantitative analysis from 10 years of ACSI-data.
5. Quantitative Results and Trade-Off Situations between Differentiation and Low-Cost Strategies

5.1 Insights from the Swedish Customer Satisfaction Index

Prior to our research, Anderson et al. utilized the Swedish CSI as a means to illustrate the importance of understanding the association between productivity and customer satisfaction. In line with our thoughts and assumptions regarding eventual trade-off situations between productivity and customer satisfaction or quality, they focused on the question in which industries actually firms with the greatest economic returns also exhibit high levels of productivity, high satisfaction, or both simultaneously (Anderson et al., 1997).

To gain insight into these questions, Anderson et al. partitioned each industry into high/low productivity and high/low customer satisfaction firms based on a firm’s relation to the industry median for each measure in a given year. Following this procedure, the authors calculated the average ROI for firms in each of the four resulting partitions. The following figure shows ideal strategy combinations for different industries with the, in average, highest average ROI in Sweden during the time of the study.

**Fig. 37.** Strategy combination earning the greatest average ROI for various firms in different industries in Sweden.

(Based on Anderson, Fornell, and Rust, 1997)
The study seems to show that firms in the cell with high customer satisfaction and high productivity that exhibit higher than average ROI come, mostly, from goods industries such as automobiles, basic foods, PCs, and clothing. The portfolio position of mail order and, specifically, the insurance sector is somewhat different and contradictory to the results in our study. Reasons for this can be seen in the limited amount of data available in the Anderson-study.

For our research focus, it is worth emphasizing that it is only for industries in this top right quadrant that the firms with the highest returns are also found to exhibit highest levels of productivity and customer satisfaction. In all other cases, highest levels of productivity and customer satisfaction in a given industry are found in off-diagonal cells. This in return suggests the further notion that these “off-diagonal” industries are confronted with a context in which it is difficult and undesirable to achieve superiority in both satisfaction and productivity (Anderson et al., 1997).

**Interpretation of the Case Studies within the Anderson-Portfolio**

As indicated in the Swedish study, companies with the highest ROI within their industries do not necessarily have highest levels of customer satisfaction or productivity. Moreover, based on qualitative insights, we can potentially identify characteristic and constant success clusters for different industries within the business strategy framework. Judging from prior case study insights, two reasons seem to be the driving forces behind this effect:

(a) Characteristic, industry-specific factors affect the way companies are able to strive for quality, without encountering diminishing returns from decreasing productivity

(b) Changing business strategies additionally affect the management focus on either of the two dimensions within our portfolio.

Especially argument (b) leads to the fact that we do not necessarily observe static clusters for selected industries or companies but, much more dynamic developments due to changes in the corporate environment and the business strategy. The following figure brings together the insights from the case studies with the theoretical framework from the study pursued by Anderson et al. (1997).
Fig. 38. Interpretation of the case studies within the Anderson-Portfolio.

We can identify the case studies from Energy Inc., Electronics Manufacturers, as well as Insurance Inc. within this framework. Insurance Inc. and Energy Inc. represent companies which developed and improved productivity and efficiency throughout the organization over the process of liberalization and consolidation within the last years. They developed new strategic ambitions in the area of customer satisfaction. However, both regard these ambitions as being under a clear “cost roof”. Therefore, the companies see a need to clearly analyze use- and-effort-potential when defining and operationalizing differentiation strategies. The next figure illustrates the development of certain generic strategic positions within our theoretical framework.
5. Quantitative Results and Trade-Off Situations between Differentiation and Low-Cost Strategies

As described in the following, we can assume and identify five characteristic positions of companies within our strategy framework.

(a) One generally known or established success position within this framework is categorized with the label “cost leaders”. Companies in this cluster basically achieve advantages over their competitors through an increased productivity in operations, cheaper sourcing options, and/or leaner structures of corporate processes. (Porter, 1980)

(b) “Differentiators” form a cluster of companies which do not focus on the possibility to offer cheap services of products, but, moreover, achieve advantages over their competitors by offering features which add real value to the customer and which makes their offering superior to the competition. In a way, these companies offer incremental improvements to established product or service spectra. (Porter, 1980)

(c) “Prospectors” are here, different to “differentiators”, companies which identify and achieve competitive advantages by actively working on services and products in new areas. Successful innovation is the key challenge for these companies. Generally speaking, prospectors enact an environment that is more dynamic than those of other types of organizations within the same industry. The prospector’s most relevant capability is the capability of finding and exploiting new product and market opportunities. (Miles & Snow, 1978)

Fig. 39. Development and characterization of generic strategic success positions.
5. Quantitative Results and Trade-Off Situations between Differentiation and Low-Cost Strategies

(d) **“Question marks”** form a cluster within our portfolio which is not to be seen as a success position. Therefore, we cannot identify any reference from literature. We can, however, identify this cluster as a position where companies are in the need to identify possible paths in order to elaborate advantages over the competition, be it by increasing productivity or customer focus and satisfaction.

(e) **“High quality standards”** is not known as a cluster in literature since traditional literature states that both dimensions are not likely to be successfully combined. Many examples however, especially from the manufacturing industry, seem to indicate that certain clusters of companies are actually able to establish leadership positions in customer satisfaction with their products, high productivity, and high returns on their investments at the same time. Judging from these examples, it seems only logical to identify this cluster as a success position.

However, it seems like not all companies can follow the path from high productivity to leadership in customer satisfaction. **“Cost leaders”** form a cluster which is characteristically in the need to avoid any activity which affects their operational efficiency and productivity. They need to keep operating costs down in order to be able to offer products at low prices, or at good and highly competitive value for money.

(f) Also for **“Analyzing Differentiators”**, it seems critical to find the right target on customer satisfaction. Even though their main asset is not necessarily to be able to offer products or services at cheapest prices, they still need to care about negative effects of customer satisfaction and quality. These companies are in the strong need to determine the right levers of customer satisfaction, which do not, or just to a small degree, have a negative impact on the company’s operational efficiency or productivity. A clear necessity for these companies is a profound understanding of the customer through the use of more effective and analytical measurement and control approaches based on customer satisfaction data.
5.2 **Data-Analysis based on the American Customer Satisfaction Index (ACSI)**

The following paragraph will describe the quantitative analysis pursued with the help of data provided by the American Customer Satisfaction Index (ACSI). To be able to discuss the analysis properly, we will briefly introduce selected facts on the background of the ACSI in the following.

The ACSI is a national economic indicator of satisfaction with the quality of products and services available to U.S. household consumers.

Established in 1994, the ACSI produces indices of customer satisfaction and related measures (on 0-100 scales) for four levels of the economy: (1) national, (2) ten economic sectors, (3) 41 industries, and (4) more than 200 individual companies.

The ACSI can be looked at as the foregoing model to the European Performance Satisfaction Index, which was initiated with a feasibility study in 1997.

**Reasons for choosing the ACSI as a suitable data-source:**

The reasons for choosing the ACSI as the basis for our research can be seen in a combination of practical reasons and reasons relating to the available database. First, the database from the ACSI is probably better to analyze on a macro-level since it entails an economic sector which is, in terms of size, almost comparable to the European sector with the advantage of highly homogeneous offerings and companies across all states. Furthermore, within Europe, we often have to face the difficulty that different countries either do not have certain companies present within their area or the perception of the customer varies significantly from country to country due to cultural differences and barriers. The American market is more homogeneous in terms of customer perception as well as the representation of companies within different states, which again implies less statistical variance. The second reason is that, for the purpose of this research, the ACSI-data and the financial data were easily accessible through the available database of the National Quality Research Center. Disadvantages from this selection of data can be seen in the fact that the ACSI-database covers quantitative results on the American consumer, whereas, on the qualitative side, we are discussing insights from European companies. Certain differences have to be acknowledged which refer to aspects such as different consumer preferences, loyalties, and perceptions of product or service quality when comparing USA with Europe. However, on our generic level, we assume that we can make use of an American database to discuss related quantitative insights.
The national index is updated quarterly on a rolling basis, with new data for one or more sectors of the economy replacing data collected in the prior year. Sector, industry, and company/agency indices are updated annually for a large number of industries covering economic sectors as:

- Utilities
- Manufacturing/Durable Goods
- Manufacturing/Non-durables Goods
- Retail Trade
- Transportation & Warehousing
- Information
- Finance & Insurance
- Health Care & Social Assistance
- Accommodation & Food Services
- Public Administration & Government
- E-Commerce and E-Business as a part of other sectors.

Based on the large amount of economic sectors and differences in the data-quality between sectors, we chose to deliver a more detailed analysis on four specific industries: **food manufacturers, financial services, energy services, and phone services.**

Each company/agency index is calculated from responses to questions asked to its recent customers. Industry indices are created by aggregating company indices plus an aggregated index for “all other companies in the industry,” weighted by company revenues in the U.S. household market. Sector indices are aggregated from industry indices, weighted by industry revenues within the sector. The national ACSI is aggregated from the sector indices, weighted by each sector’s contribution to the GDP.

### 5.2.1 Data provided through the ACSI and Stern Stewart Co.

The data we could utilize within our quantitative research was based on results from 10 years of ACSI. Since we wanted to look at the impact of product quality, service quality, value for money, and/or customer satisfaction on a selected financial performance figure of each company, we had to look at ACSI-related indicators as the independent variable in our analysis. The dependent variable, namely the financial performance figure, was provided by Stern Stewart Co. Choosing from various
indicators as MVA, EVA, and ROC, we chose ROC as the appropriate figure since it represents a ratio figure and therefore excludes, to a higher degree, value differences in performance figures relating to the size of the company.

