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The Dynamics behind Consistency:
A Case study on NTT Group and Deutsche Telekom

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Purpose: The main aim of this thesis is to investigate the implications and dynamics behind *consistency* between resource allocation decisions and the corporate strategy. The telecom industry, a high-velocity environment going through an extensive deregulation process, is put under the magnifying glass. Japanese telecom giant NTT Group is studied as well as its German counterpart Deutsche Telekom. Potential antecedent factors in the *strategic decision-making process* to consistency are studied. It is also examined whether there is a direct interplay between consistency and economic performance. This is carried out in order to get a better understanding of the concept of consistency. A better perception of consistency could help managers improve their understanding of formulation and implementation processes of corporate strategy and get better in timing and creation of new strategies. Looking at consistency could also support stakeholders with valuable information of investment opportunities.

Method: The approach used in the thesis is the deductive method. By studying a theoretical framework, hypotheses on factors influencing consistency have been developed. The data used is derived through a longitudinal case study of NTT Group and Deutsche Telekom. All important resource allocation decisions (made by NTT) over a specified time period are codified into a *Resource Allocation Database* at the University of St. Gallen. Deutsche Telekom was already codified at the time of this thesis. The hypotheses are then tested by analyzing the codified data with regression and correlation analysis methods.

Results: Consistency is compared with other related concepts and positioned in the strategic implementation field. The findings in the analysis support Rajagopalan with colleagues' *strategic decision process model* (1993) which suggests that organizational and decision-specific factors affect decision outcomes, which in its turn affect economic outcomes. The findings suggest that the consistency level *decreases with time*, which could help managers with timing and frequency in strategy formulation. Consistency also seems to *decrease on higher decision making level*. Furthermore, it is indicated that strategy formulation in these two companies might be *adaptive* in kind. The *strategic inflection points* suggest that strategy formulation lag behind the actual strategic behavior. Finally, the study of the interplay between consistency and stock price might indicate that shareholders perceived the announced corporate strategy negatively. With extensive improvement of methods this might be a way to evaluate strategies retrospectively.

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1 Introduction

1.1 Background

Corporate strategy 'is concerned with the firm's choice of business, markets and activities' (Kay 1993), and thus it defines the overall scope and direction of the business. The purpose of an overall corporate strategy is to put the organization into a position to carry out its mission effectively and efficiently. This in turn to meet the main objective of the corporate strategy concept; to create shareholder value (Collis 1996). A good corporate strategy should integrate an organization's goals, policies, and action sequences (tactics) into a cohesive whole.

Considering these definitions it is not hard to realize the relevance of the corporate strategy both in terms of formulation and implementation. The definition and formulation of a corporate strategy that is conformed to both business goals, as well as to organizational and environmental conditions is a challenging task to say the least. Equally important is the awareness of the implementation process and the linkage between the firm's strategic decisions and its corporate strategy.

The corporate strategy has external as well as internal relevance. To the inside of the firm it focuses decisions and actions on company objectives and directs resources and processes in the course appointed by the corporate strategy. The announced corporate strategy is also essential to the outside of the company. It signals the visions and the company course to outside stakeholders such as shareholders, investors and debtors. Choice of corporate strategy thus concerns the choice of the proper *strategy content*. Strategy content is a major field in strategic management research. However, despite indisputable relevance of this topic, the choice of strategy and strategy content is not the main theme in this study.

In addition to the choice of proper strategy content, the above discussion opens for the interesting subject of studying the relation between strategic decisions and the announced corporate strategy. This concerns the study of *strategy process* and more specifically the study of *strategy implementation*. In this context the focus is subsequent to the strategy choice, i.e. the corporate strategy is already set and announced.

In a quite new area of research in the *strategy implementation field* the consistency to the corporate strategy is studied by looking at the company's resource allocation decisions (Richter and Schmidt 2005, Schmidt and Brauer 2006). The next step would be to study the dynamics and implications of the consistency concept itself, an area that hasn't been under much research.

1.2 Problem Area

Subsequent to recent corporate scandals, boards of directors are facing an increased pressure from investors, creditors and shareholders to ensure corporate governance of their investments (Schmidt and Brauer 2006). Furthermore, shareholder activism is increasing and it seems to be a general loss of investors' trust in corporations' governance capabilities. Integrity and competence of boards of directors have been questioned publicly and examined by governmental corporate governance commissions. Besides, there seem to be a lack of adequate methods and measures for assessing the effectiveness of companies, and boards in particular, in guiding strategy execution (Schmidt and Brauer 2006).

The *consistency concept* has been introduced in order to cope with these needs and to increase the understanding of *strategy implementation*. The consistency concept is positioned subsequent to the *choice of strategy* in the field of *strategy implementation* or *strategy execution*. Consistency signals the alignment between a firm's *resource allocations decisions* and its announced *corporate strategy*, in other words in which degree the previously announced corporate strategy is implemented. *Resource*

allocations comprise strategic decisions that affect tangible resources such as financial, physical, human, organizational and technological resources.

Scholars have used consistency as a measure of strategic decision quality (Shrivastava and Grant 1985). Consistency ensures shareholders that the corporation actually "walks like it talks" (McGregor 1967). Desirable levels of strategy consistency are likely to vary across different industries depending on how volatile the environment is. For instance, high-velocity environments, like the telecom industry (Burgelman 1996), are likely to require higher levels of strategic flexibility, thus impacting a firm's suitable level of (in)consistency. This leads to a difficult balance walk; a firm needs to strive for a level of strategy consistency which satisfies share- and stakeholders that look for consistency on the one hand, but also allows executive management to follow business opportunities which are not totally consistent with the initially formulated strategy on the other hand.

However this doesn't question the appropriateness of measuring strategic consistency, since one can assume that a firm would announce changes to its corporate strategy if it recognizes that environmental changes has a long-term impact. It is also of importance that strategic inconsistencies are detected and discussed internally as well explained to a firm's share- and stakeholders.

Thus, consistency as measurement is highly relevant from a strategic formulation and implementation perspective. Consistency is clearly a dynamic concept and little research has been done to investigate the *dynamics* and *antecedent factors* that may affect and explain consistency. Richter and Schmidt (2005) have in their study investigated one organizational (decision making level) and one decision-specific factor (timing) affecting the decision-making process as antecedents of consistency between corporate strategy and resource allocation decisions. Their research concerned two independent variables (to consistency) in two companies, and can be seen as a springboard to further research that can fill the existing *research gap* concerning the dynamics behind consistency. I believe it would be relevant to study consistency in a *high-velocity* and *dynamical environment* (Burgelman and Grove 1996) where tendencies might be distinct and become detectable despite my limited resources and short time-frame. The effects of both good and poor decisions reach the "surface" sooner due to faster feedback. The telecom industry is a high-velocity environment with a very high innovation rate (Burgelman and Grove 1996). It is also an industry that is going through an extensive deregulation process. In this study Japanese telecom giant NTT Group is compared with its German counterpart Deutsche Telekom.

On the basis of the issues discussed above and Richter and Schmidt findings (2005), I would find it relevant to study the dynamics of consistency. I would like to examine the concept of consistency from three angles: First, I would like to investigate if and how organizational and decision-specific factors influence consistency between corporate strategy and resource allocations. Second, find out if there is a linkage between consistency and economic performance. Third, study consistency in another industry than Richter and Schmidt (2005), namely the *telecom industry* which I believe is a particularly interesting industry for this subject. The approach can be illustrated by the following research approach:

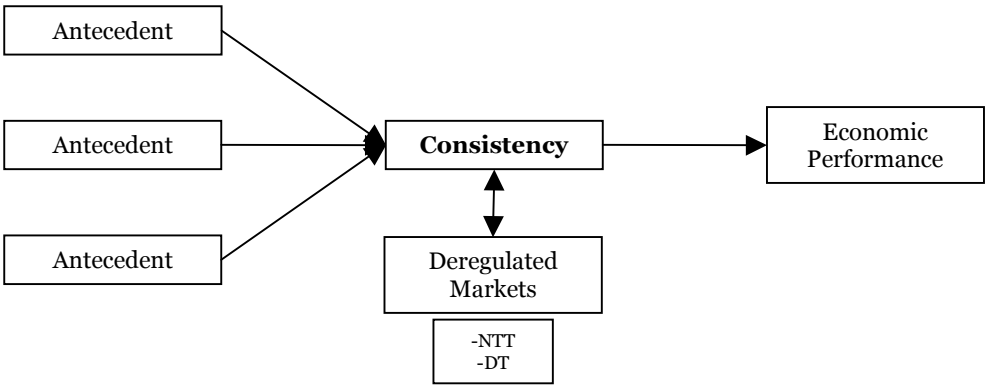

Figure 1. Research approach

Based on the discussion above the following three research questions are formulated:

-What factors influence consistency between the corporate strategy and resource allocation decisions?

-Is there a relationship between consistency and economic performance?

-How can consistency between resource allocations between resource allocations and corporate strategy in the deregulated telecom industry be characterized?

Slightly predominated focus will be directed to the first research question which truly investigates the dynamics of consistency. The second question also touches the dynamics, but it also deals with the topicality of consistency. The third research question has more of an overriding nature, since the study is limited to one case study in one the deregulated telecom industry all results are in first hand and to the largest extent applicable on this particular industry. Thus in one sense, all findings in this study describes how consistency is characterizes in the deregulated telecom industry.

1.3 Aim of Study

Consistency refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy. The aim of this study is to reach a better understanding of the concept of consistency. Furthermore to see what managerial and theoretical implications this brings.

This will be done by codifying NTT Group's (presented in section 2.3) *resource allocations* over a specified observation interval into a *resource allocation database* (presented in section 2.1.2) and use already codified data on Deutsche Telekom. This codified data will then be analyzed. The dynamics behind consistency is studied in order to create a better perception of consistency. The linkage to economic performance is a part of understanding the implications of consistency. The study is carried out with a constant focus on the *telecom industry*.

A better perception of consistency could improve scholars and managers understanding and ability in strategic formulation and implementation. This is of both internal and external relevance. To the inside it could improve the accuracy in the corporate strategy formulation, and improve the directing of resources and processes in the course appointed by the corporate strategy. To the outside it could help managers to communicate visions and the course of the company to outside stakeholders such as shareholders, investors and debtors in a clearer and more comprehensive way.

1.4 Demarcations

Due to limitation in time and resources this paper will be concentrated to an in-depth case study of two companies. Thus the study will be limited to two companies in one industry in a limited geographical area. More specifically the study is focused on two market leaders which both are going through extensive privatization transformations. The data will also be restricted to a certain time period. Furthermore, the study doesn't claim to find all independent variables explaining consistency, but to investigate a group of deductively identified and hypothesized independent variables.

1.5 Disposition of the Thesis

The remaining parts of the thesis are structured as follows:

2. Methodology. The main purpose of this chapter is to give the reader a chance to come to trust the methodology and thereby construct the necessary foundation on which derived arguments and implications can rest on. The chapter discusses the methodology of the study, i.e. *how* the study has been carried out; review and evaluations of methods used. Section 2.1, *Method Introduction*, provides a methodological overview, choices of theories and a general description of the resource allocation database. Section 2.2, *Method Description: Six-Step Approach*, describes the methodology, or how the work has been carried out in detail. Section 2.3, *Choice of Industry and Case-Study Companies*, describes and motivates the choice of industry and case-companies. Section 2.4, *Method evaluation*, presents evaluations of the methods used.

3. Theoretical Overview and Perspectives on Consistency. The purpose of the theory chapter is to present the theoretical context of consistency, and position the concept and other related concepts in this context. Another important purpose is to lay the foundation for hypotheses formulation. Section 3.1 discussed the corporate strategy, i.e. the concept that consistency is measured against. Section 3.2 discusses the division often made between strategy content and strategy process and presents literature on strategy process and defines what is meant with process in this study. Strategic process is typically divided in the three branches (see figure 5), namely strategy formulation, strategy implementation and strategic choice. Section 3.3 presents strategy formulation. Section 3.4 concerns strategy implementation and compares consistency with other related concepts in strategic management literature and locates my definition. Section 3.5 discussed the strategic decision process which is important for the hypothesis.

4. Hypotheses – Theory in action. Since the necessary tools and concepts are provided for in the third chapter the hypotheses can be formulated. The purpose is to build a structure which enables analyzing and testing the hypotheses in the fifth chapter. It commences in section 4.1 with formulation of corporate strategies and codification and consistency rating of all gathered resource allocations. As section 4.1 provide the dependent variables (consistency) section 4.2 presents the independent variables. The hypotheses, based on the theoretical framework, are formulated the latter section.

5. Analysis and Results. In this chapter the hypotheses will be tested with linear regression and correlation analysis. The statistical results will be interpreted. The findings will be compared to existing research and analyzed. The reliability and external validity of the findings is finally discussed.

6. Conclusions. This chapter will try to summarize the contributions of this study. Its purpose, and the purpose of the thesis, is to try and answer the research questions, which is clearly reflected in the structure of the chapter.

7. Further research. Discusses how to move on with my findings as starting point.

2 Methodology

The main purpose of the chapter is to give the reader a chance to come to trust the methodology and thereby construct the necessary foundation on which derived arguments and implications can rest upon.

Section 2.1, *Method Introduction*, provides with a methodological overview, choices of theories and a general description of the resource allocation database. Section 2.2, *Method Description: Six-Step Approach*, describes the methodology, or how the work has been carried out in detail. Section 2.3, *Choice of Industry and Case-Study Companies*, describes and motivates the choice of industry and case-companies. Section 2.4, *Method Evaluation*, presents an evaluation of the methods used.

2.1 Method Introduction

Consistency refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy. Hence consistency implies measurements in some form. In order to examine consistency and answer the research questions I therefore need some sort of quantitative methodology.

Japanese telecommunication giant NTT Group and its German Counterpart Deutsche Telekom are chosen as case study objects in this paper (these choices are motivated and described more in detail in section 2.3). Deutsche Telekom is already codified into the Resource Allocation Database (see section 2.1.2) and hence the data on Deutsche Telekom is already available. NTT however has to be codified into the database. The codification process in brief is as follows:

The first step is to identify the corporate strategy. This is done by studying statements made by the company, published interviews with top-managers, annual reports and business plans. Only explicit information and statements are utilized and no personal interpretations are made. Data about the resource allocations in the observation interval is gathered from Factiva and Reuters News (this is explained more thoroughly in section 2.2, *Step 1: Identification of relevant empirical observations*).

The identified resource allocations are codified into the resource allocation database. Each resource allocation is described qualitatively and measured quantitatively. For instance point in time, decision making level, volume and change in portfolio configuration is registered. Each resource allocation is also rated with respect to its consistency to the current and next corporate strategy (this is explained more thoroughly in section 2.2, *Step 3: Transformation of raw data and coding*).

How reliability and validity is affected by this process is described in section 2.4.

The generated codified data can be used to analyze consistency. This study will use a deductive research approach; hypothesis will be formulated from a theoretical framework. Thus one of the main purposes of the theory chapter is to lay out the foundation for the hypotheses on consistency from theories in the literature. In a deductive research approach the theoretical framework plays a particularly vital role for the study. When building hypotheses on theories, the theoretical framework inevitable set the course. The theory chapter can be seen as a part of the analysis process. This is the reason why the theoretical framework claims a large part of this paper. In the next step statistical methods will be used in order to test the hypothesis. The results from these tests will hopefully help answering the resource questions.