The Return on Capital (ROC) is a measure of how effectively a company uses the money (borrowed or owned) invested in its operations. Return on Invested Capital is equal to the following: NOPAT (= net operating profit after taxes) / [total assets minus cash and investments (except in strategic alliances) minus non-interest-bearing liabilities].

\[
\text{ROC} = \frac{\text{NOPAT}}{\text{Total assets} - (\text{cash} + \text{investments}) - \text{non-interest bearing liabilities}}
\]

In comparison, the Return on Investment (ROI, as used by Anderson et al., 1997) is a measure of a corporation's profitability, equal to a fiscal year's income divided by common stock and preferred stock equity plus long-term debt. The ROI measures how effectively the firm uses its capital to generate profit. In comparison to the ROC, we can say that the messages derived from both figures are highly related. Both figures therefore allow equally good opportunities to be utilized as a financial performance measure. If the Return on Invested Capital of a company exceeds its weighted average cost of capital (WACC), then the company created value. If the Return on Invested Capital is less than the WACC, then the company destroyed value.

In our context, it is certainly interesting to see in what circumstances a stronger investment in customer satisfaction actually seems to create value. In many cases, we expect to identify some significant regressions between customer satisfaction and ROC. However, since we assume that strategy as well as changing context are influencing this regression to a significant degree, it will be interesting to see if we can determine some thresholds or downsides of exaggerated customer satisfaction for certain industries.

We also want to focus our attention on the quality or customer satisfaction dimension and leave out questions regarding trade-off situations for efficiency or productivity targets. There are mainly two arguments for this focus in our quantitative research.
(a) Incompatibility of productivity figures
When looking at productivity figures and comparing those within one industry, or even across industries, we encounter several arguments, which make it almost impossible to derive valuable messages. Productivity is defined as a ratio-figure between the number of employees and sales (= # of employees/sales). However, many companies have a different depth of their value creation process, meaning some have higher and some lower outsourcing volumes. This again has a significant impact on the number of employees within the company and, thus, also the productivity figure. Moreover, many companies have very different interfaces with their clients. For us, specifically the number of employees involved in the customer-interface is of utmost importance. This figure is however only a small, sometimes insignificant fraction of the whole amount of employees. To compare this data especially between industries would imply very low levels of statistical significance with any derived message of a potential analysis.

(b) Difficulty to obtain profitability figures
Secondly, Stern Stewart Inc. did not provide productivity figures for the companies analysed in our study. To obtain these figures would have been a very costly and/or time-consuming endeavor. Looking, in addition, at the issues listed in our first argument (a), it makes sense to leave out a quantitative analysis of productivity figures and focus on the fist research model, which discusses high quality targets.

5.2.2 Quantitative Hypotheses derived from the Case Studies
Looking at our case studies, we find that one key argument represents the assumption that there are supposedly many industries, in which companies are, on the one hand, forced to compete in terms of product or service quality. On the other hand, many of these have to be very careful not to loose the competition on another ground as well, since operational efficiency is needed to compete with low prices for their offerings.

These companies can neither afford to be leading in low prices without reaching for a competitive level of customer satisfaction or quality, nor can they do vice versa.

Our research question two asks in this context the following:
Do certain industries at a given point in time imply certain limits to strategic ambitions and the corresponding appropriate complexity of management control systems?

If this was in fact so, we would have two possible explanations for this observation: (1) we could argue that the characteristic gaps are caused by characteristic, industry-specific differences which just make it impossible to surpass certain performance levels. A second possible argument could be that (2) other industries have just, not yet, reached their full potential in the observed strategic objective. The following figure illustrates these arguments at the example of customer satisfaction or quality as the strategic objective.

**Fig. 40.** Potential arguments for characteristic gaps in industry-specific levels of customer satisfaction.

Looking more specifically on the customer satisfaction dimension, we can state the following:

Assuming there is an industry which reached a level of quality and customer satisfaction, where an improvement of quality and satisfaction would not improve returns exceeding the costs of any improvement initiative, this industry would, supposedly, have diminishing returns from a certain level of customer satisfaction on. Furthermore, we would expect significant differences between industries, looking at the average CSI scores over the years.

If companies are actually confronted with defined strategic success positions, we would identify different potentials for improvement in different industries. Comparing the average CSI-score of an industry with the CSI-score of the top-performers in terms of ROC, we could see how much “potential for improvement” there actually is for a
given industry. Also, comparing the top ROC-performers’ average CSI-scores across industries, we could see how much focus on quality and customer satisfaction a given industry is actually able to pursue or should pursue in order to maximize its competitiveness.

At the case of Swedish pharmacies, a good example for a business with a substantial significance of services, Westlund and Löthgren (2001) verified the interaction between employee and customer satisfaction, as well as interactions between these criteria and productivity and cost efficiency in service operations. The data was taken from Swedish pharmacies based on their financial key figures, data from an industry-specific customer satisfaction index as well as an employee satisfaction index. The qualitative measures were derived from questionnaires, and obtained using a partial least squares estimation procedure. Key conclusions were in this study positive links between employee satisfaction towards customer satisfaction as well as work productivity. Furthermore, work productivity was identified as a positive driving force towards cost efficiency. Judging from these findings, we find support for our success positions identified within the business strategy matrix. More importantly, we see that the partial effects from customer satisfaction on cost efficiency are rather mixed. In particular, positive relations are found just for highly productive pharmacies (Westlund & Löthgren, 2001). Judging from the quantitative evidence, the industry of Swedish pharmacies seems to have the characteristics of analyzing differentiators. On the one hand, customer satisfaction is an important driver for the success of the pharmacies, on the other hand, only certain elements of customer satisfaction seem to go along with an improved cost efficiency of the company. In order to improve the financial return of pharmacies, it seems obvious that successful pharmacies are in the need to identify the most critical drivers of customer satisfaction by, at the same time, looking at critical drops of operational productivity.

Summing up briefly, we want to empirically look at the following in different industries:

- Different average ACSI scores across industries
- Gaps in ACSI scores between top financial performers and average performers
- Potentially diminishing financial returns in higher levels of ACSI scores for certain industries.
5.2.3 Empirical Results and Conclusions based on the ACSI

To start out with, we want to take a look at the following illustration comparing the average ACSI scores of 14 industries with accumulated data from the last 10 years of ACSI (1994 – 2004). What we see are, comparing some industries, significant and strong differences between the average CSI-scores.

Picking out some extreme examples, we see that airlines for example have an average score of 66, which is around 18 below the overall average of food or electronics manufacturers.

Even though hotels and department stores perform a little bit better, we can see that, in general, manufacturers deliver higher satisfaction than firms that provide services.

Fig. 41. Comparison of average ACSI-scores (1994–2004) for different industries.

In addition, the variability or variance of the results for lower scoring industries is higher compared to most companies with a strong focus on manufacturing activities. Reasons for these differences can be found in many arguments. The National Quality Research Center argues that services are, unlike pure products, co-produced with customers. Services involve more human resources of both provider and user, therefore it probably also increases unpredictability. In addition, it shows that in general, more standardized offerings often allow a focus on both customer satisfaction and productivity. Since services are rarely standardizeable, we see that probably this industry just cannot afford to focus a lot more on satisfaction without lowering productivity and returns (Anderson, Fornell, & Rust, 1997).
5. Quantitative Results and Trade-Off Situations between Differentiation and Low-Cost Strategies

However, the chart still does not prove that companies in lower performing industries are not able to score better. Possibly, one could also argue, the reason for the differences could also be the fact that some industries have just not yet reached their full potential in terms of customer satisfaction and quality.

In order to be able to answer this question, we have to look at our data more closely. Also, it is necessary not only to look at the ACSI scores, but also to bring these in relation to some indicator representing financial performance or corporate success. The following graph illustrates a first industry-specific analysis at the example of telephone services.

![Telephone Services: Customer Satisfaction and average ROC.](image)

Fig. 42. Telephone Services: Customer Satisfaction and average ROC. (With quadratic regression curve)

As we can see, the industry of telephone service providers reveals a strong correlation between average customer satisfaction scores and the average return on capital for each interval of companies. Highly apparent is the fact that a few companies showed to be, in some periods of the 10-year survey, strong under-performers in terms of its service quality and customer satisfaction. At the same time, we can see that the companies scoring with average CSIs of 65 or even less than 60 points have the, by far, lowest average financial returns on capital. Apparently, low
service quality results in this case in strong losses in customer loyalty, which again represents a strong indicator for financial performance.

However, the average industry is performing relatively good in comparison with its top performers, which again indicates that only a few companies actually deliver very poor services.

Comparing the CSI-scores of the top-25% performers, namely the companies achieving the highest returns on capital in a specific year between 1994 and 2004, with the industry-average CSIs over the last 10 years, we see a relatively small difference of 0.6 points.

Apparently, we can see that, even though telephone services score significantly lower than, for example, supermarkets or food manufacturers, the largest part of the telephone industry still shows to perform relatively close to the benchmark of the industry. A very high increase in service quality for an average performer of the industry would here not necessarily lead to improved financial returns. Apparently, one can argue that initiatives striving for service excellence would in this industry be in a conflict with costs related to the improvement initiatives. In order to justify these insights on a broader basis, we want to take a look at different results from other industries.

The following graph illustrates a similar analysis for energy providers. Similar to the analysis of phone services, we see a correlation between selected customer satisfaction intervals and the average ROC for energy services. In average, low performers are showing to pay strongly in terms of lower returns on capital. The average CSI over the last 10 years is at a level of 74.1, which is relatively close to the average of 73.3 for phone service companies.
Still, we see a significant difference between the top performers for both industries. Whereas the top-performers in phone services were relatively close to the average industry in terms of customer satisfaction, the difference or gap for energy services is significantly higher. With an average CSI of 77, the top 25%-quartile of companies in ROC scores more than 2.9 points higher than the average industry-CSI. Apparently, the analysis shows that the potential for improvement of its service quality and customer satisfaction is still very high for the average industry. Diminishing returns are not really given at any point, even though the quadratic regression curve shows a weak downward slope starting at CSI scores higher than 77.

The gap in satisfaction between the average industry and the top performers can, however, be explained in two different ways. On the one hand, one can argue that the companies with higher financial returns also have the money and financial flexibility available to initiate programs which drive customer satisfaction. On the other hand, we can state that the reason for the higher returns can eventually be seen in the higher satisfaction of the customers, leading to higher loyalty, a better image, and, since the companies are publicly traded, also higher shareholder values and financial returns. Since the companies are, to some extent, regulated (yet still a part of the market as publicly traded corporations), we will assume that mainly customer satisfaction...
represents the key driver for this correlation. In any event, the gap in terms of customer satisfaction indicates that there is strong potential for improvement for a large share of the companies within the industry.

A very different situation can be recognized in the following, third industry analysis, illustrating the situation for financial services.

**Fig. 44.** Financial Services: Customer Satisfaction and average ROC.
(With quadratic regression curve)

First of all, customer satisfaction scores in financial services are very low compared to almost all other industries. The average score over the last 10 years showed to be at around 70.5. Furthermore, the graph indicates, that financial service companies with lower satisfaction scores seem to end up having lower returns. However, different to the two previous examples, we see the same phenomena happening for companies achieving significantly higher satisfaction scores in certain years during 1994 and 2004. Apparently, we have – in average – diminishing returns from a CSI of about 69 on. Even if we would look at this as a statistical anomaly or coincidence, the comparison of the average industry and the top 25%-ROC-quartile shows that actually the companies with the higher returns showed to have an average satisfaction score of 68.78; more than 2.7 points lower compared to the 10 year industry average.

As indicated in a study pursued by KPMG and the University of St. Gallen in 2005 (KPMG (2005), see appendix), increasing customer satisfaction seems to be a very critical task in an industry which relies more and more on operational efficiency and
productivity in its retail service businesses. Especially in years with less return from asset management, banks as well as insurance companies are strongly forced to weigh every activity or quality initiative with potential gains or losses on the cost side. The case study on the insurance company additionally supports these arguments, since Insurance Inc. was, especially during the crisis of financial markets, highly concerned about its operations and corresponding costs. The main message from this analysis should certainly not be that the average industry has to lower its service quality to reach the average financial returns of the industry’s top-performers. Still, quality initiatives should certainly be selected carefully in order to achieve an optimum in an apparent trade-off between customer satisfaction or quality and productivity. A major reason for potential downsides of customer satisfaction can therefore, in addition to our prior arguments, be a lack of good and effective measurement and knowledge of customer satisfaction and its drivers.

An important study researching on exactly the trade-off between customer satisfaction and future profitability can be seen in a recent paper from Madhav Rajan. Rajan (2006) used a collection of wide-ranging customer relationship data from 115 retail banks in order to develop a powerful guidance for managers to know how to use nonfinancial metrics effectively. His key conclusion was directed specifically at retail banks, and stated that “... looking at a customer satisfaction number alone doesn’t do you much good unless you know the costs involved in achieving it.” A difficulty in analyzing customer satisfaction is, according to Rajan, often, that customers might be primarily satisfied because the company is giving away services or offerings below its actual or competitive value. If this is the case, customer satisfaction does not tell you much about what your future profitability will be. A message from his study is that a bank must always compare customer satisfaction to specific costs such as the amount of interest or the amount it invests in other service areas. (Rajan, 2006)

This trade-off situation is characteristic in this specific case of financial service businesses. Much more likely, manufacturers seem to be able to be efficient and produce goods of high quality at the same time. The following graph illustrates our analysis of food manufacturers between 1994 and 2004.
5. Quantitative Results and Trade-Off Situations between Differentiation and Low-Cost Strategies

Characteristic for manufacturing companies is, in general, that the average CSI score is significantly higher compared to companies with service operations with often not standardized processes. The graph shows that even companies with the lowest CSI-scores reach a level of at least 80, which is higher than most top performers in service industries. The range and variation of customer satisfaction is also much smaller. We can see that few companies at the lower end of the range also showed to have drops in financial returns. In general however, the average satisfaction is only 0.6 points away from the average CSI of the top-25%-ROC-quartile. Judging from these insights, we can say that the general satisfaction with food manufacturers and its products is very high. Under-performers tend to have lower returns, however, the general range of customer satisfaction is very narrow and most companies are very close to top-performers.

To complete the picture of our quantitative analysis, we want to show some additional results on three other industries. The development of full histograms was here not possible since the data was either limited on the satisfaction scores or on the financials (ROC).

Fig. 45. Food manufacturers: Customer Satisfaction and average ROC. (With quadratic regression curve)
In the following, we will discuss the quantitative results with respect to the insights gathered from our case study research. The alignment of both analyses should ideally merge into a common understanding of how context and strategy define the way companies design and prioritize certain elements of MCS.

5.3 **Summary and Alignment of Qualitative and Quantitative Insights**

Looking at the interpretation of the case studies within our portfolio framework, we mainly discussed trade-off situations between the targets to improve customer satisfaction and risking lower productivity. Within this spectrum, we interpreted electronics manufacturers on the one hand as “high quality standards”, meaning that these companies are actually in an industry which is able to combine both targets on superior quality, as well as productivity. On the other hand, Energy Inc. was interpreted as a company which has a strong cost focus, but still recognizes the high potential in, at least, improving corporate or service quality. At the same time, the top-management of this company is showing concerns on the effectiveness of new measures, especially with regard to operational costs. Much more so, Insurance Inc. developed this attitude during the crisis of financial markets starting in the end 90s. Probably representative for the whole industry, Insurance Inc. sees, like other financial service providers, the need to improve customer satisfaction. At the same time, banks and insurance companies recognize much more the need to increase operational efficiency in order to compete as “cost leaders” within their industry.
We have not covered case studies on “prospectors” or “differentiators”. Even though these companies or clusters are highly interesting and often very successful, they much more rely on their success due to either competitive advantages with products and innovations, or niche strategies which offers the possibility to neglect the importance of operational efficiency. Both clusters have probably not an as strong need to rely on better Management Control Systems as the clusters described by our case study examples.

By definition, quality of services and products represent characteristics which are wanted by the customers, and which basically satisfy customers. It therefore seems reasonably legitimate to take customer satisfaction as an indicator for quality, be it service, product, or corporate quality. If we considered electronics manufacturers as an industry which actually is able to combine high productivity and quality with a very developed and sophisticated utilization of Management Control Systems, we would expect this industry to score relatively high in terms of customer satisfaction. Looking at energy service companies, we would expect the industry to have a medium level of customer satisfaction, whereas financial services would, according to our case study insights, score relatively low.

In addition to the average industry customer satisfaction scores, the figure on the average score of the top-25%-performers in ROC is just as interesting. From the viewpoint of an “average” company of a given industry, we could here see how much potential for improvement in this respective area of customer satisfaction and quality our company actually has. The potential means, in this context, the potential return on quality initiatives or MCS-elements which do not exceed the costs of resources involved in these initiatives. All in all, the satisfaction score of our companies with the highest financial return should ideally indicate the benchmark on how much a company should actually focus on satisfaction in order to leverage returns. The following figure illustrates an alignment of both qualitative and quantitative results.
Fig. 47. Quantitative and qualitative results on industry-specific success clusters.

As we can see from the graph, we aligned the quantitative results with our qualitative portfolio-chart by defining high service or product quality as an equivalent to the top-scores in our 10-year ACSI-survey. In a similar way, we defined the low performers in service and product quality as an equivalent to CSI-scores from 60 to 70. Since top performers scored by our definition between 80 and 90, our spectrum of customer satisfaction is ranging in this illustration between 60 and 90.

Interestingly, the quantitative results seem to support our impressions from our cases to a relatively high extent. Similar to electronics manufacturers, food manufacturers seem to compete in an industry with a very high emphasis on product quality. The analysis of the ROC-top performers seems to justify this strategy, since the companies with highest financial returns in the 10 selected years also score in this range, just 0.5 points higher than the average industry. Both, the qualitative results, as well as the empirical analysis, suggest that the “success cluster” for electronics and food manufacturers is therefore in the top range, defined as “high quality standards”.

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**Quantitative Results**

- **Food Manufacturers**: 82.6 (+0.5)
- **Energy Service Providers**: 74.1 (+2.9)
- **Telephone Service Providers**: 73.3 (+0.6)
- **Financial Service Providers**: 70.5 (-2.7)

**Average ACSI**

- **Top 25 % ROC**: 83.2
- **Average ACSI**: 80

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**Qualitative Results**

- **Top 25 % ROC**: 73.1
- **Average ACSI**: 70

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**Note**: ACSI-Difference between Industry-average and Top 25%-quartile ("Improvement Potential")
Very different is the situation for the other three service companies. On the one hand, we see that financial services are just barely above the low customer satisfaction segment. Even more designative, the top performers in banks and insurance companies score even lower, being clearly in the low customer satisfaction range between 60 and 70. Since the top-performers should, by definition, indicate the way financial service companies should handle their focus on corporate quality and their corresponding design of Management Control Systems, we can clearly say that the success cluster of financial services seems to be in the “cost leaders” segment, just as the case study results suggested.