2.1.1 Theory Choice

The consistency concept is a new and rather unknown concept in strategic management literature. Considerable effort will therefore be assigned to locate consistency in the strategic management field. The division between *strategy content* and *strategy process* will be discussed. The connection between consistency and *strategy formulation* will also be investigated.

The codification of resource allocations over the observation periods and grading of each resource allocation in terms of alignment to the strategy creates a variable *consistency*. Consistency is hence a variable that vary over time. When we are studying consistency we are therefore in the field of *strategy process*. Strategy process will therefore also be an important part of the theory chapter.

In order to identify antecedents to consistency the *strategic decision process* (strategy execution) will be examined. I will use Rajagopalan's (1993) framework in which environmental, organizational and decision-specific factors can be seen as inputs and consistency as one of the outputs. In this context process can be seen as explanation for variance theory (see section 3.2).

2.1.2 Resource Allocation Database

The history of the resource allocation database started with Joseph L. Bower. He developed a resource allocation process model (RAP-model) in the early 1970s based on his studies of capital budgeting. The RAP-model was modified and extended by Robert A. Burgelman in the early 1980s. He was first to use the model for strategy research. He developed the Bower-Burgelman (BB) process model of strategy making. Burgelman (1983) used this process model to investigate the interaction between strategic behavior, corporate context and the concept of corporate strategy.

The model has been used on St. Gallen University in Switzerland to build up a resource allocation database. The objective of the database is to build an extensive knowledge about resource allocation processes in a set of different industries over a time span of several years (Frankenberger et. al 2005).

The reasons why I need this database in my study is because the big amount of data in a longitudinal case study (see section 2.4.1) requires it. It enables the transformation of information from different data sources that obviously varies in format and context into a joint format. The database facilitates data collection, processing and analysis (Frankenberger et. al 2005).

For more detailed information I refer to *Resource Allocation Database Handbook, Data collection and Entry* (Frankenberger et. al 2005) and section 2.2.

2.2 Method Description: Six-step Approach

According to Schmidt (2004) there is no generally accepted concept for the comparative empirical exploration of strategy processes. Based on the Bower's RAP-model and Burgelman's Bower-Burgelman process model, Schmidt (2004) introduced a six-step methodological approach to study strategy process. This approach is usually used by scholars who utilize the resource allocation database. The approach, which also will be used in this study, can be illustrated as follows:

Figure 2. The six steps of the RAP-model

Step 1: Identification of relevant empirical observations

First of all, requirements for relevant empirical data that can be collected from publicly available sources need to be defined. With the intention of not being buried in data, process studies should focus on a single aspect of strategic management such as resource allocations. Decisions on resource allocations indicate how firms abstract long-term corporate goals in concrete situations. Besides, the study of resource allocation processes has practical advantages. Data on resource allocations is relatively easy to access as publicly listed firms are required to publicize important resource transactions such as acquisitions, layoffs and divestments. Firms only have limited freedom due to legal requirements to build up information asymmetries toward their shareholders and other stakeholders (Schmidt 2004).

Within the frame of an outside-in analysis, it is practical to look at activities that affect tangible resources such as financial resources (capital, cash flow), physical resources (real estate, infrastructure), human resources, organizational resources (organizational structures, management, control and evaluation systems) and technological resources (machinery and other hardware, software, patents). Tangible resources transactions are easy to access, measure and record from an outside-in perspective since they are inherently codifiable. On the contrary, intangible resources such as brands, images and skills are harder to analyze.

In order to standardize and facilitate comparison of resource allocations of different firms in St. Gallen University's Resource Allocation Database, collection of data is restricted to one professional news service provider, namely Reuters News. It is a renowned and recognized news agency using several reliable data sources. This enables "data triangulation", i.e. comparison of resource allocations between different sources. A search with the case company on Reuters News gives around 1000 hits per year. Of these circa 100 are resource allocations.

Step 2: Development of a resource allocation database

The extraordinary amount of data collected requires the creation of a structured database. Format, context and degree of information vary among the different data about resource allocations that are collected. A database enables the transformation of the heterogeneous data into a joint format and supports data collection, processing, analysis and storage (Schmidt 2004).

Bower (1970) developed a resource allocation process model (RAP-model) in the early 1970s based on his studies of capital budgeting. The RAP-model was modified and extended by Burgelman in the early 1980s. He developed the Bower-Burgelman (BB) process model of strategy making.

St. Gallen University uses a resource allocation database, bases on the RAP and BB-model, in which 26 firms have been codified so far. A detailed manual have been developed in order to standardize of the codification process and create a high quality database.

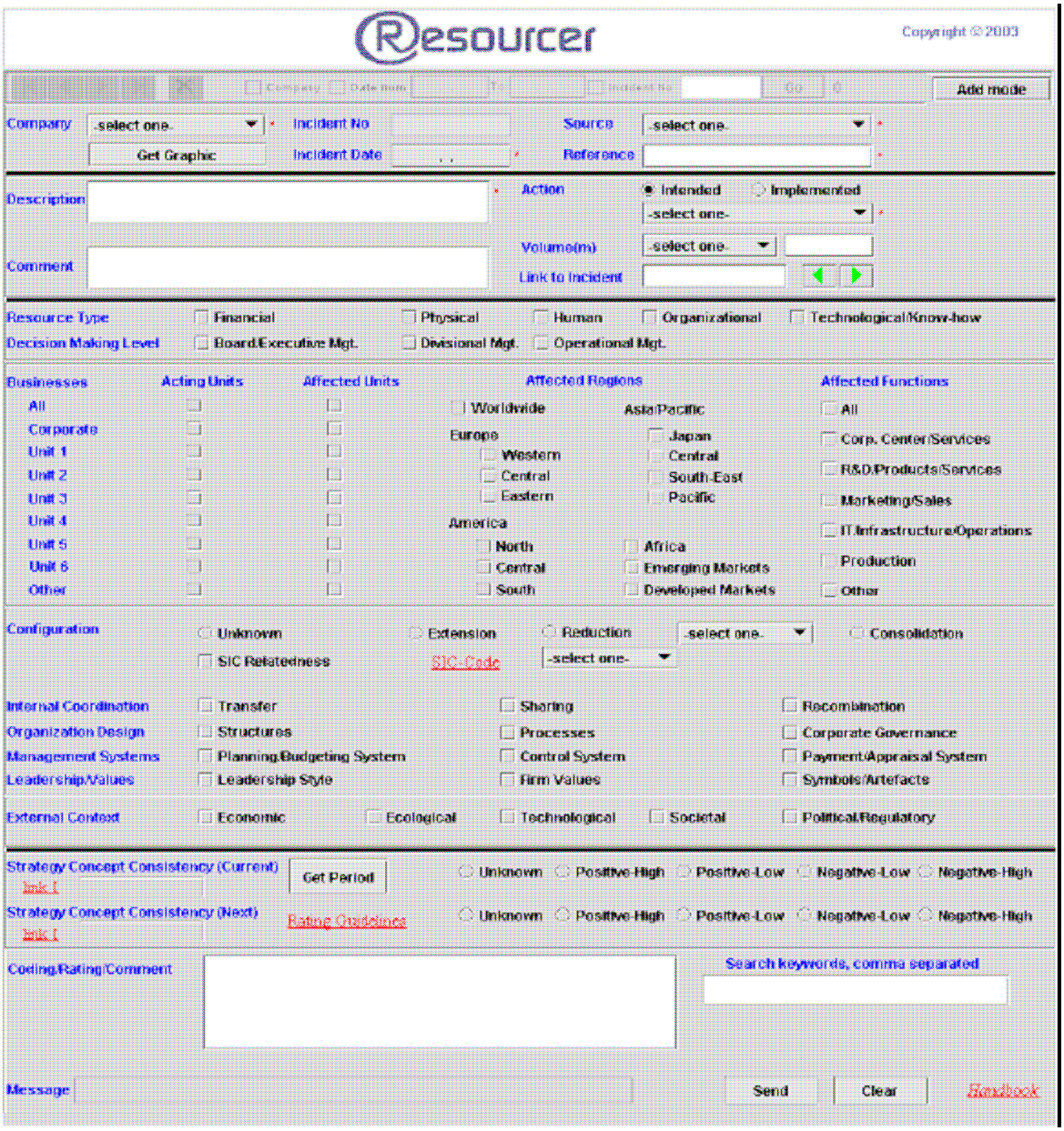

Figure 3. Resource allocation database

Step 3: Transformation of raw data and coding

The raw data must be sorted and transformed into records. Only relevant empirical observations, named "incidents", are coded into the database. In other words, only activities that affect the allocation of tangible resources are recorded. The codification can be divided into four different fields:

- *Identification:* Company name, incident number, date and source of information.

- *Qualitative description:* Incident description. Comments and background information for a better understanding on what was the communicated logic behind the incident. Linkage to other incidents.

- *Structured coding:* Transaction volume. Type of action (investment, divestment, resource transfer etc.). Type of resource affected (financial, physical, human, organizational and technological resources). Decision making level: "Board/Executive level" includes CEO, COO, members of the board and thus the highest level, also including corporate staff. "Divisional Management level" is one level lower, i.e. management team of the different divisions or business units, these can be regional or product markets. "Operational Management level" refers to middle management in the different business units, for instance head of the electronics department of the automotive R&D. Moreover, acting and affected business units are specified. Also affected regions and affected functions are denoted. In the next part five different elements of corporate strategy are evaluated; "Configuration" deals with the mix of businesses in the corporate portfolio. "Internal coordination" refers to refers to different resources are used and shared between business units. "Organizational Design" refers to effects on structures, processes or corporate governance. The last two elements are "Management systems" and "Leadership/value".

- *Consistency rating:* The final task in order to complete the entry of an incident is to rate the resource allocation with respect to its consistency with the current and the next corporate strategy. "Positive-High" (100) signifies compliance and means that the individual allocation executes the corporate strategy. "Positive-Low" (33) signifies conformity of the individual decision with the corporate strategy. "Negative-Low" (-33) corresponds to a modification, meaning that the resource allocation deviates from the intent of the corporate strategy. "Negative-High" (-100) finally classifies the incident as a contradiction to the intent of the corporate strategy.

Step 4: Analysis and identification of process patterns

In the fourth step the codified data is analyzed and interpreted. The interpretation of patterns, for example how and why incidents appear in particular chronological sequences or socially meaningful time cycles is carried out.

This is where the analysis starts. Since all incidents have been codified into the database all the data needed to examine the research questions is gathered. Consistency between resource allocations and corporate strategy can be examined and tests of the hypotheses derived in the theory framework can be carried out.

Step 5: Verification and validation

The results from the quantitative outside-in analysis are tested in a series of structured interviews with key organizational informants. Managers are interviewed on multiple hierarchical levels, also functional specialists and central staff should be included. The purpose of the interviews is to challenge the results of the analysis.

Step 6: Iterative process

The interviews help to define new data analysis needs. It can be seen as the beginning of an iterative process and as a link back to the beginning of the process.

Step 5 and step 6 are described for the sake of the completeness of Schmidt's six-step methodological approach. In this study I have followed the first four steps as described above and step 5 and step 6 omitted or are referred to further research.

2.3 Choice of Industry and Case Study Companies

2.3.1 Telecommunication

The telecommunication industry is an important industry of general interest. It is influencing and shaping our new society. The telecom industry has played a central role in the economic globalization and it helped facilitate a fundamental shift in economic reality toward a knowledge-based society (Sirois 1999).

The innovation rate is very high, particularly the last ten years have implied a technology explosion with the wireless revolution, swelling mobile sector and rapid internet penetration. Furthermore, the telecommunication industry is going through an extensive deregulation-phase world-wide. National boundaries are vanishing and global competition is growing fast and the industry is consolidating.

I would find it both interesting and relevant to study strategy in a longitudinal case-study (see section 2.4.1) in an industry that goes from a newly deregulated state to a more maturing state. I also believe that it is more fruitful to do study a high-velocity industry (see discussion above, Burgelman and Grove 1996). Strategic management becomes more complex and puts higher pressure on managers. Tendencies become clearer and bad decisions become evident quicker due to faster feedback, "you will soon know if you have missed the train".

Moreover, consistency is allowed to play and vary over a bigger scale since the contingency and uncertainty is greater. Hopefully, this will make tendencies, relationships and interplays clearer and in the next step tell us more about the concept of consistency.

2.3.2 Nippon Telegraph and Telephone

Japan, the world's second largest telecom market has been going through a series of fundamental structural changes and developments (Maamria and Kobayashi 1999).

NTT was established in 1952 as a semi-independent public organization charged with the task of reconstructing the country's domestic telecom infrastructure. It remained government-controlled for the next 33 years. It was not until 1985 that NTT was partially privatized and controlled competition was introduced into Japan's domestic and international telecom sectors.

NTT was, in April 1999, made private and the Japanese telecommunication market was deregulated. The driver of deregulation was immense pressure for competition at an international level (Cornu and McClelland 1995). The divesture issue had been appearing on governmental agendas for some 15 years (McClelland 1997). NTT was totally reorganized and was also allowed fully enter into international operations.

NTT went from a regulated, state-owned telephone company to an aggressively expanding global telecommunication player. NTT had both resources and aspirations, and experienced exceptionally fast growth after the reorganization. Japan is also known as a particularly high-tech friendly market and NTT DoCoMo's i-mode service was leading the technology development. NTT was the biggest telecom player in Japan and the second biggest telecom company in the world. Moreover, Japan is an interesting telecom market. After the deregulation Japan was experiencing a "Telecom Gold Rush" (Maamria and Kobayashi 1999) with rapidly increasing competition as a consequence.

To conclude, the Japan telecom market and Nippon Telephone and Telegraph fulfils the desires and requirements stated in the previous section. NTT is a fast changing and developing company in a high-velocity environment (Burgelman 1996). NTT Group will therefore be codified into the resource allocation database in this study.

2.3.3 Deutsche Telekom

Deutsche Telekom will also be used in the analysis. The resource allocation database already contains the German telecom giant from a previous study (Blank 2003). Therefore I will not carry out the codification of Deutsche Telekom. Therefore I will not study Deutsche Telekom annual reports, individual resource allocations and the German market in the same extent as in the case with NTT Group and the Japanese market. However it is gratifying to have the additional amount of data for the analysis. Deutsche Telekom increases the quality of my analysis. NTT and Deutsche Telekom mostly act on different geographical markets. Similar results for NTT and Deutsche Telekom increases the external validity of the findings, i.e. the findings are valid for the telecom industry in a higher degree. The utilization of Deutsche Telekom data asks for a short presentation of the company and its context during the codified time-period.

Deutsche Telekom was in a very similar situation as NTT Group in time-period of examination. January 1, 1998 was a day of central importance for the telecommunication industry in Europe. This day the EU liberalizations program for the telecommunication industry came into play (Deutsche Telekom 1998). This in its turn lead to the German "Telekommunikationsgezetz" which set the framework for the deregulation and liberalization of the German telecommunication market. The German market was opened and Deutsche Telekom went from having no competitors to 164 competitors in one year (Deutsche Telekom 1998). Besides experiencing a hefty growth in competition after the deregulation the German giant had a clear and aggressive growth and internationalization strategy. Thus, the starting point (in the observation interval) of Deutsche Telekom is in many ways similar to NTTs.

2.4 Method Evaluation

2.4.1 Longitudinal Case Study

The fundamental form for a case study comprises a detailed and thorough study of one single case (Bryman and Bell 2005). Stake (1995) argues that case study research is able to touch the complexity and specific nature that the specific case has. The consistency concept demands deep and extensive analysis over a longer observation interval. The restrictions in time and resources when writing a master thesis has limited me to observation and analysis of one company, NTT Group. Fortunately, I also have access to secondary data and analysis of Deutsche Telekom.

According to Bryman and Bell (2005) most case studies are qualitative in nature but in some situations quantitative methods are more convenient. The resource allocation database provides the opportunity of measuring and analyzing data quantitatively. This gives the opportunity of formulating hypotheses that can be tested quantitatively. I believe that quantitative methods are underrepresented and underestimated in the strategic management literature.

Longitudinal studies are usually used to map changes. Pettigrew (1990) emphasizes the importance of longitudinal studies as ways to acquire data about the mechanisms and processes through which changes are created. A longitudinal case study can give information about the time relationship between variables and thus the causal relationships between variables. A longitudinal case study is a prerequisite when studying consistency over time.

I adopt an outside-in perspective when studying NTT. Consistency relates to the firms announced corporate strategy that is communicated by for example annual reports and business plans. Also information about resource allocations is gathered from public sources. By doing this, I adopt the perspective of external stakeholder groups such as financial market representatives who primarily rely on publicly available information as a basis for their judgment of firm behavior. It might be possible that the announced corporate strategy does not reveal intended strategies to their full extent, given that firms might not communicate confidential elements to the public due to competitive concerns. However, the increased demand for transparency (Friedman 2005, Maguire 2003) allows us to believe that that the deviation between a firm's announced and unofficial corporate strategy is likely to be almost negligible.

2.4.2 Evaluation of Sources

The corporate strategies are obtained from annual reports and business plans. Documents from organizations are often meaningful, clear and comprehensive for scholars. However, they should be understood as *normative* sources of information (Bryman and Bell 2005). They don't necessarily provide a correct description of the organization. There is most certainly a motive behind and a message that they want to communicate. Thus, it is dangerous to automatically assume that these sources constitute objective descriptions. However, in line with the discussion in section 2.4.1 and the strong demands from external stakeholders for transparency, I assume that the communicated corporate strategy in reports and business plans actually is NTT's corporate strategy.

Information about resource allocations is gathered from published material in mass medial sources. Articles from mass medial sources has to be questioned regarding *genuineness* (does the author have enough knowledge in the subject) and *credibility* (existence of faults and distortions). *Reuters News* has been chosen as source. Reuters is very well respected and regarded as one of the leading sources of business news. They in turn have several sources, enabling "data triangulation", i.e. comparison of information between different sources. Their reputation and existence depends on their credibility and ability to provide accurate and correct information. I assume that Reuters is a credible information source.

The theoretical work is based on existing research and articles. In order to increase the credibility, I have tried to provide an extensive theoretical overview, with the intent to provide a thorough description of the research area and to enable selection of credible theories. I have strived to select articles from well established and respected journals and to support my standpoints with respected scholars.

2.4.3 Reliability

In order to argue for this study's reliability three areas of the research process need to be evaluated:

1. Gathering of data
A one year search on NTT on Reuters News gives around 1000 hits. Of theses around 100 are resource allocations according to the definition of a tangible resource allocation in section 2.2. The definition is clear and in almost all cases it is simple to separate resource allocations from other news. Considerable time and carefulness is laid on gathering the data. I believe that the loss of relevant data is insignificant. The next question is whether Reuter News provides information about all resource allocations. I believe that the demand for transparency and the big medial attention results in publishing the great majority of all important resource allocations.

2. Codification of data
The codification of the data means that it is taken out from its context and conceptualized. In order to keep reliability in the process, the codification is standardized to a large extent. The procedure is explained and described in a *resource allocation database handbook* (Frankenberger et. al 2005). The procedure is well tested and evaluated to ensure a reliable codification of the data. In order to keep accuracy and codification in line with the template, much time has been allocated to codify the data. The codification has been double checked and carried out in a series of reasonable long time periods to ensure reliability.

3. Statistical methods
The third area is the processing of codified data with statistical methods. The discussion whether these methods, and results obtained when using these methods, are reliable will be discussed in section 2.4.6 and in the analysis and results section.

2.4.4 External Validity

One constantly topical question that concerns a case study's external validity is how a single case (or two in this thesis) can be representative, how can it generate results that can be applied to other cases? Without testing the results from a case study on other objects in other contexts it is difficult to generalize results.

In this case study two market leaders that were transforming from state-owned monopoly companies to private companies on deregulated markets are studied. It is important to have that in mind when generalizing results to other telecommunication companies. For instance, small and new telecommunication companies might be different.

Scholars sometimes claim a certain degree of theoretical generalizing from a case study (Bryman and Bell 2005). A case study can generate theories that can be applied to other studies. In this aspect case studies can have a certain external validity. Hence case studies can be used both for testing theories and generating new theories.

Thus results should be generalized with certain carefulness. The external validity of my findings will be discussed in the analysis and results section.

2.4.5 Measuring Validity

Am I really measuring what I am saying that I measure? Since this is a quantitative study it is particularly easy to define what I intend to measure. The intent is to measure the possible interactions between certain defined variables. The intent is not to find all independent variables explaining a dependent variable, so I run no risk of failing to spot variables.

When studying processes in social-science, searching for causal relationship between variables, there is always a risk for underlying variables. A discovered relationship might be due to an underlying variable explaining both the independent and dependent variable, in that case validity is low. Processes in social-science are almost always complex, linked to other processes and hard to overview. This is thus a risk in this study, as well as in all other studies in social science.

2.4.6 Statistical Methods

No extraordinary statistical methods will be used in this study. After consulting with the Faculty of Mathematical Statistics at Lund Institute of Technology I have chosen to use linear regression and correlation analysis in order to test the hypotheses (these methods are briefly described in Appendix A).

Linear regression assumes linear relationships. Other regression methods such as logarithmic, inverse, quadratic, cubic, logistic and exponential regression has also been tested with less statistically significant results. The relationships examined are hence from now on assumed to be linear. Since I use basic and standard methods I refer to Blom and Holmquist (1998) or Körner and Wahlgren (2002) for those who desire more detailed information.

3 Theoretical Overview and Perspectives on Consistency

The concept in focus in this thesis, *consistency*, refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy. This chapter will present this concept and its context, and lay the ground for formulation of hypotheses. Hence the purpose of the theoretical framework is twofold:

The *first purpose* is the definition of concepts. Consistency is a concept with a certain context in the strategic management literature. When examining consistency one inevitably touches other closely related concepts in this context. To establish credibility it is hence important to present this environment and the concepts that are relevant when studying consistency. The structure of the chapter can be illustrated as a funnel (see figure 4), commencing by drawing a broad picture of the theoretical context of the consistency concept. The different views or branches in the area will be presented, followed by a process of focusing and selecting (and motivations why concepts and theories are of interest). Since consistency is a rather novel and unknown concept in the literature it is particularly important to classify, define and position consistency, and the research, to the scientific context. That is the purpose of the "funnel" process which ends up with definitions, and what I mean with concepts used when examining consistency.

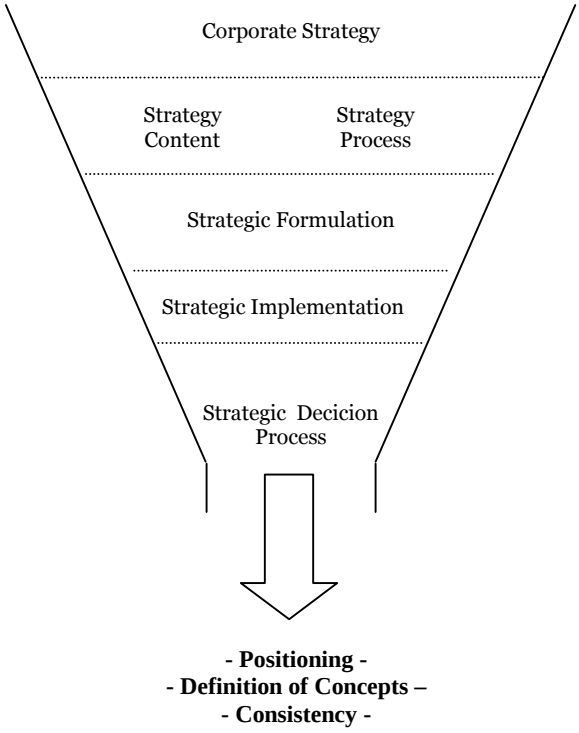

Figure 4. The "funnel" process

The "funnel" process starts with reviewing the corporate strategy concept which is the first utilized concept in my research process (identification of corporate strategy). The order of the concepts in the "funnel process" then follows the structure and branches of the research field (see figure 5).

The research field is illustrated below in figure 5. It is only meant to present a schedule of the research field. It does not say anything about the processes or dynamics of the concepts. Hopefully it helps

making the framing of the chapter more comprehensive, and helps the reader to orientate throughout the chapter.

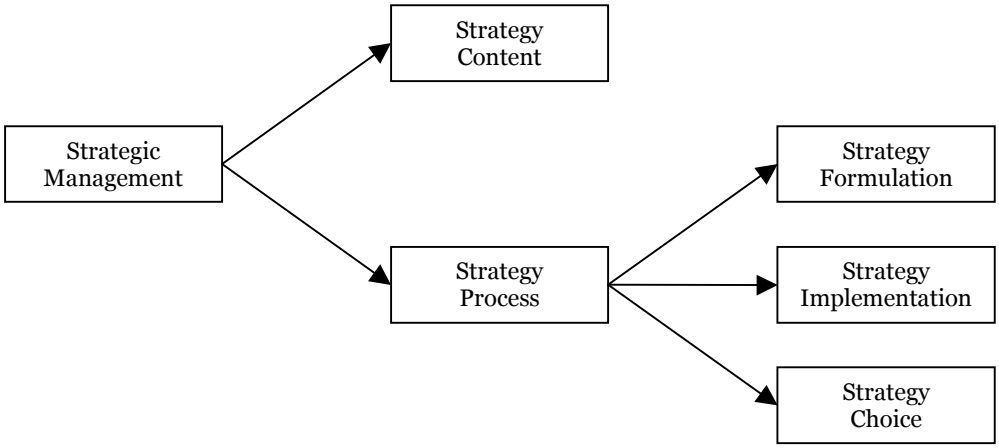

Figure 5. Description or schedule of research field

The *second purpose* is to lay out the foundation for the hypotheses on consistency from theories in the literature. In a deductive research approach the theoretical framework plays a particularly vital role for the study. When building hypotheses on theories, the theoretical framework inevitably sets the course of the study. The theory chapter can be seen as a part of the analysis process. This is the reason why the theoretical framework makes up a large part of this paper.

3.1 Corporate Strategy

In order to obtain a perception of consistency, all recorded incidents are compared to the identified corporate strategies. Thus, the corporate strategies play a fundamental role for the analysis, so a clear definition and a thorough examination of the concept is required.

The strategy concept has its main value, for both profit seeking firms and nonprofit organizations, in determining how the organization defines its relationship to its environment in the pursuit of its objectives (Bourgeois 1980). Two elements are important in our definition of corporate strategy, namely *corporate-level strategy* and *business-level strategy*.

Beard and Dess (1981) perceive Corporate-level strategy and business-level strategy as *inter-industry* and *intra-industry* variations respectively in business firms' strategies.

Corporate-level strategy is defined in terms of variation in the deployment of a firm's resources among the portfolios of industries within which all business firms compete. Hofer and Schendel (1978) propound this view: "corporate-level strategy is concerned primarily with answering the question of what set of businesses should we be in. Consequently resource deployments among businesses are the primary components of corporate strategy". Thus, a firm's corporate-level strategy can be understood in terms of the distribution of firm assets, sales, employment, capital-budget, or other indexes of firm resources among the range of existing industries.

Most firms have simple corporate-level strategies, in these terms. They compete in only one industry among the hundreds that are possible. Other firms, however, such as the Fortune 500 largest industrial firms, typically participate in several industries, and their top managers must handle the varied and conflicting demands of their industrially specialized subunits.

Business-level strategy is defined in terms of variation in firm characteristics relevant to competitive success or failure within a given industry. The business-level strategy is uniquely connected to each related industry and can only be compared with other strategies in that particular industry. Hofer and Schendel (1978) again provide a concise definitional statement: "At the business level, strategy focuses on how to compete in a particular industry or product-market segment. Thus, distinctive competences and competitive advantage are usually the most important components of strategy at this level".

3.1.1 Definition of Corporate Strategy

The definition of corporate strategy in this study comprises both corporate-level strategy (domain selection) and business-level strategy (domain navigation). Thus the avowed or explicit corporate strategy that I use in my outside-in approach contains both goals in terms of markets and industries and how to be competitive in each industry. Moreover, corporate strategy refers to what Mintzberg (1985) describes as intended strategy (see figure 8). Intended strategy is the origin of a strategy, "leadership plans and intentions".

3.2 Strategy as Content or Process

3.2.1 Existing Research

The dominating branch in strategic management research treats *strategy content*. Research on strategic content is to a large extent based on work by Ansoff (1965), Andrews (1971), Hofer and Schendel (1978), and Porter (1980). In strategic content research strategy is perceived more as a state than a process (Pettigrew 1992). Examples of topics in the area of strategy content are portfolio management, diversification, acquisitions and mergers, divestments, product market choices, and the alignment of firm strategies with environmental characteristics (Rajagopalan et al. 1993).

However, an increasing number of publications (for instance Garvin 1998) and interest are focused on *strategy process*. In other words *how* strategies are formulated and implemented within firms and *how* the process of strategic change occurs and develops over time. The strategy process perspective will prove to be more convenient when looking at consistency since consistency is a dynamical concept that changes over time. Schendel and Hofer (1979) presented a definition of strategic management as process-oriented:

"Strategic management is a process that deals with the entrepreneurial work of the organization, with organizational renewal and growth, and more particularly, with developing and utilizing the strategy which is to guide the organization's operations."

Implicit in this definition lays the core of the process approach to management. Formulating and implementing strategy and assuming it is a process and not a state, also the emphasis on renewal and growth and of entrepreneurial work. All together suggesting a concern for action and movement in the analysis of the firm.

Regrettably the promise in the Schendel and Hofer (1979) definition has not been realized (Pettigrew 1992). Much of strategic management research is an exercise in comparative statics. Scholars have made calls for bringing *time* and *dynamics* more into the methods of strategic analysis. Rumelt with colleagues (1991) ask for more dynamical explanation and commend recent interest in time-based analysis of competition and the administration processes that select and coordinate the firm's attitudes. Porter (1991) argues for contemporary research exploring the chains of causality that constitute a more dynamic theory of strategy.

The distinction between strategy content and strategy process has however been criticized (Pettigrew 1992). The division has allowed process research to develop into its own field, or as Chakravarthy and Doz (1992) puts it; with a different focus. However, it is clear that content research are asking more dynamic questions (for example Nelson 1991, Porter 1991) and that gains can be made by linking strategic content research with strategic process research.

The scholarly interest in strategy process research has grown. The body of strategy process research is diverse and cannot be contained within a single paradigm. "Implicitly, scholars tend to adopt very different views of strategy process, and the views they adopt influence the questions they ask, the research methods they employ, and the contributions they make" (Van de Ven 1992).