On the other hand, we have energy services and telephone services within the group of our analyzed industries, whereas both score in a medium range. Both would therefore be labeled as “analyzing differentiators”, whereas the improvement potential for energy services is, judging from the empirical analysis, much higher (as discussed previously). In a way, also this aspect is reflected with our discussion of the Energy Inc. case. Whereas low cost in operations was a major issue for the management, the high concern on focusing on corporate quality and customer satisfaction was clearly reflected by the new strategic corporate targets.

Besides being in a service industry, also the closer proximity to end-customers seems to be of importance here. We see first evidence that business-to-business industries as e.g. the food industry or electronics manufacturers seem to be able to successfully achieve higher levels of customer satisfaction compared to business-to-customer industries as e.g. financial services.

Summing up, we can say that the quantitative results show that contextual aspects as e.g. industry characteristics have an important meaning and partly determine the way an industry or respectively a company within a specific industry focuses on quality and customer satisfaction. Still, we can see that corporate strategy can play a subordinate role when comparing the performance of the average industry with top performers. Especially for “analyzing differentiators”, the goal should therefore be to identify the right level of resources to allocate on quality initiatives and MCS-practices supporting the target to become equal to the industry benchmark. For these companies, the target is not to maximize customer satisfaction, but to find the most efficient levers with the highest impact on satisfaction. Here, a profound knowledge of key drivers of customer satisfaction seems to be of highest importance. The following paragraph will discuss practical implications of this conclusion.
6. Implications for Practice and Theory

According to Ulrich (2001), this dissertation intends to be applied research focusing on topics relevant to business practice. As an applied social science, the developed management theory is therefore impelled to remain in close contact with practice and contribute to solving practical problems and delivering design models relevant to the application context. (Ulrich, 2001; Bleicher, 1991)

The thesis underscored the relevance of adaptive Management Control Systems (Research question 1) which should ideally be designed sensitive to external impacts as well as company and industry specific characteristics (Research question 1 & 2). This work therefore establishes an increased awareness of the importance of carefully designed Management Control Systems. This topic is, in particular, relevant for the top management, change managers, controllers, and managers associated with quality and performance management.

With the help of several case studies, the thesis furthermore provides detailed insights into the strategic change process and adaptive changes in Management Control Systems at the example of three industries. These case studies can ideally be utilized as teaching material for lectures and student exercises.

The combination of case study insights with the quantitative results from research question 2 supports the assumption that the intensity of change management processes and Management Control Systems is directly influenced and limited by specific industry characteristics.

Fig. 48. The relevance of industry characteristics on the broadness of MCS.
Looking at corporate quality management and efficiency initiatives as two integral parts or levers of change management processes, we argue that the financial returns and synergy of both levers highly depend on corporate characteristics. In order to maximize financial returns as one of the primary corporate targets, the intensity and broadness of the Management Control System should be designed with respect to contextual, company specific impacts and limitations as illustrated in the previous chart.

### 6.1 Performance Improvement through an Appropriate and Business Area-Specific Utilization of Management Control Systems

When looking at our three main success clusters, we are assuming that companies within these clusters have to deal with different practical implications with respect to their specific business or performance areas. Just because a company is identified to be a “cost leader” does not necessarily mean that there is not one performance area requiring a very intense and broad form of management control.

As illustrated previously at the example of energy companies, performance areas can be seen as operations, corporate characteristics, product or service features, and pricing alternatives which have a strong impact on the perception and satisfaction of the customer with the product, the service and the company as a whole.

Previous parts of this work elaborated that these features are strongly related to corporate activities with a strong interface to the customer. In case of energy companies, these activities can be represented by e.g. the call center, the quality of the billing, corporate environmental responsibility, service quality (especially for business customers), power outage times, and other factors. Each of these areas can certainly be managed and controlled with higher or lower intensity and management attention, leading to corresponding performance differences of these areas in relation to industry benchmarks. At the same time, the relevance and weight of a specific performance area on overall customer satisfaction and loyalty can differ and change significantly.

Management implications for our three selected success clusters are therefore illustrated with the help of the following two-dimensional matrix.

The dimensions represent on the one hand the

- performance of certain areas in relation to industry benchmarks, and, on the other hand, the
relevance of specific performance areas or weights of these areas on customer satisfaction.

The two critical inputs to the proposed matrix are:

1. The impact or effect of different quality and value dimensions on satisfaction (such as customization, reliability and price) and
2. The level of company performance on these attributes, either in an absolute sense or relative to competitors. The explanation of this matrix is illustrated in the following figure.

**Fig. 49.** Explanation of the “Success Matrix”.

In the following paragraphs, we want to discuss specific managerial implications for the clusters “High Quality Standards”, “Analyzing Differentiators”, and “Cost Leaders” (see Fig. 38) at the example of the introduced matrix.

6.1.1 Implications for “High Quality Standards” (see Fig. 38)

This cluster was defined as a group of industries or companies which are actually able to establish leadership positions in customer satisfaction with their products, high productivity levels, and highest returns on their investments and capital at the same time. Efficiency and effectiveness seem to be in a synergetic coexistence for these companies. In general, we can see that this cluster keeps up high quality levels with the help of highly enhanced and broad Management Control Systems. The case studies show that the top management characteristically invests a large amount of time on advancing performance management practices in all key performance areas.
To stand out of the industry, the companies have to consider their specific strengths and develop and market these successfully to the customer base. With regard to our matrix, the challenge is here not only to achieve highest levels of performance in these performance areas but, furthermore, to increase and leverage the impact of these strong practices.

Judging from the quantitative insights, we can see that an underperformance in relation to the industry average is here to be seen as highly problematic. Underperformers show significantly lower financial returns compared to the industry benchmark. In this success cluster, companies cannot afford to apply weak standards in management control practices. The intensity or broadness of the internal reporting as well as organic and mechanistic forms of control should ideally be very high.

The general focus is here to strive for **effective** management control systems. The following figure illustrates the major implications for “High Quality Standards”.

---

**Management Implications for “High Quality Standards”:**


- **Improve/Push impact of corporate strengths on customer satisfaction**
  - Enhance impact of high quality features (products, services)
  - Apply enhanced, broad management control systems in corporate key performance areas
  - Intensely develop and market corporate strengths over time

- **Always improve weak performance areas**
  - Underperformers generally show significantly lower financial returns
  - Improve quality of performance of high impact features
  - Apply generally high standards in management control practices (in terms of organic/mechanistic management control & broad reporting)

- **Focus on effective MCS practices**

---

**Fig. 50.** Management implications for “High Quality Standards”.

---

6.1.2 Implications for “Analyzing Differentiators” (see Fig. 38)

“Analyzing Differentiators” were defined as a success cluster of companies which have difficulties in defining a generally right or appropriate level of customer satisfaction. Even though their main asset is not necessarily to be able to offer products or services at cheapest prices, they still need to care about negative effects of customer
satisfaction, quality, and trade-off challenges between quality and productivity. These companies are in the strong need to determine the right levers of customer satisfaction, which do not, or just to a small degree, have a negative impact on the company’s operational efficiency or productivity.

In terms of managerial implications, “Analyzing Differentiators” should ideally analyze customer perceived measures carefully and determine the weights and relevance of different corporate performance areas. Since resources or, more specifically, resources in relation to the financial returns for specific management control practices are limited for companies within this cluster, a thorough analysis is crucial which determines the potential for improvement. This potential can be seen in customer satisfaction, loyalty, and financial output or corresponding costs (financial input) associated with certain management control practices. We will call this process “Analytical Customer Satisfaction Management”; the structure and specific content of this analytical process will be described later on.

As another result or outcome from this approach, this cluster should limit investments in sophisticated management control practices in performance areas which have a low impact on customer satisfaction.

In general, a key success factor seems to be here to carefully select where to invest in costly management control practices. The following figure illustrates the major implications for “Analyzing Differentiators”.

---

**Management Implications for “Analyzing Differentiators”**:  
*Priority: optimize balance between Productivity & Customer Satisfaction*

- **Improve weak performance areas with high impact on customer satisfaction**
  - Carefully analyze customer perceived measures, determine relevance and weights of different corporate performance areas (“Analytical Customer Satisfaction Management”)  
  - Determine potential for improvement (potential increase in customer satisfaction/loyalty, & financial output) and costs (financial input) for certain management control practices

- **Do not invest in performance areas with low impact on customer satisfaction**
  - Avoid spending of resources on broad MCS in performance areas with low impact on customer satisfaction

- **Select carefully where to invest in costly MCS practices**

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**Fig. 51.** Management implications for “Analyzing Differentiators”.

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6.1.3 Implications for “Cost Leaders” (see Fig. 38)

Companies seeing themselves as being successful cost leaders basically achieve advantages over their competitors through an increased productivity in operations, cheaper sourcing options, and/or leaner structures of corporate processes. (Porter, 1980) These companies are in the need to handle their resources carefully. Operational efficiency is clearly the main target, whereas high quality is only necessary in areas which are highly important for the customer. With regard to the intensity of their Management Control Systems, these companies should apply high standards in these critical performance areas.

Regarding remaining performance areas, “Cost Leaders” should actually avoid an unreasonably high focus on management control practices in areas with low or insignificant impacts on customer satisfaction. Similar to “Analyzing Differentiators”, these companies should therefore carefully analyze the strongest levers of customer satisfaction and loyalty. In extreme cases, the management could actually consider to disinvest in projects and management control practices which have little impact.

Ideally, these companies should follow a type of target costing with regard to their corporate performance areas. Target costing, in its original version, intends to align costs associated with product or service characteristics with the appreciation or relevance of each feature expressed by the customer.