Thus it is of great importance how one perceives process and clearly defines the meaning of process. From the literature on strategy process Van de Ven (1992) distinguishes between three different definitions of process that scholars use in their research:

a. Process as explanation for variance theory
The first definition process can be seen as an input-process-output model. In other words as a process logic that explains a causal relationship between observed inputs (independent variables) and outcomes (dependant variables) in variance theory.

b. Process as category of concepts
The second definition of process is a category of concepts of individual and organizational actions, such as consistency, strategy formulation, implementation and corporate venturing. These process concepts are operationalized as constructs, and measured as fixed entities (variables) which can vary along numerical scales from low to high. This definition of concept thus examines changes in variables over time.

c. Process as developmental event sequence.
In the last definition process is percieved as a sequence of events or activities that describes how things change over time. Whereas the second definition of process examines changes in variables over time, the third definition of process takes an historical development perspective. Consistency is a variable that changes over time. Furthermore each resource allocation is codified as isolated incidents. Thus process as an historical development perspective (c.), i.e. the study of sequences of incidents and patterns, is not used in this study.

These three meanings can be seen as the prevailing views of *process* in strategic management research. Usually a scholar is adopting one view. In this thesis however the process will comprise two of the above definitions or "meanings" as Van de Ven would put it, namely *a* and *b*.

3.2.2 Processes in this Study

In order to get a better perception of the concept of consistency the *strategic decision process* (Rajagopalan et. al 1993) will be studied. This is a process with environmental, organizational and decision specific factors as input and consistency as one of the outputs. Consistency is thus the dependent variable and a set of other factors in the decision making process are independent variables. This is described in detail in section 3.5. In order to test the relevance of consistency, also the interplay between consistency and economic performance in terms of abnormal returns is examined. In this case consistency is the independent variable and abnormal returns dependent variable. In these cases *process is clearly an explanation for variance theory (a.).*

In this study the concept in focus is consistency. Consistency is made an entity or variable that is allowed to vary on a scale from low to high. The changes of the consistency variable are then studied over time. *In this case the meaning of process goes under (b.).*

To conclude, a strategy process approach is used in this study in order to examine the consistency concept. The meaning of process both refers to the logic in the strategic decision process in which consistency is one of the output variables, and to consistency as a variable that changes over time.

3.3 Strategy Formulation

According to Van de Ven (1992), strategy process deals with how strategies are formulated and implemented. Hence strategy formulation is one branch in strategy process (see figure 5 and 11). It could be worth keeping in mind that formulation in this context deals with *how* and *when* and not with *what*, in other words it does not concern strategic content. Strategy formulation literature will be used in this study to see how *consistency* in portfolio configuration resource allocations is related to the formulation of corporate strategies.

Chaffee (1985) argues that three implicit strategy formulation models are described in the literature; *linear, adaptive* and *interpretive*.

3.3.1 Linear Strategy

The linear strategy model focuses on planning. The term linear is used since it implies the methodical, directed, sequential action involved in planning. Tomlinson and Dyson (1983) describe strategic planning the process of developing a world view against which major strategic decisions can be set. The linear strategy model agrees with Chandler's (1962) definition of strategy:

"Strategy is the determination of the basic long term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals."

According to the linear view, strategy consists of integrated decisions, actions, or plans that will set and achieve viable organizational goals. Strategy "has as a purpose the setting of formal guidelines and constraints for the behavior of the firm" (Mason 1969). To reach its goals, organizations vary their links with environment by changing their products or markets or performing other entrepreneurial actions. The linear model implies that top managers have considerable capacity to change the organization.

Thus, the starting point in the linear model is the goals or the *concept*. The next step is to identify an approach, method or *strategy* to reach these goals. Finally products, markets or *domain* is chosen based on the concept. This can be illustrated as follows:

Figure 6. Linear strategy.

3.3.2 Adaptive Strategy

The second strategy identified by Chaffee (1985) is the adaptive strategy. Hofer's (1973) definition typifies the adaptive model of strategy:

"Strategy is concerned with the development of a viable match between the opportunities and risks present in the external environment and the organizations capabilities and resources for exploring these opportunities."

Hence the "goal" is represented by co-alignment of the organization with its environment. Miller and Friesen (1978) make the connection to contingency theory which stresses the adaptation to the dynamical environment. Jemison (1981) see organizations as open systems and propose more

emphasis on environment context in strategic management research. Snow and Hambrick (1980) criticize the clear distinguish made in strategic planning literature between strategy formulation and strategy implementation. They see a trade-off in terms of inferior ability to maintain the organization's alignment with environment.

The first step in the adaptive strategy model is thus looking at the actual situation of the firm, i.e. the external environment and the organization's capabilities and resources. From a portfolio configuration perspective this comes down to *domain* selection. What industries are attractive and what opportunities does a firm have with its particular capabilities and resources? From this starting point goals or *concepts* are defined and finally method, approach or *strategy* for reaching these goals is chosen. The procedure can be illustrated as follows:

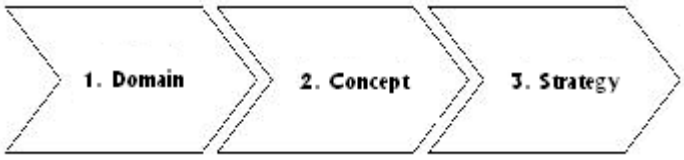

Figure 7. Adaptive strategy.

3.3.3 Interpretive Strategy

The third and last strategy identified by Chaffee (1985) is interpretive strategy. Development of interpretive strategy parallels research in corporate culture and symbolic management outside the strategy literature (Dandridge et al. 1980). The model is based on a social contract. This social contract portrays the organization as a collection of cooperative agreements entered by individuals by free will. The organization's existence depends on its ability to attract enough individuals to cooperate in mutually beneficial exchange.

Linear strategy and *adaptive strategy* are both interesting from a portfolio configuration perspective. One hypothesis in chapter 4 (H3 in section 4.3.2) will be that strategies for telecom firms in high-velocity environments are *adaptive* in kind. The hypothesis will be tested by looking at consistency in portfolio configuration resource allocations to the next corporate strategy. This will be explained more in detail in section 4.3.2. *Interpretive strategy* cannot be measured using the methodology in this thesis and is only presented for the completeness of Chaffee's model (1985).

3.4 Consistency and Strategy Implementation

A second branch in strategy process according to Van de Ven (1992) is strategy implementation, i.e. *how* strategies are implemented. *Consistency* between resource allocations (defined in methodology chapter, section 2.2) and the announced corporate strategy (defined in section 4.1.1) is a concept located in the strategy implementation field. It signals in which degree the announced corporate strategy is implemented. The concept of consistency is in focus throughout the whole thesis. Thus a detailed and thorough discussion of the concept is required.

3.4.1 Existing Research in the area

The next section will present existing research related to the concept of consistency. A comparison and study of the interrelationships between consistency and existing related concepts will clarify our definition of consistency and create a better understanding of the concept.

Deliberate versus Emergent Strategies

Mintzberg (1978) refers to two kinds of strategies. The prevailing definition at the time was strategy as (a) explicit, (b) developed consciously and purposefully, and (c) made in advance of the specific decision to which it applied. That is, strategy is a "plan". This is what Mintzberg refers to as *intended* strategy. The *realized* strategy is defined as a pattern in a stream of decisions, where a decision is defined as a commitment to action, usually commitment of resources.

Furthermore, intended strategies that get realized are referred to as deliberate strategies. However, the realized strategy in reality is a combination of the deliberate and the *emergent* strategy. An emergent strategy is formed by resource allocation patterns in the absence of intentions.

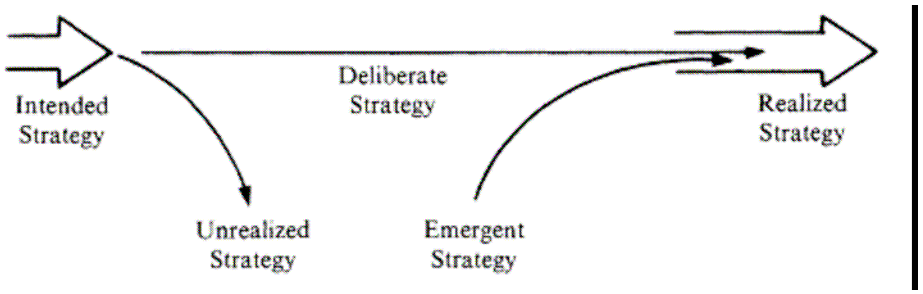

Figure 8. The relationship between intended and realized strategy (Mintzberg 1978).

Consistency refers to, in what extent the realized strategy is deliberate (consistent resource allocations) and not emergent (inconsistent resource allocations).

Mintzberg (1994) argues that entirely deliberate strategies don't exist due to changing environment factors and that planning tends to undermine both creativity and strategic thinking. Hence, consistency is not to be regarded as a *positive* measure according to Mintzberg. One thing is for certain; consistency can't be adopted as a positive measure without further research. An interesting approach would be to examine the relationship between consistency and economic performance. As a consequence of the above discussion consistency is perceived as a neutral measure until further notice.

Strategic Dissonance

Burgelman and Grove (1996) have a very similar perception of consistency. They argue that alignment between a firm's strategic intent and strategic action is not likely to last. Strategic actions will begin to lead or lag strategic intent. This creates a "strategic dissonance" in the organization. One of the key capabilities of top management is to realize this dissonance which signals a strategic inflection point, i.e. the point of time to adapt a new strategy (see figure 9).

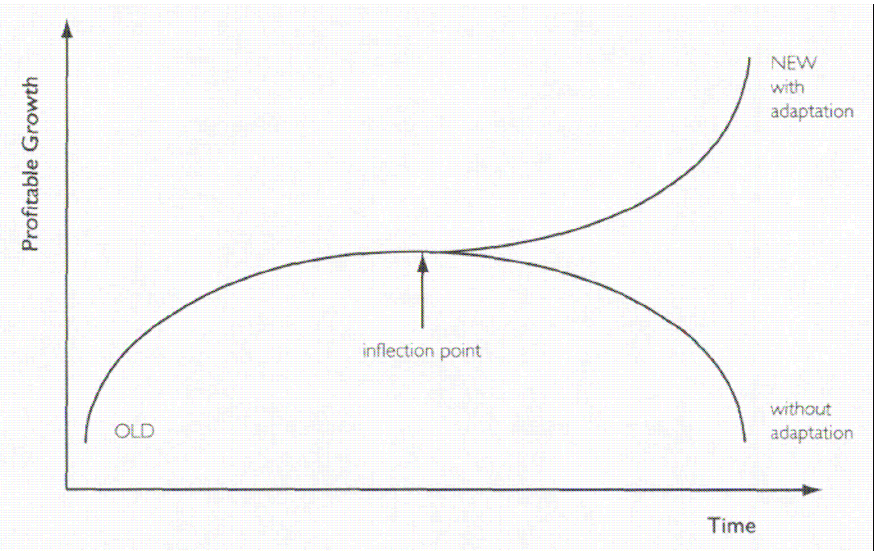

Figure 9. Strategic Inflection Point (Burgelman and Grove 1996).

The focus of Burgelman and Grove's article lies on strategy *formulation*. That is to identify the inflection point and formulation of a strategy that is adapted to the changed environment. Our concept of consistency focuses more on strategy *implementation* than strategy *formulation.* Two concepts of interest from the strategy implementation literature that relates to consistency are *adherence to plans* and *behavioral integrity.*

Adherence to Plans

Covin and Slevin (1998) studies the conditions under which adherence to plans promotes firm sales growth rate. The appropriateness of a particular strategy in a particular environmental context will often be a subject of considerable uncertainty to the firm employing the strategy. Top managers could choose to stick to the strategy when experiencing strategic uncertainty. Other top managers, however, may choose to deal with strategic uncertainty by frequently and extensively revising the firms' competitive methods even though it could mean deviating from their original plans. Hence, there is an *adherence-to-plans* aspect of in strategic implementation. The question is when and in what degree to be adherent and non-adherent to plans. Covin and Slevin (1998) defines the term "plan" as denotation of a "preconceived expectation or intention regarding the firms' future operational and strategic behavior".

There is a major difference between *consistency* and *adherence to plans*. The latter ascribes importance to the frequency and magnitude of changes of the corporate strategy. Consistency does not focus on the frequency and magnitude of changes of the corporate strategy. Consistency rather focuses on the interplay between strategy changes and implementation decisions or resource allocations. It focuses less on how often and how radically corporate strategies are changed, and more on how the resource allocations are adapted to these changes.

Behavioral Integrity

Simons (2002) defines behavioral integrity as the "perceived pattern of alignment between an actor's words and deeds". The definitions of *words* and *deeds* are quite wide and not so specifically demarcated. *Words* could for instance be "psychological contracts, corporate contracts, as well as mission statements, corporate value statements, descriptions of individual values, priorities…". *Deeds* could be any kind of actions taken by a manager. Simons argues that trust plays a central role in employment relationship and that behavioral integrity has a big impact on trust. The concept of behavioral integrity is utilized to study the interplay between managers and employees.

The definition of *words* deviates from corporate strategy and covers a much larger area. Furthermore, Simons perceive *deeds* as all kind of actions taken by a manager, while I understand deeds as tangible resource allocation decisions.

3.4.2 Topicality of Consistency

With a clear perception of the definition and the demarcations of the concept it seems to be in place with a discussion of the practical meaning and the topicality of consistency.

Research has long stressed the importance of managers to "walk like it talks" (McGregor 1967), "strategic dissonance" (Burgelman and Grove 1996), "adherence to plans" (Covin and Slevin 1998) and "behavioral integrity" (Simons 2002).

Subsequent to recent subsequent scandals, boards of directors are facing an increased pressure from investors, creditors and shareholders to ensure corporate governance of their investments (Schmidt and Brauer 2006). A general loss of investors' trust has lead to increased shareholder activism. "Integrity and competence of boards of directors have been questioned publicly and scrutinized by governmental corporate governance commissions" (Schmidt and Brauer 2006). It has been suggested that board and management efficiency can be assessed by their effectiveness in guiding strategy execution (Daily et al. 2003).

Consistency seems to be an important factor to regain *credibility* in the eyes of the company's external stakeholders, such as investors, creditors and shareholders. A systematic and standardized assessment of resource allocation decisions enables third parties such as rating, analysts, consultants and scholars an "objective" comparison between peer companies (Schmidt and Brauer 2006). Firms with higher volatility in their strategy consistency over time might be less reliant in the view of investors or at least they are required to explain divergent resource allocations to the public. It is important to point out that this is still just an assumption, few studies have been done to examine if there is a correlation between consistency and economic performance. As stated before consistency is perceived as a neutral measure until further notice.

In some circumstances high level consistency might not be desirable. For instance, high velocity environments might require higher levels of strategic flexibility and thus impact firm' suitable level of strategic (in)consistency (Schmidt and Brauer 2006). In order to catch emerging opportunities, the optimal strategy consistency bandwidth might vary from industry to industry and is dependant on the individual situation of the firm and its competitive position. I assume that managers need to strive for a level of strategy consistency which satisfies share- and stakeholder on the one hand, but also permits managers to follow business opportunities outside the initially formulated strategy on the other hand. The need for inconsistent behavior in some situations does not call into question the appropriateness of measuring strategy consistency, since I assume that a firm would announce changes to its corporate strategy if it perceives that environmental changes have a long-term impact (Burgelman and Grove 1996). It seems important that inconsistencies are detected and discussed both internally and as well as explained to share- and stakeholders (Simons 2002). This is also related to the increased demand for greater transparency in organizations (Friedman 2005, Maguire 2003).