---

**Management Implications for “Cost Leaders”:**

*Priority: Productivity*

- **Avoid investments in performance areas with low impact on customer satisfaction**
  - Carefully analyze customer perceived measures, determine relevance and weights of different corporate performance areas (*Analytical Customer Satisfaction Management*)
  - Disinvest in improvement projects and management control practices in areas which have little impact on customer satisfaction

- **Avoid weaknesses in important performance areas**
  - Apply high standards in management control practices for areas which are perceived as highly important by the customer
  - Concentrate on features with high relevance for cost leadership

**Focus on efficient MCS practices**

---

**Fig. 52.** Management implications for “Cost Leaders”.
A form of “Organizational Target Costing” could follow the same principle and align the relative performance of each corporate performance area with the impact it has on customer satisfaction and loyalty. The “corridor” indicated in the matrix from the previous graph illustrates the field of ideal positions for each performance area.

In general, a key success factor seems to be in this case to focus on efficient MCS practices. The previous figure illustrates major implications for “Cost Leaders”.

### 6.1.4 Management Implications on MCS for Different Success Clusters

As a result from the previous findings, we can state and compare certain general implications for the design of MCS in the three clusters. The findings are certainly highly generic and broad; however, they indicate some crucial dos and don’ts.

To start out with, we can say that “High Quality Standards” are in the comfortable situation where they can actually apply highly enhanced organic and mechanistic forms of management control in most corporate performance areas. These companies do not have to focus so much on analyzing levers of performance, but are much more in the need to leverage the impact of their specific strengths. The information or reporting spectrum associated with this cluster should therefore focus on detailed performance measurement of process quality and efficiency.

“Analyzing Differentiators” have varying foci on management control complexity, depending on the relevance and customer satisfaction impact of each performance area. However, in general, these companies cannot match the broadness and complexity of Management Control Systems associated with the previously discussed cluster. A crucial analysis for these companies represents a careful cause- and effect-analysis of strategic and operational performance areas on customer satisfaction.

“Cost Leaders” need to rely on this tool as well, however, they often already know crucial drivers of customer satisfaction. The cause-and-effect-analysis is highly important, but can be kept basic if the business is transparent. In terms of management control practices, “Cost Leaders” need to rely on a highly mechanistic monitoring of mainly key financials and certainly costs. Sophisticated organic management control practices are rarely found in successful companies within this cluster, due to limited resources and lower expected returns. The following graph illustrates specific generic guidelines and implications for MCS.
6. Implications for Practice and Theory

Fig. 53. Generic guidelines for MCS in different success clusters.

6.2 Illustration of “Organizational Target Costing”

The process illustrated in the following shows how companies can transform customer knowledge into a valuable asset leading to an improved strategic orientation and adjustment of management control practices.

The generic process is divided into four parts.

- Starting out, the companies need to develop an understanding of their customer’s experiences with the company’s products and services. Customer perceived measures help to identify and gather the crucial data. A critical part of this first step is the segmentation of the customer market. It is vitally important that the management possess a clear picture of customers, their behaviors toward the product or service offered, and the main drivers or factors indicating why they are acting as they do.

- Secondly, measuring and linking these experiences in a cause- and effect-chain is important in order to ensure a high quality of the results, specifically when analyzing the impact of operational and strategic performance areas on customer satisfaction and loyalty. The results of this analysis are intended to achieve the following things:
(1) The explanation of the satisfaction response and loyalty behavior of the company’s customers based on the current level of performance they are experiencing with various interaction elements (e.g., product, service, channel, price, brand, etc.), and

(2) The prediction of changes in satisfaction and loyalty should those experiences change. The statistical models underlying the cause-and-effect-networks provide a quantification (score) of the experience and also indicate the effect (impact) a change will have on satisfaction and ultimately retention.

• Third, while the chain helps to understand and predict, its real power comes from the potential to financially quantify the input factors that create customer experiences, and the outputs – revenues and profits – that result from improved satisfaction and loyalty, thus providing an assessment of the ROI attained from the actions taken or expected from planned management control practices.

• Fourth and last, the companies should focus on aligning management systems and processes with customer experiences by mapping action plans for making improvements in processes and management control in those areas that will result in the greatest gain in customer satisfaction and loyalty. The cause-and-effect-chain will provide an action planning roadmap for the changes that need to be accomplished to improve customer satisfaction. True changes cannot be manifested until the firm aligns its Management Control System and processes with the reality represented by the customer’s view of the interactions they experience. The following graph illustrates this four-phase process.

Fig. 54. Schematic illustration of the “organizational target costing” process.
In practice, structural equation models can be of the highest relevance for this analytical process. As illustrated previously with the Energy Inc. case study, structural equation models are a tool to formulate and assess relations between operations, strategic performance factors and customer loyalty with the help of customer perceived measures mostly derived from questionnaires.

Looking at our matrix examples (Fig. 57 – Fig. 59), we can see that we need two types of information in order to derive and analyze management implications for corporate performance areas – namely

1. the relative performance of each area, and
2. the relative impact the performance area has on customer satisfaction.

Structural Equation Models (SEM) utilize highly advanced empirical mechanisms to calculate exactly these two figures. As illustrated in the graph below, the arrows connecting each performance factor represent the impact of one factor on the other. Furthermore, scores are calculated which represent the absolute performance of each corporate area on strategic and operational levels.

The key benefit is, in our context, the solid analysis of the actual impact of a company’s operational performance in relation to other strategic aspects such as the pricing as well as the corporate image.

Key features of the SEM:

- Weights offer insights on the relative importance of strategic and operational factors and items
- The SEM links operational and strategic elements of customer related performance

Fig. 55. Structural Equation Model for customer loyalty and major drivers.
Ideally, the SEM should eventually help to focus management attention to crucial targets. Not only can an SEM determine exactly how relevant the quality of operations is in comparison to efficiency-related targets (strategic level), but it can furthermore analyze the most important operational levers for customer satisfaction and loyalty. As the management initiates actions in response to this information, they have to consider prioritizing initiatives in line with the estimated impact, the cost, the ease of implementation, and the alignment with current management control practices and business plans. Eventually, management implications derived from the insights gathered in this work should represent a useful framework.

Summing up with regard to our third research question, we can say that customer knowledge is crucial for companies to identify the real impact of productivity, operational excellence, and corporate image on customer loyalty – the key driver for corporate financial returns.

We now want to take a look at our third research question. In 3 a), we asked the following:

3 a) Are there tools supporting companies’ efforts to identify their specific strategic success cluster?

Knowing the impact of operations quality on customer satisfaction and loyalty helps to prioritize business strategies. In this way, companies are actually provided with profound knowledge on their position within a specific “success cluster” in the field of tension between productivity and quality. Based on the insights from this paragraph, we can state that, specifically, structural equation models help to weigh the relevance of quality (of operations, products, or services) in relation to other strategic performance areas (as e.g. productivity/pricing, and image).

Determining the impact of customer satisfaction helps managers to decide whether a company should aim for high quality standards, an increased priority on low costs, or a careful analysis or trade off between single performance areas.

In research question 3 b) we particularized the issue further by asking the following:

3 b) Are there tools supporting companies’ efforts to maintain a strong position within their cluster?
The cause-and-effect-structure of potential structural equation measurement models helps to prioritize and align management control practices within each corporate performance area. When additionally approximating the effort needed to pursue continuous efforts in certain business areas, the management can actually align the costs related to management control practices with the estimated priority for the customer. As stated previously, the analytical process could be identified as a form of “organizational target costing”.

Following the proposed process, many companies can leverage their ability to maintain a high level of corporate quality as well as a strong position in their “success cluster” while at the same time remaining efficient in operations. Specifically for “Cost Leaders” and “Analyzing Differentiators”, this target is a crucial driver for corporate success.

### 6.3 Theoretical Implications

This dissertation discussed implications of strategic challenges and changes on the complexity and the design of Management Control Systems. Moreover, it elaborated limitations for change management processes with regard to external and internal corporate- and industry-specific characteristics or barriers.

Doing so, the thesis underscored the relevance of carefully and specifically designed Management Control Systems as a key element of a change management process. The thesis therefore delivers an impulse for future research activities in a relatively new field.

The scientific contribution of this thesis is, however, not limited to the fact that it creates awareness of the topic of contingency-based designs of Management Control Systems. Furthermore, it delivers generic answers to the question of whether and with what effect the adaptation of change management processes and corresponding MCS can be pursued. Qualitative insights illustrate this process for five different industries with a focus on organic and mechanistic forms of control as well as the complexity of management information systems or internal reporting schemes.

The opening of this “black box” of MCS-design and its limitations provided meaningful insights which covered a broader spectrum of MCS-elements compared to many previous research projects.
The quantitative part of the dissertation focuses on the macro-perspective of the topic, namely, the impact of industry-specific characteristics on the limitations of quality targets. By measuring customer satisfaction as a major indicator of product or service quality, the thesis is able to show characteristic differences among four structurally different industries. The outcomes have major implications on the target levels companies can assign for corporate quality and customer satisfaction. This, in return, has major implications for change management targets and the corresponding design of MCS. These insights are new to the research field and represent an impulse for an expansion of future classic quantitative research within this research topic.

6.4 Limitations and Future Research

After the critical discussion of the results of the dissertation, we now want to show some limitations to our research, which at the same time open new opportunities for future research projects.

The applied view of this dissertation is the contingency-based view. On the one hand, the selection of this view offered the opportunity to tie in with existing research streams. On the other hand, other theoretical perspectives, such as the knowledge- or resource-based view, could possibly broaden the perspective and provide additional interesting contributions.

The case studies are certainly limited in terms of the spectrum of companies or industries covered. We chose to select a group of five companies from diverse industries in order to improve the opportunity to discuss characteristic differences and similarities in change management processes and correlated changes in MCS across industries. Certainly, the results are to be seen as examples which provide a detailed analysis of single cases. The generalization and transfer of these insights is, of course, dangerous and not always possible.