3.4.3 Definition

After having evaluated the literature in the field of strategy implementation related to the concept and a thorough discussion on consistency, it is now the appropriate moment for a definition:

Consistency refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy. Thus, a firm behaves consistent if it implements resource allocations that agree with its pronounced corporate strategy. Inconsistent behavior on the other hand refers to resource allocations and strategic decisions that deviate from the announced strategy. Consistency associates to organizational behavior. Hence a firm-perspective and not a perspective of single individuals such as for instance single managers or teams.

3.5 The Strategic Decision Process

Pettigrew (1992) argues that process research is generally concerned with choice processes or *strategic decision making*, and formulation and implementation processes. Hence, according to Pettigrew a third branch in the strategy process literature is strategy decision process which will be dealt with in this section. In order to identify potential independent variables for the dependent variable consistency, strategic decision processes will be studied.

According to Rajagopalan and his colleagues (1993) each resource allocation decision is made in a context of *environmental* (1), *organizational* (2) and *decision-specific factors* (3). These factors influence each resource allocation decision which in turn is more or less consistent to the corporate strategy concept (see figure 10). It is therefore likely that candidates for *independent variables* to the dependent variable consistency could be found from this context of the strategic decision process.

In order to identify antecedent factors or independent variables explaining consistency the framework developed by Rajagopalan et. al. (1993) has been used. The framework is an integrative model which takes into account both the context in which a decision is made and the way in which this context affects the decision-making process.

First, Rajagopalan postulate that strategic decisions are made in the context of an organization's environment and are influenced by factors such as uncertainty and complexity. Secondly organizational conditions such as decision-making level, organization structure and past strategy influence the strategic decisions. Third, even within a single organization, the process can vary across decisions because differences in decision-specific factors such as timing, type of resource affected and decision complexity (Rajagopalan et. al 1993). These three categories of factors in turn affect *decision outcomes* (4) such as *consistency to corporate strategy*, timeliness/speed and quality. In the last step the decision outcome influences economic outcomes such as profitability, sales growth and stock price.

In other words, contextual antecedent factors, namely, environmental, organizational, and decision-specific factors significantly influences strategic decision process characteristics and thus indirectly, consistency to the corporate strategy concept.

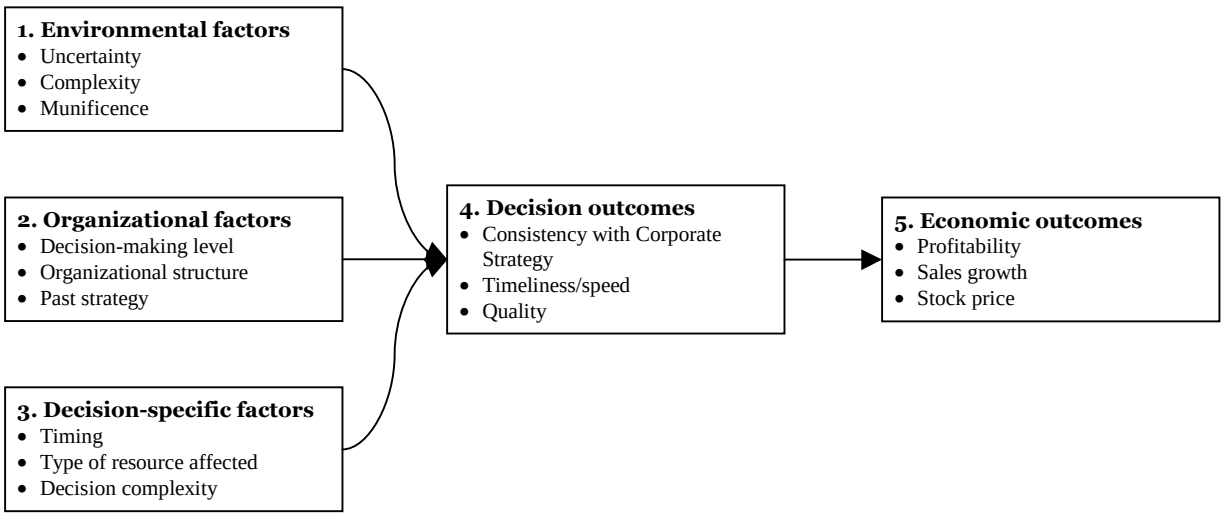

Figure 10. Strategic decision process (strategy execution)

This figure shows the dynamic of consistency, i.e. it describes the consistency process. Keep in mind that "strategic decision" doesn't imply choice of strategy but choices made when executing a strategy.

3.6 Conclusions

It is now time to conclude our position after the "funnel-process", starting by doing a feedback to the schedule of the research field (figure 5) in the introduction of this chapter. Again, the purpose is to illustrate the research field, not to illustrate the processes or dynamic of concepts. In the introduction this schedule was supposed to help making the framing of the chapter more comprehensive, and help the reader with orientation throughout the chapter.

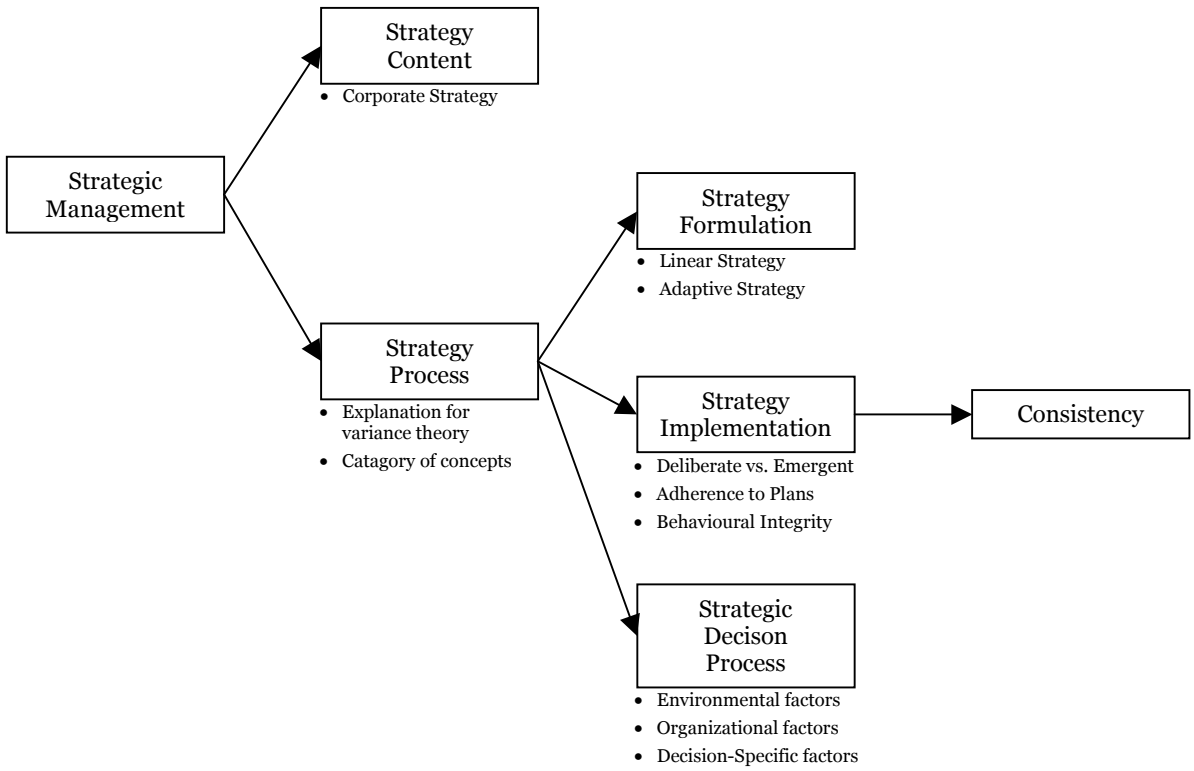

Figure 11. Theoretical position description

Figure 11 has two interesting implications. First it presents and locates the concepts touched in this chapter in the research field context. Second it position consistency in the research field.

3.6.1 Introduction of Consistency

The concept under the magnifying glass, *consistency*, has been introduced and allocated in the strategic management literature. By studying existing research in the field of *strategy implementation*, consistency has been defined and positioned. The examination of theories and literature in this chapter has supplied us with concept definitions for this study:

Corporate strategy (section 4.1.1)

Comprises both corporate-level strategy (domain selection) and business-level strategy (domain navigation). The explicit corporate strategy contains both goals in terms of markets and industries and how to be competitive in each industry. Refers to what Mintzberg (1985) describes as intended strategy (see figure 8).

Resource allocation (section 2.2)
Action that affect tangible resources such as financial (capital, cash flow), physical resources (real estate, infrastructure), human resources, organizational resources (organizational structures, management, control and evaluation systems) and technological resources (machinery and other hardware, software, patents).

Consistency (section 3.4.3)
Refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy. Thus, a firm behaves consistently if it implements resource allocations that agree with its pronounced corporate strategy. Inconsistent behavior on the other hand refers to resource allocations and strategic decisions that deviate from the announced strategy.

3.6.2 Foundation laid for the formulation of Hypothesis

The chapter has also laid the necessary foundation for the formulation for hypotheses on consistency.

Literature from the *strategy formulation* field has been presented and studied in order to enable exploration of the potential connection between consistency and strategy formulation. Section 3.3 has separated *linear strategy* from *adaptive strategy*. In the next chapter a hypothesis will be formed in order to look at which strategy that dominates at NTT.

The *strategic decision process* is finally examined to enable identification of antecedents to consistency. Factors that influence the *decision* and *economic outcomes* in the strategic decision process are divided into *environmental, organizational* and *decision-specific factors*. Hypotheses on antecedents to consistency will be derived from this framework in the next chapter.

The theory chapter has provided us with the required tools to form hypotheses and examine consistency. I am now ready to transform theory into action.

4 Hypotheses – Theory in action

After the construction of the theoretical framework I have the tools and concepts to formulate hypothesis. The purpose of the chapter is to build a structure which enables analyzing and testing the hypotheses in the next chapter. It commences in section 4.1 with formulation of corporate strategies and codification and consistency rating of all gathered resource allocations.

As section 4.1 provides the dependent variables (consistency), section 4.2 gives us the independent variables. The hypotheses, based on the theoretical framework, are formulated in the latter section.

4.1 Dependent Variables

The first step to measure consistency is to identify corporate strategies. Section 4.1.1 starts with presenting the background to the identified corporate strategies, this is followed by short descriptions of the corporate strategies (the corporate strategies in their complete forms are described in Appendix B and C). Codification of the identified resource allocations as described in the methodology chapter provides with the *dependent variable consistency*. The section ends with descriptive statistics for consistency.

4.1.1 Corporate Strategies

In the year 1998 the Telecom Business Law in Japan was revised, the amendments became effective November 1, 1998. These amendments were made in order to promote further competition (NTT 2000) and was a part of the governments overall policy towards deregulation of the Japanese Telecom industry. “The laws will revitalize the information industry and improve our global competitiveness”, said Kan Higashi from McKinsey (Reuters News, June 15, 1997).

The new law enabled NTT to split into two local carriers and a long-distance company, under supervision and control of a single holding company. The new law also allowed NTT to enter into the international telecommunications market. Furthermore, it created a more competitive business environment for NTT.

This led to NTT’s changeover to a holding company structure July 1, 1999. The motive was to boost management efficiency and speed up its global expansion (NTT 2000). The restructuring was thought to allow NTT management to focus more on individual business lines which in turn would lead to improved efficiency and profitability.

The restructuring in 1999 lead to the announcement of the *NTT Group Three-Year Business Plan – Change to “Global Information Sharing Corporate Group”* which was announces April 1, 2000 (the new fiscal year starts April 1 in Japan). This constitutes the foundation for the first corporate strategy examined in this paper. The announcement of the Three-Year Business Plan came in a point in time in the beginning of the deregulation of the Japanese telecommunication industry.

Corporate Strategy 1 (April 1 2000)

See complete form in Appendix B. Growth and taking market share was the central theme in the strategy. One of the stated goals was to become a full telecom service provider, thus heavy diversification of products and services. Furthermore, NTT's aspiration was to become the world market leader in telecom by focusing on IP networks and mobile communications which were regarded as key growth areas. This also required aggressive geographical expansion efforts through acquisitions, tie-ups and strategic alliances. The expansion was focusing on European and US.

NTT wanted to shift focus away from the shrinking and non-profitable phone service market to IP network services and mobile communications. Key IP-network services were: IP connection service, ADSL-services, high-speed optical IP connection services and LAN communication services. The key mobile communication product was the predecessor to 3G, namely i-mode.

Financing was not in the center of attention. Expansion was partly going to be financed through listing of subsidiaries and through the issuing of new shares.

NTT Group took on heavy debt in the aggressive expansion that followed after the corporate strategy from April 1, 2000. The situation had also changed due to severe business climate after the collapse of the IT-bubble and maturing markets. As an effect of this Mario Wada was appointed as new president in June 2002. In April 2003 *NTT Group Three-Year Plan (FY 2003-2005) – "Toward Early Achievement of Resonant Communications Environment"* was declared. The declared strategy had some significant differences from the corporate strategy from 2000.

Corporate Strategy 2 (April 1, 2003)

See complete form in Appendix C. The strategy was mainly a focusing strategy, emphasizing concentration on core competences and core businesses with growth potential and future importance. NTT wanted to increase shareholder value by strengthen finance of which one part was to increase profitability and efficiency in existing alliances and businesses, hence not seek to expand and find new partners but to improve existing partnerships. NTT also stated its wish to contribute positively to the development of society and environment.

Maturing markets and the dotcom collapse led NTT to plan consolidations and reorganizations of businesses and reduction in expenses. NTT also planned to take away its focus from Europe and US to focus on the Asian market. Key products were broadband services and 3G services, maturing markets and products leads to investments in value added services such as content services.

Finance was a central theme in the strategy. NTT planned to strengthen finance by reducing interest-bearing debt, reorganizations, restructurings, repurchases of stock and reducing number of employees.

On these premises on NTT, an observation interval from *April 1, 2000* to *April 1, 2004* is chosen. Deutsche Telekom is already codified over the time period *January 1, 1999* to *June 1, 2003*.

4.1.2 Descriptive Statistics for Dependant Variables

The corporate strategies enable codification of all resource allocations. This section will present some descriptive statistics for the resulting dependent variables, consistency. To give an overriding view how consistency develops over time the average consistency-rate is calculated every half year and plotted (see figures 12 and 13). These are only meant to give an overview and qualitative feeling for consistency.