The quantitative analysis of this thesis is based on a relatively broad database of the American Customer Satisfaction Index. Still, the data provides a good, but not perfect match with the case study results. Especially for the group of manufacturers, the database provided only insufficient material to deliver results for electronics manufacturers; instead, food manufacturers were chosen as an alternative.
Furthermore, as often in descriptive quantitative analyses, the causality behind assumed relations or correlations of customer satisfaction and financial outcome has to be challenged. Whether customer satisfaction drives the profits of the companies or, as is also possible, a better financial corporate situation drives a stronger effort and focus on the customer is not known. Still, the results are meaningful in both ways, since companies should see them as an incentive to strive for the best possible results in terms of both customer satisfaction and financials. Even though the sources of data are limited and costly to obtain, further research could here empirically prove statistical significance.

To sum up, the selected approach intended to provide generic insights and cross-industry comparisons. Follow-up research can build very well on the broad spectrum of insights and hypotheses gathered here by focusing the topic on one of the industries, certain specific elements of management control, or specific changes in management control related to selected comparable external or internal challenges.
7. Final Conclusions and Remarks

The thesis provides a well-founded analysis of situation-specific limitations to the complexity of Management Control Systems. By describing change management processes with three case studies from different industries, a detailed picture is given on how different and changing internal and external challenges can determine the way companies can or should design their reporting system as well as their organic and mechanistic forms of management control.

Managers can benefit from these insights by focusing their resources on efficient and effective forms of performance management. Especially the quantitative results showed that the way companies can and should deal with a strategic target, such as customer satisfaction, differs significantly from company to company, and even more so between industries. In the same way, the appropriate complexity of Management Control Systems differs. As a result, managerial implications are provided for three characteristic success clusters. These implications are intended to be a generic guideline and discussion platform for a broad range of practitioners.

Top managers, change managers, and managers affiliated with quality management and controlling are to be seen as the target audience of this work. Specifically change management is a very current topic due to the increasing challenges and more frequent changes and turnarounds companies had to go through recently. Due to this fact, the contingency-based analysis of this topic is valuable for practice-oriented research.

Even though these same managers within our target audience are inundated with numerous trends and statements on ever more complex forms of management control, they should take the results of this dissertation seriously and consider thoroughly what their appropriate corporate targets and targets for their Management Control System actually are, promising the highest financial returns.
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8. References


9. Appendices

9.1 *List of Selected Interviews from Research Phase 1*

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9.2 Concept and Structure of Case Study Interviews

(A) Characterization of the company / business unit:

- industry, market position, size, value chain, market characteristics
- organizational characteristics, structure, regions
- strategic objectives over time, conflicts, opportunities, threats

(B) Description of management control systems and practices:

- Implications of process or business reorganization on MCS
- Description of MCS on operational and strategic levels
  - mechanistic performance management
  - organic performance management
  - non-financial performance measures

(C) Description of changing strategic priorities over time:

- triggers
- targets, and
- key performance indicators
  over selected phases

(D) Discussion
9.3 Further Related Case Study Results for Energy Inc.

The structural equation modeling technique applied to analyze customer satisfaction with operational and strategic performance factors (1) provides in this context a method of dealing with multiple relationships simultaneously while providing statistical efficiency, and (2) possesses an ability to assess the relationships comprehensively. In comparison, multiple regressions, factor analysis, multivariate analysis of variance, discriminant analysis, and some other techniques all provide the researcher with powerful tools for addressing a wide range of managerial and theoretical questions. Still, they all share one common limitation: each technique can examine only a single relationship at a time. Especially companies intending to identify relations between different performance areas can bring in their knowledge through a defined cause-and-effect-path diagram. Since this knowledge is very present in our case within all business units, this structural model approach was applied.

(Expert interviews during 1st action research project, 2004)

Fig. 1. Non-financial performance measurement at the example of customer satisfaction (1st action research project, 2004).

From a list of performance areas, this structural model is actually intended to provide the management with a better overview on what is really crucial to customer loyalty and eventually the company’s performance. The following graph is actually taken from a study from Mercer Management Consulting, showing the impact the drivers of satisfaction have on overall customer satisfaction within the illustrated tree.
analysis. Quite similar to our structural model, this approach ranked the factors based on company-specific customer responses to survey questions.

Fig. 2. Ranking of perception drivers in energy delivery.
(Mercer Management Study, 2005)

Similar to the outcome of the structural model, the weights representing the impact on satisfaction of each performance driver should eventually help to focus management attention on crucial targets. As the management initiates actions in response to this information, they have to consider a prioritization of initiatives across the estimated impact, the cost, the ease of implementation, and the alignment with current initiatives and business plans. Eventually, management implications derived from the insights gathered in this work should provide a framework to work in this direction.

Specific to each business unit, Energy Inc. will – with the help of a structured approach – determine how key aspects are linked to each other and eventually to employee commitment as the main ‘factor’ or objective. The model structure allows furthermore to link this data to the quality of overall performance and through this directly to customer satisfaction. In the long run, empirical links to on the one hand data from process-KPIs from the business performance initiative as well as links between customer loyalty and financial outcome should even increase the relevance and power of the model. Qualitative differences between both approaches are briefly illustrated in the following figure.
Fig. 3. New employee satisfaction measurement.
(2nd action research project, 2004)

On the basis of employee and customer data, Energy Inc. is now able to identify the relevance as well as the quality of operational aspects as e.g. “complaint-management”. Even though the pricing aspect is highly relevant in this specific industry, the company can with this approach clearly identify how important other aspects as e.g. overall customer satisfaction or image really are for the loyalty of customers – also specific to every single business unit. The non-financial performance measurement models serve as drivers for the focus on strategic differentiation and are intended to support especially the goal to become the number one for customers as well as employees.
9.4 Case Study – Operating Passenger Traffic

- Characterization of the Service Structure at Operating Passenger Traffic

Operating Passenger Traffic represents a business unit from a major European provider of train transportation. Within the organizational structure of the whole company, Passenger Traffic is one out of four divisions and is responsible for public railway transportation. The whole service to the passenger encompasses long-distance and regional traffic, whereas these are again split into the functions operating and customer service. Figure 34 depicts the matrix structure of the overall passenger service offering. As illustrated in the following, operating is responsible for both long-distance and regional traffic, has however no responsibility for the direct service to the customer (Company presentation kick-off workshop, 8/2004).

This case study is therefore to be seen from a different perspective: whereas in the other case studies, we looked at each company as a whole, we have to now look at inter-organizational issues as well, be it through the fulfillment of certain requirements from superior management levels, agreements with other business units, or the general acceptance of new implications by subordinates of a specific business unit.

![Matrix structure of different services and organizational units.](Company presentation kick-off workshop, 8/2004)
**Organizational Characteristics**

As to the legal ownership situation, the company is still 100% public and state owned. However, the situation changed and first competitive conditions or elements erupted within the last years (interview 7/2002).

Within the organizational setting of the company, the tasks for Operating Passenger Traffic are quite clear and static:

The unit is supposed to achieve a constantly high level or improvement of the products or services in terms of:
- punctuality,
- cleanliness, and
- reliability.

At the same time, the unit is confronted with the challenge to reduce production costs until 2007 by at least 10%. Key operating challenges resulting from these tasks are subject to the business development and controlling units as well as specifically to all operational functions as fleet management, planning and steering, production, cleaning and maintenance. The following picture briefly illustrates the organizational structure of Operating Passenger Traffic (Company presentation Kick-off workshop, 8/2004).

![Organization chart of Operating Passenger Traffic.](image-url)
The external development and changes in the Management Information System (MIS) at Operating Passenger Traffic over time

Until 2004, the business unit was regarded as a cost center with no responsibility for the way operations are designed and sold within specified service levels. Key challenge number one was and is still to a great extent the allocation and operation of vehicles with little regard to the profitability of operations within the business unit (Interview 7/2004).

In the future, this is planned to be subject to change: whereas a cheap production and high productivity in operations are a strong focus now, a more competitive environment should be created in the long run.

Similar to other cargo transportation companies, operating passenger traffic plans to combine both efficiency and customer orientation through

- a flexible management of prices and service level agreements and
- the creation of a competitive situation by the help of more and more liberalized markets.

Similar to the ideas of ‘target costing’-techniques, the unit is supposed to move away from a defined transfer pricing between regional or long-distance traffic and operating. Prices need to be looked at more critical and with regard to the trade off between the use of service quality, the perception of customers, and related costs. Basic conditions and requirements which need to be considered in this context are Efficiency Targets, Conflicts, and Progress.

In order to achieve more efficient operations within the key processes of operating passenger traffic, the first step was to detect and explore synergies between the operation and the maintenance of the trains. These synergies resulted in higher productivity rates for both processes.

However, a stricter process orientation coming along with new ISO 9000 goal-settings and requirements has to be considered with a marginal effect in this context. The introduction of key process indicators has not yet achieved a solid quality level at Operating Passenger Traffic.
The long-term target is represented by a broader Management Information System (MIS) incorporating aspects as
- financial reporting,
- reporting of the status of trains,
- quality reporting, and
- project reporting.

As visible from the new dimensions, the goal is to move from a system providing information on revenue and costs towards a system encompassing further aspects as quality and customer requirements or perceptions. The following figure illustrates stages and conflicts on the way towards a higher efficiency in operations (Interview 7/2004).