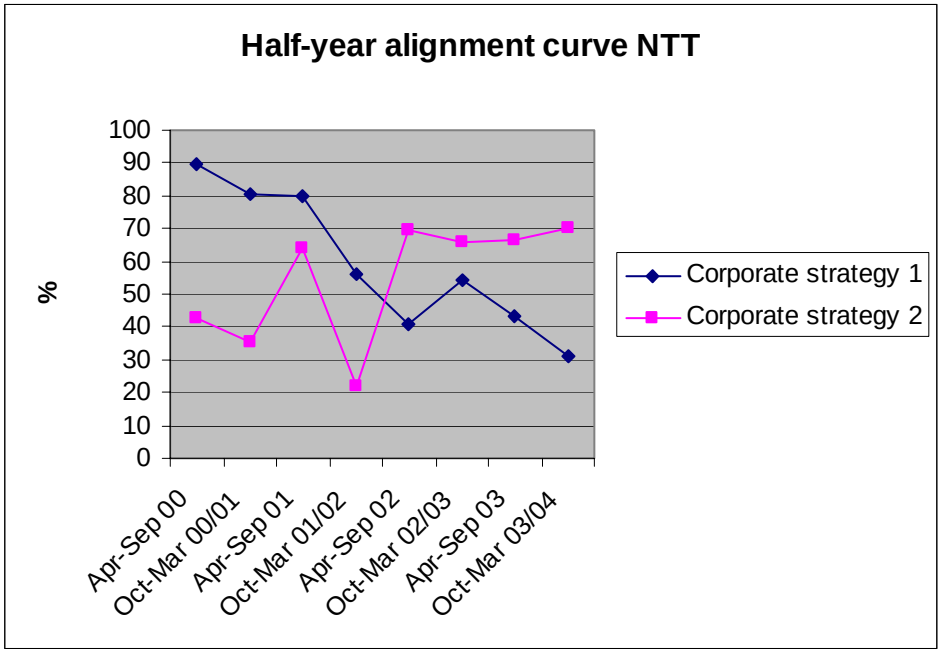

Figure 12. NTT consistency. Corporate Strategy 1 (April 2000) and Corporate Strategy 2 (April 2003)

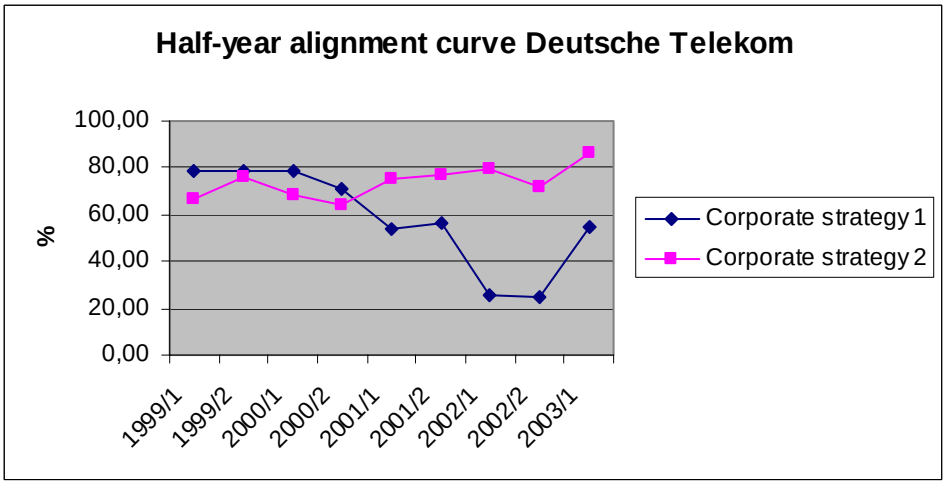

Figure 13. Deutsche Telekom consistency. Corporate Strategy 1 (Jan 1999) and Corporate Strategy 2 (Nov 2001)

Table 1. Descriptive statistics for the dependent variables

Variable	Variable	N	Minimu	Maximu	Mean	Std.
NTT Consistency to	NTTCS1	300	-100,00	100,00	60,396	65,70466
NTT Consistency to	NTTCS2	300	-100,00	100,00	54,866	73,50974
DT Consistency to	DTCS1	375	-100,00	100,00	58,218	62,92637
DT Consistency to	DTCS2	376	-100,00	100,00	73,199	54,47079

4.2 Independent Variables

Finally all the pieces necessary to formulate the hypotheses are provided. In the following section four hypotheses concerning consistency will be formulated with the objective to answer the research questions. The hypotheses will result in a set of independent variables that will be defined and presented later in this section.

4.2.1 Decision-Specific Factor: Time after Announcement

In strategy process and more specifically in the strategic decisions process, decision-specific factors influence the strategic decisions and consistency. One decision-specific factor is the *point in time* after the announcement of a corporate strategy.

Announcement of a new corporate strategy often initiates a change process within the company, acting as a force for organizational change. Executives often utilize the articulation of a new corporate strategy to create a momentum for change and unfreeze the company. For an example of this see Greiner and Bhambri's (1989) case study where the CEO of SBU successfully changed the company and created a momentum with the announcement of a new corporate strategy.

However, it requires persistence to keep the new corporate strategy concept as the guide for management behavior over an extended period of time. Early organizational dynamics often decline as managerial and public attention shifts. Burgelman and Grove (1996) argue that in extremely dynamic industries alignment between a firm's strategic intent and strategic action is not likely to last. Inevitable, strategic actions will begin to lead or lag strategic intent. Such divergences between intent and action cause "strategic dissonance" in the organization.

I would therefore expect the alignment of decisions to a given corporate strategy concept to erode with time. Therefore, my hypothesis is as follows:

H1a: The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the greater the likelihood that the decision is consistent with that corporate strategy concept.

However, there is also research pointing in the opposite direction. Past strategies has a great influence over its strategic choices (Mintzberg et. al 1976). According to Mintzberg past strategies often explain why organizations exhibit momentum in the same direction as defined by the previous corporate strategy. In other words, organizations are found to resist reversals in direction in case of change in strategy and structure (Mintzberg et. al 1976, Miller and Friesen 1980). Miller and Friesen (1980) explain it as follows: Organization momentum consists in an evolvement consistently in accordance with a perspective, strategy, ideology and mission of their own. To reverse this momentum is costly and can result in discrepancies and imbalances.

To summarize, past strategies can limit the consideration of new alternatives and build escalating commitment to an ongoing course of action. Thus, one can expect the consistency to a new corporate strategy concept to grow stronger with time. Therefore a contradictive hypothesis is:

H1b: The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the smaller the likelihood that the decision is consistent with that corporate strategy concept.

In order to test whether any of the two hypotheses are correct, consistency to the prevailing strategy is chosen as dependent variable. The number of days after the announcement of a corporate strategy is selected as independent variable. Hence these variables are counters that are reset to zero at the announcement of the second corporate strategy. However, consistency to the first corporate strategy *after* the announcement of the second corporate strategy is also examined and requires "counters" that are not reset. This results in four independent variables used:

- *NTT days after announcement (NTTdays).* Days after announcement of CS1, days after announcement of CS2.
- *NTT days after CS1 (NTTtotdays).* Days after announcement of CS1. Not reset.
- *DT days after announcement (DTdays).* Days after announcement of CS1, days after announcement of CS2.
- *NTT days after CS1 (DTtotdays).* Days after announcement of CS1. Not reset.

4.2.2 Organizational Factor: Decision Making Level

According to Shrivastava and Grant, formal structure and power centralization are associated with rationality in the strategic decision making process (1985). It could therefore be argued that higher decision making level leads to increased rationality in the decisions and higher consistency to the corporate strategy.

In order to gain credibility in the organization, executives have to show that their own behavior is consistent with the corporate strategy that they themselves formulated. In that aspect one could therefore expect high consistency on high decision-making levels. On the one hand lower-level managers should show alignment to the corporate strategy concept, since their careers to a large extent depend on conformant behavior, on the other hand they have to balance this requirement with the need to adjust the corporate strategy concept to the specific situation "on the ground". Burgelman (1983) argues that structural context intervenes and influences the corporate strategy concept through middle- and lower-level management. In that sense strategy follows structure. In line with this reasoning one can assume that consistency to corporate strategy is likely to be lower on lower decision-levels.

Therefore I hypothesize that:

H2: The higher the hierarchical level at which an individual decision is taken, the greater the likelihood that the decision is consistent with the prevailing concept of corporate strategy.

In order to test this hypothesis, consistency to the prevailing corporate strategy is chosen as dependent variable. The independent variable, decision making level, is graded; Board/Executive 3, Divisional 2 and Operational 1. NTT and Deutsche Telekom are tested separately as well as jointly where all data from the two companies is put together. This results in three independent variables:

- *NTT decision making level (NTTdml)*. Three-graded variable describing the decision making level of all resource allocations at NTT.
- *DT decision making level (DTdml).* Three-graded variable describing the decision making level of all resource allocations at DT.
- *Decision making level all data (dmlAll)*. Three-graded variable describing the decision making level of all resource allocations at NTT and DT.

4.2.3 Strategy Formulation: Portfolio Configuration Decisions

The next hypothesis used to examine consistency will be linked to strategy formulation and the telecommunication industry. It will investigate consistency between resource allocations affecting the portfolio configuration and the next corporate strategy, yet to be announced.

Aligning corporate strategy and strategic action is a key top management responsibility (Burgelman and Grove 1996). Such alignment is viewed by some as driven by the strategic intent of the CEO who sets ambitious targets within a longer time horizon. This view is built on the premise that top managers have extraordinary foresight. According to Burgelman and Grove (1996) there is convincing evidence extraordinary foresight is very improbable in high-technology industries. The question is how top management makes strategic decisions when extraordinary foresight is not available. Burgelman and Grove key premise is that "in extremely dynamic industries alignment between a firm's strategic intent and strategic action is not likely to last. Inevitably, strategic action will begin to lead or lag strategic intent. Such divergences between intent and action cause 'strategic dissonance' in the organization." This dissonance then leads to the formulation of a new strategy.

Thus *linear strategy* discussed in section 3.3.1 is probably not applicable and descriptive for the strategy process, or more particularly for the strategy formulation process in NTT Group and its subsidiaries. When extraordinary foresight is not possible, strategic planning is likely to play a less significant role in the strategy process. Instead adaptive strategy described in section 3.3.4 is probably more correct in describing how the strategy formulation process works in NTT.

The first step is looking at the actual situation of the firm, identifying external treats and opportunities and internal capabilities and resources, and the chose products and markets (Chaffee 1985). This comes down to domain selection and is reflected by the firm's portfolio configuration allocations. After that goals or concepts and finally approach or strategy to reach those goals is chosen (see figure 7 in section 3.3.2). If portfolio configuration allocations are consistent with the *next* corporate strategy, this indicates that domain selection precedes concept and strategy formulation, which in its turn would point toward adaptive strategy formulation in the firm. Therefore, assuming adaptive strategy formulation in NTT and Deutsche Telekom leads to the following hypothesis:

H3: Portfolio configuration resource allocations closer to the announcement of the next corporate strategy are more likely to be consistent to the next corporate strategy.

Consistency to the *next* corporate strategy is chosen as dependent variable. In order to isolate resource allocations that are portfolio configurations a dummy variable is required. NTT portfolio incident (NTTport) and DT portfolio incident (DTport) indicates portfolio configurations with 1 and 0. The independent variable is the number of days after the announcement of the first corporate strategy:

- *NTT days after announcement (NTTdays).* Days after announcement of CS1, days after announcement of CS2.
- *DT days after announcement (DTdays).* Days after announcement of CS1, days after announcement of CS2.

4.2.4 Economic Performance and Consistency

Schmidt and Brauer (2006) suggest taking *strategy consistency* between a firm's resource allocations and its announced strategy as a proxy for boards' effectiveness in guiding strategy execution. They argue that subsequent to several corporate corruption scandals, board of directors and executives are facing amplified pressure from investors, creditors and shareholders to ensure effective corporate governance of their investments.

Schmidt and Brauer (2006) as well as Richter and Schmidt (2005) argue that ensuring consistency between the announced and the actual executed strategy is a meaningful role for boards of directors and executives. McGregor (1967) expresses it as that the corporation "walks like it talks", another expression is to "align words and deeds" (Simons 2002). Schmidt and Brauer realize that high velocity environments might require higher levels of strategic flexibility. They argue that inconsistent behavior needs to be communicated and that environmental changes that have a long-term impact should result in a change of the corporate strategy. To conclude, they suggest that consistency can be used to measure decision quality.

Even though consistency has been perceived as a neutral measure up till now, it is time to make an assumption. In line with the above discussion, it is logical to assume that investors, creditors and shareholders respond positively to consistent behavior. This in its turn would result in a positive relationship between consistency and market value. This results in the following hypothesis.

H4: There is a positive relationship between consistency and the firm's economical performance in terms of market value.

Dependent variable to test the hypothesis is abnormal returns, which is the monthly change in share price adjusted with the monthly change of Nikkei stock index. This data is available on NTT's and Nikkei's websites. This does not mean equivalence between economic performance and stock-price. Expressing myself a bit carefully, market-value can be seen as an important part of economic performance. Due to the limited time-frame I need to demarcate the study. Furthermore, the value perceived by market and shareholders is of particular interest since I have an outside-in approach in the study.

The independent variable is consistency each month in average. Hence two new variables are introduced:

- *Dependent variable: Economic performance (EcPerf).* NTT's monthly abnormal returns.
- *Independent variable*: *Monthly consistency (ConsMonth).* NTT's consistency each month in average.

4.3 Descriptive Statistics for Independent Variables

In table 2 and 3 I present descriptions and descriptive statistics for the independent variables used in the study.

Table 2. Independent variables and their units of measurement

Variable	Variable name	Unit of measurement
NTT days after announcement	*NTTdays*	Days after announcement of CS1 and of
NTT days after CS1	*NTTtotdays*	Exclusively days after announcement of
NTT decision making level	*NTTdml*	Board/Executive 3, Divisional 2,
NTT portfolio incident	*NTTport*	Dummy, 0 or 1
DT days after announcement	*DTdays*	Days after announcement of CS1 and of
DT days after CS1	*DTtotdays*	Exclusively days after announcement of
DT decision making level	*DTdml*	Board/Executive 3, Divisional 2,
DT portfolio incident	*DTport*	Dummy, 0 or 1
Decision making level all data	*dmlAll*	Board/Executive 3, Divisional 2,
Monthly consistency	*ConsMonth*	Average consistency on monthly basis

Table 3. Descriptive statistics for the independent variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
NTT days after	302	1,00	1089,00	452,0298	319,43817
NTT days after CS1	302	2,00	1461,00	671,9934	414,97660
NTT decision making level	302	1,00	3,00	1,9106	0,84434
NTT portfolio incident	302	0,00	1,00	0,5099	0,50073
DT days after	377	1,00	1061,00	421,9151	279,19725
DT days after CS1	377	1,00	1637,00	813,1061	484,09125
DT decision making level	377	1,00	3,00	1,5356	0,46794
DT portfolio incident	377	0,00	1,00	0,2573	0,43772
Decision making level all	679	1,00	3,00	1,3780	0,52662
Monthly consistency	55	-33,00	100,00	57,8564	36,64584

4.4 Summary

After presenting a theoretical overview, the concept of consistency and hypotheses, the next step is to test the hypotheses and analyze the results. But before doing that I will summarize where we stand. The research approach is based on the three following research questions:

-What factors influence consistency between the corporate strategy and resource allocation decisions?

-Is there a relationship between consistency and economic performance?

-How can consistency between resource allocations and corporate strategy in the deregulated telecom industry be characterized?