**Efficiency gains through a reorganization of functions or business units**
- e.g.: Synergies between Operating & Maintenance
- Reorganization of Personnel: e.g. operators & administrative functions
- Synergies between different operating functions overall: reorganization / improvement of business understanding

**Consolidation of old reporting systems, drop in information quality**
- problematic integration of the IT-system (SAP)
- core of the information system is still (estimated: 80 %) referring to the organizational, not the operational structure
  - step backwards in MIS-quality through increased problems through organizational consolidation

**Efficiency gains through a stronger process orientation & mechanistic monitoring of key process indicators**
- definition of new processes (going in line with ISO 9000 requirements)
  - future perspectives:
  - definition of key processes and corresponding Key Performance Indicators (KPIs)
- Management Information System (MIS) for increased transparency: (on 4 pillars)
  - financial reporting, train reporting, quality reporting, project reporting

**Fig. 3. Efficiency-progress: Three stages at Operating Passenger Traffic.**
(Based on interviews)

- **Description of the new MIS-project**

  Before the initiation of the MIS-project, the business unit did not have a unified reporting structure. The target was basically to consolidate already existing indicators and merge these with newly developed figures to a meaningful management cockpit. As stated in the description of the project plan, a possible ‘upgrade’ of the model towards a System Balanced Scorecard is considered as desired.
After a successful implementation of the MIS, a continuous reporting is planned. The monthly management meeting is intended to serve as a platform where critical performance areas and eventual improvements can be highlighted and discussed.

A reporting of crucial figures from the MIS to other organizational units and levels is intended as well (Project documentation ‘New MIS’, 2005).

• **Benefits from the new MIS-project**

The use of the whole process was defined by the business unit as follows prior to the project initiation. Financial benefit was described as hardly identifiable, however expectable over a longer time-period. Different potentials were summarized as

  (1) an increase of profits  
  (2) rationalization, efficiency gains  
  (3) more efficient use of human resources  
  (4) the reorganization of processes and structures  
  (5) the reorganization and relocation of sites (e.g. production)  
  (6) a synergetic use of resources.  

(Project documentation ‘New MIS’, 2005)

Referring to figure 36, we can state that especially the points 2, 3, 5, and 6 are ‘quick wins’ and represented by stage one in the three stage efficiency development process. The reorganization of processes and structures in point 4 is a long term target and represented with the third stage in our foregoing illustration.

• **Chances, Risks, and Consequences resulting from the new MIS**

The MIS project management team summarizes the following points as chances, risks and eventual consequences (Project documentation ‘New MIS’, 2005).

*Non-quantifiable information:*

“Indicators only represent the kind of data or information which is quantifiable by figures. Informal aspects however, which can be meaningful for the organization as well, cannot be presented by this means. The new MIS intends to identify current organizational shortcomings and leadership difficulties within a management cockpit.”
The reported content should support an improvement in the manageability of the business unit.”

Indicators as point of time-referring measures:
“Indicators are referring to specific points of time and represent static figures. A higher meaning of these indicators can only be achieved by analyzing changes and developments of figures over time. By comparing target levels and the current status of performance indicators, one can significantly improve the message derived from the values. In addition, these figures have to be displayed as reference values.”

Use of outrun measures:
“Most figures are based on measures from the balance sheet and the income statement. Since these measures are often only determined annually, they often represent an outdated and obsolete value. Management decisions based on this data can often be results from misinterpretations and changed initial positions.”

Danger of isolated applications:
“An isolated application of key figures leads to misinterpretations, wrong use of information and eventually to wrong decisions since sometimes only a part of the entrepreneurial reality is considered. Missing links and important cause and effect structures are often left behind due to a wrong determination or non-existence of key figures within management cockpits.”

Correct Interpretation of key figures:
“A correct determination of key figures is often not sufficient. Experience shows that the sole determination of performance indicators does not necessarily lead to a correct interpretation of the results. One prerequisite is often the right interpretation within the whole context and setting of the unit passenger operating traffic.”

The following table summarizes selected chances and risks as perceived from the project management team of the new MIS prior to the implementation of the change measures.
A highly controversially discussed point is certainly the acceptance level throughout the organization. Critical is here to design cockpit measures which on the one hand can be monitored frequently and easily, are easy to understand and provide higher transparency and management attention instead of isolated applications with no relation to the top management.

In a way, we can say that the business unit is to some extent confronted with an iterative process: whereas the consolidations of businesses lead to improved processes, the unit realized the need to update and improve the MIS-structure as well. This step certainly goes along with the utilization of a number of KPIs as listed in the following. The critical part here is to, over time, find the right level of management control to improve transparency as well as commitment, support and understanding for the reporting structure by the employees and process owners.
Fig. 5. Core- and border-areas of new reporting measures.
(Results from 3rd workshop, (11/2004))

- **Changing Strategic Priorities and Selected Corresponding Performance Measures at Operating Passenger Traffic Inc.**

The business unit was confronted with challenges leading to a need for change in the industry-specific MIS. Initially, the emerging increased focus on competitiveness can be seen as a trigger for changes in strategic priorities. The business had to switch the focus towards higher organizational efficiency in the first place by restructuring and reengineering the organization. In long-term perspectives, the MIS is intended to increase process quality in itself with the help of a continuously monitored and accepted reporting system with a selected number of highly relevant KPIs.
The following graph illustrates the different phases of Operating Passenger Traffic by considering the
- cost target, the
- ‘organizational efficiency by synergy’ target, and the
- ‘organizational efficiency by process quality’ target as three important elements.

As visible, the synergy potential can be utilized relatively quick. A more synergetic and efficient use of human and material resources as well as a reorganization of sites were here fast implemented objectives. The improved reporting and performance measurement system is clearly a long term target and has the potential to lead to further cost and quality improvements in the long run.

**Summary**

This case study offers information on an operations business unit of a public passenger traffic provider. The business unit was confronted with an increased liberalization and competitiveness of its market in the recent past. Results were more challenging, profit center-oriented service level agreements and a correlated cost and quality focus of the unit. The unit reacted and implemented – among other means – changes within the operational Management Information System (MIS).
Within this study, one can see how the changes impact

- the design and specification of the operational management information system,
- how reorganizations are coping with negative effects for the informational perspective from the management and process owners, and
- how the business unit is in the need or urged to balance complexity and the amount of detailed information on key processes with the acceptance level of operational MIS throughout the organization.

In this case study, we looked primarily at the way one specific business unit deals with emerging challenges in adapting its Management Information System and organizational structures. From the point of view of our first research question, we get insights into primarily how the business unit determines the right broadness of information as well as the level of standardization of new processes in order to confront emerging challenges.

The corresponding changes in organizational settings and the business unit’s Management Control System can be summarized as follows:

- The reorganization of operating and maintenance into a more process oriented organization lead to efficiency gains and an increased use of synergies across functions
  - At the same time, information quality went down due to problems with the integration of existing MIS
- New information requirements are intended to cover the aspects financials, quality reporting, project reporting, and the status of trains
  - Key challenges were here the transparency, actuality, and acceptance of new reporting requirements
  - Operating passenger traffic is in the need to weigh the optimum level of increased transparency of new processes with an adequately broad and efficient management information system in order to consider emerging needs for quality, relevance of information, and full support of all process owners and employees.
9.5 Case Study – Retail Banking Industry

- Introduction into Characteristic Challenges to the Retail Banking Industry

This study describes empirical results illustrating how or to what degree retail banks were able to meet challenges in the area of meeting customer expectations and productivity targets. The results are subject of a study elaborated by KPMG in cooperation with the University of St. Gallen.

Retail financial services represent an industry confronted with many pressures. On the one hand, the regulatory environment, risk and capital management, reporting and compliance are all major issues demanding the attention of board and executive alike. On the other hand, there is still a business to run, with customers to be won or retained, costs to be managed and shareholder value to be created, all in an increasingly dynamic and international environment. Failure on any of these counts can swiftly spread both domestic and international attention. The key to the success of a retail financial service organization in this complex environment is the relationship between the revenue generating customer base and the cost of the infrastructure required to service, satisfy and delight them.

In line with related industries and specifically with our qualitative results from the Insurance Inc. case, the cost-income ratio remains one of the most closely watched and targeted numbers in any modern bank. On the revenue side, growth in customer numbers, customer retention, share of wallet, and cross sale ratio are all key metrics. Differently, on the cost side, the variables are around staff numbers, branch numbers, the range and variety of channels to the customer and the location of transaction processing, as off-shoring develops as a means to both manage cost and, in some cases, improve customer service.

- The trade off between customer satisfaction and high productivity levels in retail banking branches

The key challenge is here certainly the question how customer satisfaction can be achieved and, more importantly, at what price. The results show insights illustrating
what retail banks are actually doing to attract, retain and sell more to their valued clients, what they believe their clients’ want and what their recent successes and failures in meeting these needs were. Equally important, the study shows their activities, successes and failures, in order to manage cost and improve their technical and operational capabilities.

As indicated, KPMG International spoke to 54 senior decision makers in the marketing and operations functions in some of the leading retail banks in nine countries. The survey highlighted some of the key developments in retail banking – for example, how the branch is experiencing something of a renaissance, even in those countries where customers have traditionally used multiple channels and multiple providers. Retail banks are increasingly aware of the fact that customers want a more personal service – longer banking hours, personalized telephone banking and additional client service personnel – and a number of respondents have focused on providing a customer service normally reserved for high net worth clients down to their core retail customer base. The survey also highlights some of the key operational challenges facing the banks, for example the problems of adapting legacy systems to multiple delivery channels, creating cross-business unit processes and empowering their front line staff.

The difficulty for financial institutions, is typically to generate additional revenues while successfully managing their costs down. The cost-income ratio remains a big challenge.

- **Descriptive Empirical Results**

The most important driver to the success of a retail banking organization is the balance between the revenue generating client base and the cost of the infrastructure required to provide superior service to customers. The following paragraphs sum up selected descriptive results from a KPMG study, focusing on customer satisfaction and cost management in financial institutions.
Customer satisfaction

Due to a limited customer base in domestic markets, banks are restricted to the turnover of their client base, potential increases of product offerings for their current clients, as well as the opportunity to capture their competitor’s clients with a superior product, channel and/or service. The achievement of these aims relies on a number of factors which are described and analyzed in the following extracts from the KPMG study.

Channel

Despite the trend for customers to use multiple channels, the branch is enjoying something of a renaissance. Branch networks are being expanded, existing branches are being refurbished and modernized and opening hours are increasing markedly. Internet banking was seen by the survey sample as the most important channel for their clients. However, the banks’ performances in this area are rather mixed. Delays in
launching the service, access problems and security were all raised as significant ongoing issues. The provision of automated telephone banking was the only area where banks believe they are ‘over-delivering’ – suggesting that past investments in this technology have overestimated the level of client acceptance. Banks would seem to be moving away from automated systems towards personalized telephone banking services. Their perceived under-delivery in this area perhaps reflects the significant operational challenges inherent in delivering such a service.

**Product**

The survey highlights that having a suitable suite of products is of primary importance. The low interest environment has reduced the banks’ ability to differentiate on price alone but two alternative strategies were evident:

- Gaining a better understanding of the customer base and tailoring products accordingly
- Innovation, and perhaps more importantly, being seen as innovative.

**Personal service**

Softer issues, such as the importance of ‘friendly’ branch staff and the desire to build a higher-touch trusting relationship, were seen as very important but an area where banks accept that they are under-delivering. This issue is being tackled and frontline staff is being empowered to build these relationships through the provision of better client information and the careful design of incentive schemes based on customer service metrics rather than hard sales targets.

**Cost management**

The operations function is central to a bank delivering on its customers’ expectations. However, they have a further business objective to achieve; namely, generating greater efficiencies and often, cost cutting. Achieving a healthy balance between these conflicting pressures is a central tenet for every COO.

**People**

Banks are still struggling with the optimum balance between operational staffing costs and good quality customer service. Moves to fully automate the telephone banking process have proved unpopular with customers and new technologies have created their own challenges. Outsourcing and off-shoring have been successful in helping to meet cost targets but there are examples of this resulting in a decline in service quality. (KPMG, 2005)
**Systems and processes**

The survey showed that while operations managers were confident they could deliver on their core transaction processes, they faced a number of other challenges. Systems and processes are in a need of updating to help improve the quality and timeliness of information and reduce the number of system failures. Many large banking organizations have legacy systems that have difficulties interacting with one another. This clearly creates inefficiencies and the survey demonstrated that a significant problem area for operations is the difficulty of creating systems that work across all business units and channels.

**Customer information**

Good data management in operations is important to help meet the demands of marketing departments in terms of generating information on customers and providing the systems to access and manipulate this data. Success in this area has been mixed and the survey revealed examples of where banks had no way of knowing how many customers they had for certain product areas. (KPMG, 2005)

![Fig. 2. Empirical results on cost management factors in retail banking.](image)
• **Implications for the design of MCS in retail banks**

What becomes obvious from the results illustrated in this study is that, despite strong – and often exaggerated – efforts, the satisfaction of customers apparently cannot be leveraged significantly by utilizing and developing highly automated customer-interfaces.

The industry made big efforts to develop a stronger use of telephone banking services and WAP- or digital TV-services. However, when comparing the relevance of these channels for the customer with the relevance of personalized banking, we still see a strong gap. A reasonable share of customers use internet banking as their personal interface, but for many, the direct connection to people is crucial to develop a deeper connection to a certain bank.

This fact certainly has major implications for the design and focus of Management Control Systems at retail banks. On the one hand, speed, friendliness and reliability of personalized service show to be of major importance in order to create satisfied customers. Since these aspects are however only very costly to control, we would expect banks to weigh actual, broad forms of management control in order to ensure an outstandingly performing staff with less satisfied customer and less costs for management control.

Apparently, for many retail banks, the latter is reality: in all three categories of personal service, the actual performances of the banks lag strongly behind the actual rank of the factors, as e.g.

- Speed and efficiency with customer requests,
- Friendly staff with short queues, and
- Speed and efficiency of response to complaints.

Therefore, even though one would expect retail banks to apply broad forms of interaction and training with their staff (organic control), we see that the relevance of low costs implies less focus on these aspects of management control.

Looking at our second chart (Fig. 41), we see that more efficiency-related key drivers by operations managers are rated the highest: timely and accurate transaction processes.

In general, one can state that Management Control Systems can and should only be as good and broad as the expected return allows. The insights from the quantitative analysis in chapter five will further support this hypothesis.
9.6 Details of the main PMD-Project-Workshops

Workshop 1:

Date:       June 9th, 2004
Location:   Swissotel, Zürich

Topic:      Performance Management Framework

Participating Companies: (In alphabetic order)

- **Credit Swiss Financial Services (CSFS):**
  - Mr. Fischer
  - Mr. Inhester

- **Schweizerische Bundesbahnen (SBB):**
  - Mr. König

- **Schweizerische Post (SP):**
  - Mr. Huggenberger

- **SUVA:**
  - Dr. Horner

- **HILTI:**
  - Dr. Rohner

- **Vattenfall:**
  - Mr. Eriksson
  - Mr. Groth

Participating scientific institutions:

- **Stockholm School of Economics (SSE):**
  - Prof. Dr. Westlund

- **Institute for Technology Management (ITEM), University of St. Gallen:**
  - Dr. Herrmann
  - Mr. Pock
  - Mr. Voelz
  - Mr. Linnemann (as guest auditor)
  - Mr. Mezzour (as guest auditor)
Workshop 2:

Date: August 28th, 2004
Location: Swissôtel, Zürich
Topic: Strategy Development and Performance Measurement

Participating Companies: (In alphabetic order)

**Helvetia Patria:**
- Dr. Guggisberg
- Mrs. Krämer
- Mr. Balk-d’Aubert

**Schweizerische Bundesbahnen (SBB):**
- Mr. König

**SUVA:**
- Dr. Horner

**Vattenfall:**
- Mr. Eriksson
- Mr. Hallberg
- Mr. Gröbler

**Christian Rohner – nachhaltige Unternehmensführung**
- Dr. Rohner

**Mummert Consulting:**
- Dr. Brunner

Guest speaker:

**Unaxis:**
- Dr. Eisl

Participating scientific institutions:

**Stockholm School of Economics (SSE):**
- Prof. Dr. Westlund

**Institute for Technology Management (ITEM), University of St. Gallen:**
- Prof. Fahrni
- Dr. Herrmann
- Mr. Pock
- Mr. Linnemann
Workshop 3:

Date: November 18th, 2004
Location: Renaissance Hotel, Zürich
Topic: Performance Reporting

Participating companies: (in alphabetical order)

**Helvetia Patria:**
- Mrs. Krämer
- Mr. Balk-d’Aubert

**Schweizerische Bundesbahnen (SBB):**
- Mr. König

**Roche:**
- Mr. Huber

**Vattenfall:**
- Mr. Hallberg
- Mr. Gröbler

**Christian Rohner – nachhaltige Unternehmensführung**
- Dr. Rohner

**Mummert Consulting:**
- Dr. Brunner

Guest speaker:

**CFI Group:**
- Mr. Fritsch

Participating scientific institutions:

**Stockholm School of Economics (SSE):**
- Prof. Dr. Westlund

**Institute for Technology Management (ITEM), University of St. Gallen:**
- Prof. Fahrni
- Dr. Herrmann
- Mr. Pock
- Mr. Linnemann
# Workshop 4:

**Date:** December 3rd, 2004  
**Location:** Renaissance Hotel, Zürich  
**Topic:** Reporting Implementation and Organizational Behavior

Participating companies: (in alphabetical order)

- **Helvetia Patria:** Mrs. Guggisberg
- **Schweizerische Bundesbahnen (SBB):** Mr. König
- **Vattenfall:** Mr. Gröbler
- **Christian Rohner – nachhaltige Unternehmensführung:** Dr. Rohner
- **Mummert Consulting:** Dr. Brunner

Guest speaker:

- **Siemens Nederland:** Mr. Neerings

Guest speaker:

- **Swissmill:** Mr. Lorenz

Participating scientific institutions:

- **Stockholm School of Economics (SSE):** Prof. Dr. Westlund
- **Institute for Technology Management (ITEM), University of St. Gallen:** Dr. Herrmann  
  Mr. Pock  
  Mr. Voelz
9.7 CV Thomas Pock

Name: Thomas Pock
Date of Birth: August 7, 1976
Place of Birth: Mönchengladbach

Education:
Until 1995: Abitur at the Erasmus Gymnasium in Grevenbroich
1995-2002: Dipl.-Ing. at the RWTH Aachen
1997-2002: Dipl.-Kfm. at the RWTH Aachen
1997: Exchange Student at the ITESM, Monterrey (Mexico)
2002-2005: Doctoral Student at the University of St. Gallen (Switzerland)
2005-2006: Visiting Scholar at the University of Michigan (USA)

Practical Experience:
1995: Internship at Mannesmann Demag-Meer, Mönchengladbach
1996-1997: Student Assistant at the Lab. for Machine Tools, RWTH Aachen
1997: Internship at ZF Group, Cincinnati (USA)
1999: Internship at Roland Berger Strategy Consultants, Munich
2002-2005: Research Associate at the Institute for Technology Management,
University of St. Gallen (Switzerland)