The following four hypotheses have been formulated in order to examine the consistency concept and answer the research questions:

H1a:	*The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the greater the likelihood that the decision is consistent with that corporate strategy concept.*
H1b:	*The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the smaller the likelihood that the decision is consistent with that corporate strategy concept.*
H2:	*The higher the hierarchical level at which an individual decision is taken, the greater the likelihood that the decision is consistent with the prevailing concept of corporate strategy.*
H3:	*Portfolio configuration resource allocations closer to the announcement of the next corporate strategy are more likely to be consistent to the next corporate strategy.*
H4:	*There is a positive relationship between consistency and the firm's economical performance in terms of market value.*

The hypotheses are obviously parts in the research approach and connected to the resource questions presented in the introduction chapter. How the hypotheses are linked to the research approach is illustrated in the following figure:

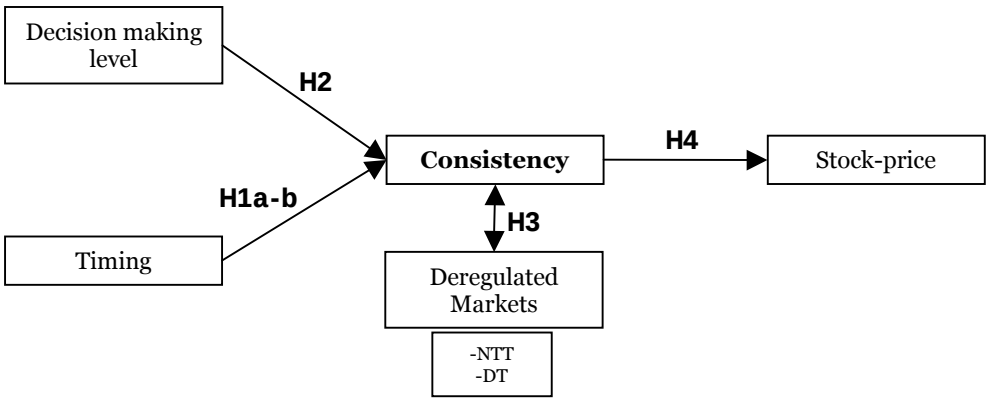

Figure 14. Linkage between hypotheses and research approach

H1a-b and *H2* have been formulated in order to deal with the first research question, hypothesizing two antecedents to consistency. The purpose of testing *H4* is to examine the relationship between consistency and economic performance and answer the second research question. Equivalence is not claimed between economic performance and stock-price. Expressing myself a bit carefully, market-value can be seen as an important part of economic performance. Due to the limited time-frame I need to demarcate the study. Furthermore, the value perceived by market and shareholders is of particular interest since I have an outside-in approach in the study. The allocation of *H3* needs an explanation; the hypothesis is formulated in order to examine whether strategy formulation is adaptive in kind for

the case companies in the telecommunication industry. This hypothesis is hence linked to the telecommunication industry and deregulated markets in the first hand. Therefore it is connected to the third research question. However, the third research question is also overriding, comprising all analysis. Since the consistency concept requires in-depth research, the time frame and limitation in resources has restricted me to look at NTT and Deutsche Telekom. My results will hence be restricted to the deregulated telecom industry in first hand.

The hypotheses are derived from theory and the theoretical overview. The theory chapter is structured according to a schedule of the research field (see figure 5). The following figure shows where the hypotheses are located and how they are linked to the theory:

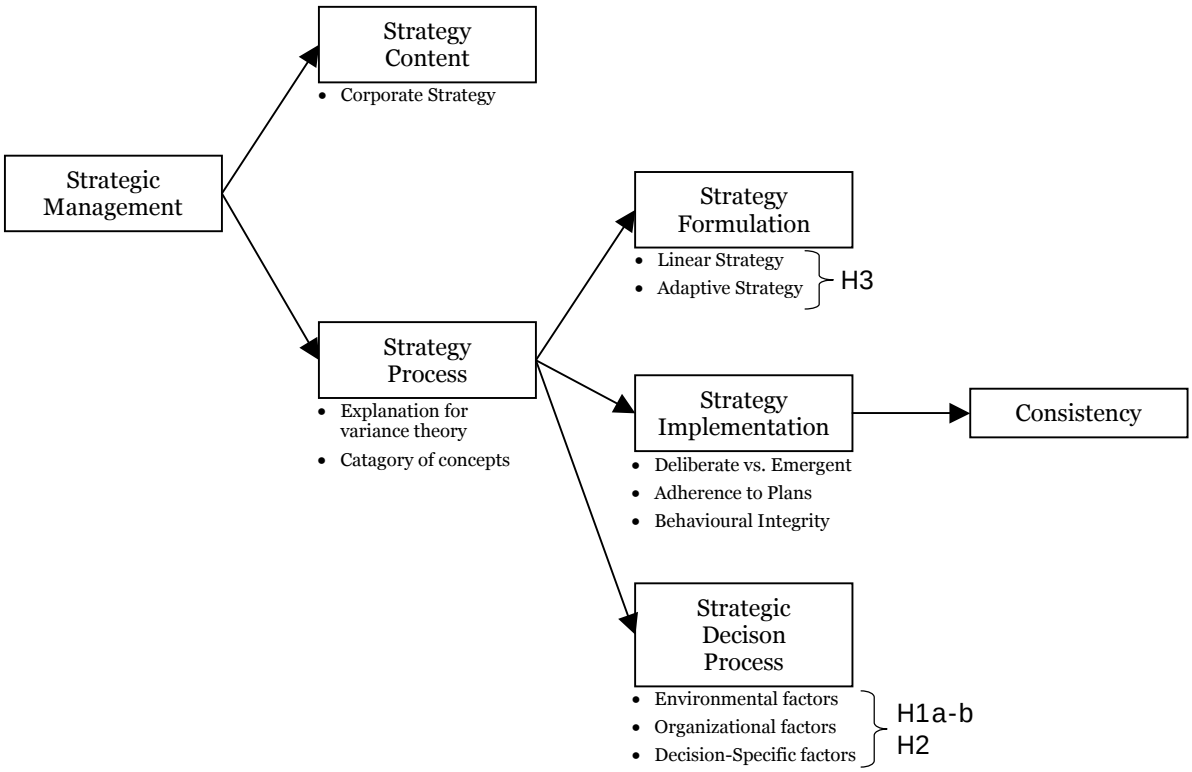

Figure 15. Hypotheses and schedule of research field

It is important to keep in mind that figure 15 only illustrates a schedule of the research field and where the hypotheses are located in the theoretical context. It is not intended to show anything regarding the dynamics of consistency. The locating and linking of the hypothesis to the theory chapter can be even more specific. One branch of Strategy Process in figure 15 above, Strategic Decision Process, led to the demonstrated framework in section 3.5 (figure 10). The hypothesis in this framework is illustrated below:

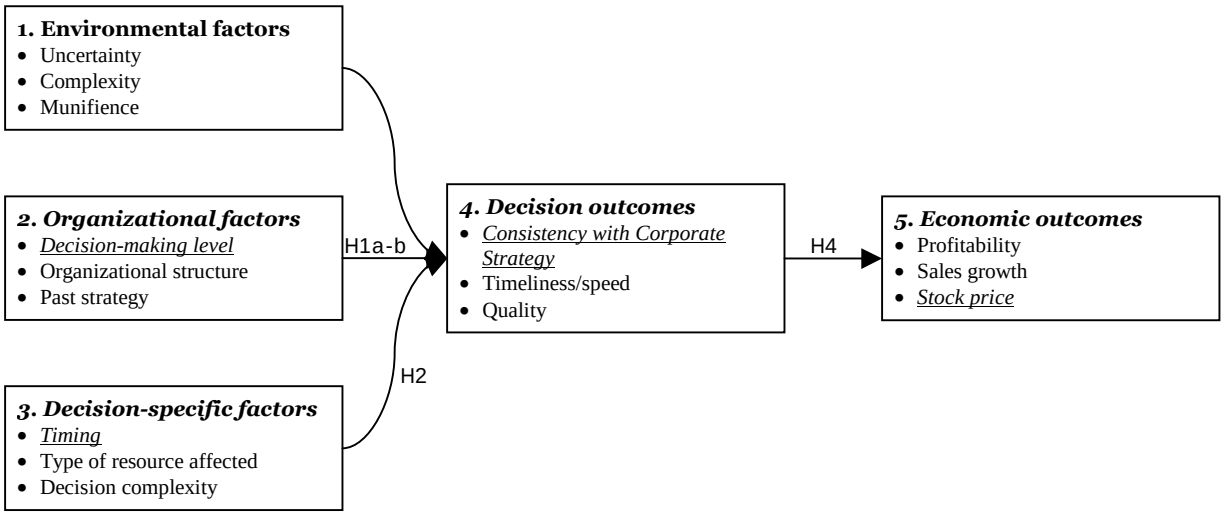

Figure 16. *Strategic decision process (strategy execution)*

This figure shows the dynamic of consistency, i.e. it describes the consistency process. Keep in mind that "strategic decision" doesn't imply choice of strategy but choices made when executing a strategy.

5 Analysis and Results

The codification of NTT into the database and the access to Deutsche Telekom, already entered in the database, has provided us with the *dependent variable* consistency (also used as independent variable in H4). Based on existing theories and literature *hypotheses* have been formulated and *independent variables* defined. I am now ready to test the hypotheses with *linear regression* and *correlation analysis* (see appendix A for description of these methods and utilized statistical units of measurement).

Findings sum up the results and orientates the reader. *Statistical Interpretations* discusses how the statistical results should be interpreted, if the reader is just interested in the implications she/he is recommended to skip this part. Even though this section might not be of interest for all readers it is important for the credibility of the findings. In *Existing Research* the findings are compared with existing research. *Analysis* discusses my interpretations of the results. *Reliability and External Validity* discusses the findings reliability and external validity.

5.1 Time after Announcement (H1a-b)

H1a: The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the greater the likelihood that the decision is consistent with that corporate strategy concept.

H1b: The sooner a resource allocation decision is taken after the announcement of a new corporate strategy concept, the smaller the likelihood that the decision is consistent with that corporate strategy concept.

Table 4. Results testing H1

Variable	N	Coeff.	Std.	t-value	Sig.	R2	Correlatio
NTT Consistency							
(1) NTTdays	238	*-0,053*	0,012	-4,487	*0,000*	0,078	-0,280**
(2) NTTtotdays	299	*-0,051*	0,009	-5,830	*0,000*	0,102	-0,320**
NTT consistency							
(3) NTTdays	60	-	-	-	-	0,008	0,091
DT consistency to							
(4) DTdays	237	*-0,034*	0,011	-3,042	*0,003*	0,038	-0,194**
(5) DTtotdays	374	*-0,035*	0,006	-5,426	*0,000*	0,073	-0,270**

See section 4.2.1 and 4.2.5 for variable definitions
* Statistically significant at 5 % level
** Statistically significant at 1 % level

5.1.1 Findings

Consistency decreased with time after announcement of the corporate strategy, which supports hypothesis H1a. Hence the announcement of a new corporate strategy has a significant impact on the consistency level which managers should be able to benefit from. This finding supports Rajagopalan's strategic decision process framework (1993). Another interesting finding is that the announcement of a new corporate strategy does not seem to affect the consistency to the old one.

5.1.2 Statistical Interpretations

If the reader is only interested in the implications she/he is recommended to jump to section 5.1.4.

The first test (1) which concerns the time-period when NTT's first corporate strategy is prevailing shows a significant (statistically significant at 1 % level) negative relationship between consistency and time after the announcement of the corporate strategy. In the case of Deutsche Telekom there is also a negative relationship (4). *This suggests that hypothesis H1a is true and hypothesis H1b is false*.

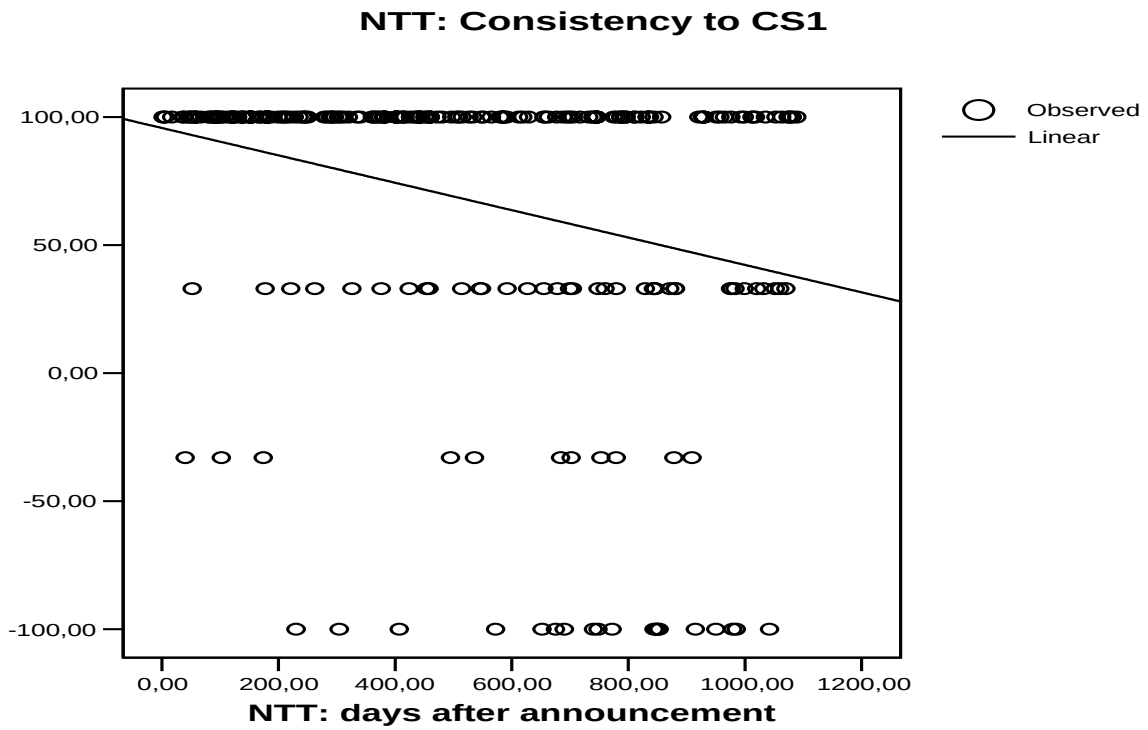

Figure 17. Regression line. Consistency to the first corporate strategy

Relationship after announcement of the next strategy

It is natural to assume that this negative relationship is magnified and reinforced after the announcement of the second corporate strategy. The relationship throughout the whole time-period is therefore examined in the second test (2). The negative relationship is still statistically significant at the 1 % level. The correlation rate is only marginally higher, and even more peculiar, the regression coefficient which constitutes the gradient of the regression-line is hardly affected at all. This indicates that the tendency of decreasing consistency to a large extent exists previous to the announcement of the next corporate strategy. When testing the whole time-period at Deutsche Telekom (5) the correlation rate increases from -0.194 to -0.270 and R2 increases from 0.038 to 0.073 which is believed to be an effect of the extra amount of data, the correlation coefficient is not affected.

Examining the two companies' consistency to the second corporate strategy does unfortunately not provide any interesting results that indicate interplay. I believe that one reason for this could be insufficient amount of data (60 observations in test 3 instead of 238 or more instead of 237-374 in the other tests) and too short observation intervals (1 year instead of 3 or more).

Low R2

Another point that needs our attention is the low values of R2 (see description in Appendix A). R2 denotes how much better our regression relationship predicts resource allocations than the mean value. Values of R2 around 4-10 % thus imply that the regression relationship predicts the consistency rate in resource allocations poorly. The reason for the low values of R2 is a large spread and variation in the consistency-level in different resource allocations.

However, this is not an interesting unit of measurement in this study. It is natural to expect that the consistency rate in resource allocations are widely scattered. Hundreds of important resource allocations are made in NTT and Deutsche Telekom during the observation interval, comprising strategic decisions concerning for instance financial, human and technological resources. In this thesis there have been no aspirations to predict single resource allocations.

The unit of measurement in focus, consistency, regards the degree to which the strategy is implemented. Thus not measuring single resource allocations, but measuring the average in some sense. If a significant regression relationship is found, it explains how the average-level vary in the interval. In other words, a significant regression-relationship explains how consistency varies with the independent variable in the observation interval. Since it has been concluded that R2 is of no interest in the study it will be omitted from here on.

5.1.3 Existing Research

The results are consistent with Burgelman and Grove's findings (1996). They argue that extraordinary foresight is improbably in high-technology industries. In their study more than a dozen case studies of major players in the information processing and telecommunications industry have been analyzed. Their findings suggest that strategic actions will begin to lead or lag strategic intent in high-velocity environments, leading to decreasing consistency.

My findings are also in line with Richter and Schmidt's (2005) results from their empirical research. Their study is the only one I found investigating consistency (with a similar conceptual definition). They examined how consistency changes after the announcement of a strategy in the Swiss pharmaceutical companies Ciba and Sandoz. They also found a significant negative relationship between consistency and time after announcement.

The results also support Greiner and Bhambri's findings in their case study of SBU where the CEO successfully changed the company and created a momentum with the announcement of a new corporate strategy.

My findings are inconsistent with some existing theories in the literature. Mintzberg and his colleagues (1976) argue that the *past strategy* has a great influence over the strategic choices in an organization, implying that consistency is not likely to be highest right after the announcement of the strategy. Miller and Friesen (1980) explain it as the organization having a strategic momentum. Tushman and Romanelli (1985) argue that past strategies can be the key source to organizational inertia. To set a new course or reverse this momentum is difficult, suggesting that consistency probably increases with the time after the announcement of the strategy. The results I have obtained contradict these theories.

5.1.4 Analysis

The result is in line with Rajagopalan's framework of the strategic decision process (see figure 10 in section 3.5). The identified relationship supports the assumption that antecedents in the decision-specific context influence decision-outcomes, in this case consistency. The result confirms the described structure in figure 10. This indicates that the framework successfully describes the strategic

decision process (mind you; *not* choice of strategy) and strategy implementation process. It also proposes that the model could serve well as starting point for future research.

The announcement of a new corporate strategy has a significant impact on the consistency level (compare with Richter and Schmidt 2005). Executives and managers need to be beware and take advantage of this effect. They should consciously evaluate when and how often to formulate new corporate strategies. By providing a new corporate strategy before the momentum of the old one is exhausted, the organization maintains a high strategic momentum and keep the different functions working coherently in the same course.

It is natural to expect that the effect described above vanishes if new corporate strategies are formulated too frequently. Mintzberg and Westley (1992) present a method to deal with this particular issue, briefly it could be described as building a long-term strategy that can be broken down into smaller parts that are formulated and implemented in a coherent order. The purpose of doing this is to enable higher frequencies in strategy formulating and implementing without loosing the long-term strategic course and impact-effect.

Another interesting observation is how the consistency to the first corporate strategy is affected by the announcement of the second corporate strategy, tests (2) and (3). One might suspect it to drop significantly but this doesn't seem to be the case, the regression coefficient doesn't seem to decrease notable. This is an interesting indication, but it is not statistically proven by these tests. My findings indicate that the announcement of the second corporate strategy doesn't seem to affect consistency to the first corporate strategy (it continues to decline in the same pace). One possible explanation for this could be that the corporate strategy is just an adjustment to the company's actual strategic behavior, just a formulation of the course the company's already follow. Perhaps this tells us something about *strategy formulation* in NTT and Deutsche Telekom. The indicated behavior fits well into what Chaffee (1985) defines as *adaptive strategy* (see section 3.3.2). Firm's that utilizes an adoptive strategy approach in strategy formulation align their behavior to the environment, and then the strategy is formulated in the next step (see figure 7 in section 3.3.2). The results indicate that NTT and Deutsche Telekom utilize an adaptive strategy formulation approach. This is an interesting observation; investigation of hypothesis H1a-b, tells us something about hypothesis H3.

5.1.5 Reliability and External Validity

Decreasing consistency with time after announcement is believed to be a reliable result. It is statistically significant at a high level and the method to reach the result is a standard method and straightforward. The result is also assumed to be externally valid to a relatively high degree. Burgelman came to the same conclusions when studying a dozen cases in the information processing and telecommunications industry (1996). Richter and Schmidt reached the same results in the pharmaceutical industry. It is therefore possible that the result is applicable on other industries as well.

The lack of effect on consistency to the first corporate strategy when announcing the second is an interesting indication. The level of reliability for this result is unknown. More sophisticated statistical methods could provide more detailed results. The external validity is also questionable; in first hand the result comprises only NTT and Deutsche Telekom. These two companies act for the most part on totally different markets, which give reason to believe that the result applies to other companies in the deregulated telecom industry as well. On the other hand NTT and Deutsche Telekom might not be representative for all kinds of companies in the telecommunication industry. These two companies both have in common that they were market leaders transforming from state-owned monopoly companies to private companies on deregulated markets. Other telecommunication companies in other situations might experience different dynamics. Hence, in order to increase the external validity, the hypothesis needs to be tested on other companies and in other industries.

5.2 Decision Making Level (H2)

H2: The higher the hierarchical level at which an individual decision is taken, the greater the likelihood that the decision is consistent with the prevailing concept of corporate strategy.

Table 5. Results testing H2

Variable	N	Coeff.	Std.	t-value	Sig.	Correlation
NTT Consistency to *(1) NTTdml*	238	*-10,334*	4,483	-2,305	*0,022*	-0,148*
NTT consistency to *(2) NTTdml*	60	-12,007	11,383	-1,055	0,296	-0,136
DT consistency to *(3) DTdml*	237	-6,410	4,146	-1,546	0,123	-0,100
DT consistency to *(4) DTdml*	137	-6,760	6,037	-1,120	0,265	-0,096
Consistency all data *(5) dmlAll*	675	*-5,961*	2,449	-2,434	*0,015*	-0,093*

See section 4.2.2 and 4.2.5 for variable definitions
* Statistically significant at 5 % level
** Statistically significant at 1 % level

5.2.1 Findings

The consistency level decreases with increasing decision making levels. This contradicts hypothesis H2. This is inconsistent with most research and theories found. The results supports Rajagopalan's (1993) strategic decision process framework.

5.2.2 Statistical Interpretations

All five examinations indicate a negative relationship between consistency and decision making level. The tests on NTT, (1) and (2), provide large regression coefficients, -10.3 and -12.0. However, only study (1) is statistically significant on 5 % level. Let's look closer on this particular test. On my consistency-scale where 100 is total alignment and 0 is neutral to the corporate strategy, consistency in average on Operational level is approximately 20 units higher than on Board/Executive level. H2 can't be confirmed, instead our findings point in the opposite direction.

Even though test (3) on Deutsche Telekom point toward a negative relationship it can only supported with 87.7 % certainty (and does not reach the first statistical significance level). The coefficients of the Deutsche Telekom test are smaller, -6.4 and -6.8, indicating smaller differences on different decision-levels. When the information of NTT and Deutsche Telekom are put together (5) in order to create a larger amount of data for the regression analysis the negative relationship again is statistically significant at 5 % level (only 0.5 % from the 1 % level). The relationship is more significant when all the data is put together. This could be an indication that the Deutsche Telekom relationship would be statistically significant if a larger amount of data was available. This is however only an assumption.

Again I believe that the insufficient significance levels when doing tests on the second corporate strategies, (2) and (4), are due to insufficient amount of data. This is indicates by the increased significance level when the data of NTT and Deutsche Telecom is put together.

5.2.3 Existing Research

Our results support Richter and Schmidt's findings from their examination of Ciba and Sandoz. They also found a negative relationship between decision making level and consistency. The findings are inconsistent with Shrivastava and Grant theory that formal structure and power centralization are associated with rationality in the strategic decision making process. An argument that implies that higher decision making level leads to increased rationality in decisions and higher consistency to the corporate strategy. Also Burgelman claim that consistency is higher on higher decision-making level since low-level and middle-level management has to weight decision-making in line with announced strategy to adjustment to threats and opportunities that they perceive "on the ground". My result actually goes against the stream, inconsistent with almost all literature I have found.

5.2.4 Analysis

The significant relationship supports the strategic decision process model, postulating a relationship between organizational factors and decision outcomes (see figure 10 in section 3.5). Again it indicates that the framework correctly describes the strategic decision process and strategy implementation process. The framework is probably a good starting point when doing research in these areas. The results from testing hypotheses H1a-b and H2 suggest that consistency can be explained by factors in the framework.

Our findings point in an opposite direction to what is suggested by the major part of the research found and our hypothesis H2. There could be several explanations for this.

High-level managers and executives might have strong personal interests that influence them in the decision making process. For instance "empire building motives" (Trautwein 1990, Haunschild at. al 1994) leading to large acquisitions, larger organizations and more power to the executives. These decisions are however not necessarily consistent with the corporate strategy. It might also be top-managers responsibility, with their general view of the organization and the environment, to sometimes look beyond the strategy and take inconsistent decisions (Richter and Schmidt 2005).

On the other hand, lower-level managers might be observed more in detail. Controlling systems might push them to be conformant with the announced strategy. The pressure to act conformant might dominate over the business-specific demands and opportunities and threats that become clear close to operations. Decisions might also be more comprehensive, easier to survey and closer to operation on lower business levels. When handling such decisions it might be easier to act consistently. However, these suggestions are only speculations and can't be regarded as proven explanations for the result.

If this result holds it is relevant for top managers and executives. It is then not enough to encourage and direct lower- and middle-level management to act consistent to the corporate strategy. Top managers also need to evaluate their own strategic behavior and make sure that they are aware of the consistency level of their own strategic decisions. As top managers they set the standard and their behavior has great impact on the behavior of lower level managers.

It is important to keep in mind that the findings in first hand are restricted to NTT and Deutsche Telekom and perhaps also the telecommunication industry, and in second hand to companies on deregulated markets in high-velocity environments. In order to lift findings to a more general level further research must be conducted.

I believe that decision-specific factors might have a greater influence on consistency than organizational factors. This is controversial; it reduces the importance of the organizational context in strategic decision making. It is important to press that this is just an assumption. The significance level was higher for my decision-specific factor than for my organizational factor, this point in same direction as my assumption. Richter and Schmidt's study (2005) show the same indications. However, a confirmation of this assumption would require cross-sectional regression studies with larger samples of independent variables in several industries.

5.2.5 Reliability and External Validity

Decreasing consistency with increasing decision making level is believed to be a reasonably reliable result. The result is statistically significant but not as strongly as the *timing* factor. The statistical methods used are carefully evaluated and discussed with the Faculty of Mathematical Statistics at Lund Institute of Technology.

The result is believed to be externally valid to a certain degree. It is a striking result that is inconsistent with most literature found. However Richter and Schmidt reached the same result when studying two companies in the pharmaceutical industry. The result needs to be tested in more industries. It also needs to be tested on other telecommunication companies due to NTT's and Deutsche Telekom's specific situations (see section 2.4.4).

5.3 Portfolio Configuration (H3)

H3: Portfolio configuration resource allocations closer to the announcement of the next corporate strategy are more likely to be consistent to the next corporate strategy.

Table 6. Results of testing H3

Variable	Filter	N	Coeff.	Std. Dev.	t-	Sig.	Correlatio
NTT Consistency to							
(1) NTTdays	*NTTpo*	129	*0,019*	0,019	0,997	*0,321*	0,088
(2) NTTdays (all		238	*0,027*	0,015	1,770	*0,078*	0,114
DT consistency to CS2							
(3) DTdays (all		237	0,011	0,012	0,857	0,392	0,056
All data consistency							
(4) AllDays (all		476	*0,020*	0,010	2,002	*0,046*	0,096*

See section 4.2.3 and 4.2.5 for variable definitions
* Statistically significant at 5 % level
** Statistically significant at 1 % level

5.3.1 Findings

The findings indicate adaptive strategy formulation in the telecom industry and thus point in the same direction as H3. The indications can't be regarded as being proved by these tests though. The results support Burgelman's theory (1996) of strategic dissonance and strategic inflection points in high-velocity industries.

5.3.2 Statistical Interpretations

The first test on NTT (1), which only regards portfolio configuration allocations, indicate a negative relationship between consistency to the next corporate strategy and time till the announcement of the next corporate strategy (time is expressed as days after announcement of the first corporate strategy, a positive relationship to this time variable thus corresponds to a negative relationship to the variable as time to the next corporate strategy). However this relationship is only statistically significant to 67.9 % certainty.

To broaden the test all resource allocations, and hence all strategic decisions observed, are included (2). Now the negative relationship is statistically significant with 92.2 % certainty, still 2.8 % from the first significance level. Test (3) on Deutsche Telekom point to a negative relationship but the significance level is too low to make further assumptions.

One possible explanation for the lack of significant results could be insufficient amount of data. Therefore I put together the data from NTT and Deutsche Telekom to create a larger sample (4). Now the negative relationship is statistically significant at 5 % level. This result could imply that the reason to the non-significant results in tests (1), (2) and (3) is too small test samples. This is however only an assumption.

5.3.3 Analysis

Even though I got a coefficient suggesting a negative relationship between portfolio allocation consistency to the next corporate strategy and time to announcement of next strategy, the relationship is not statistically significant. Thus, hypothesis H3 can't be proved. My theory is that the test samples are too small. After increasing the test sample by looking on all resource allocations and not just portfolio configurations, and putting together the data from NTT and Deutsche Telekom, I achieve a negative relationship which is statistically significant. It is unclear however if this supports hypothesis H3.

If portfolio configuration decisions where increasingly consistent with next corporate strategy, it could signal that *strategy formulation* at NTT follows the *adaptive strategy* framework (see section 3.3.2). Portfolio configuration decisions corresponds to *domain* selection (see figure 7 in section 3.3.2) which precede the announcement of the new corporate strategy, which corresponds to *concept* and *strategy* definitions. However, when portfolio configuration decisions are expanded to all strategic decisions (which lead to statistically significant results) it is not clear whether this signal an adaptive strategy formulation. The findings from testing hypothesis H1a-b gives some indications of adaptive strategy formulation in NTT and Deutsche Telekom. However, my conclusion is that I don't have enough evidence to claim that adaptive strategy is prevailing at NTT and Deutsche Telekom, even though my results point in that direction.

Strategic Inflection Point
However my expanded test (4) and my findings in section 5.1 are consistent with Burgelman and Grove's (1996) theoretical model. They argue that strategic actions will begin to lead or lag strategic intent in high-velocity environments. Divergences between intent and action cause *strategic dissonance* in the organization. *Strategic dissonance* can signal a *strategic inflection point* which is the optimal point in time to formulate a new strategy (see figure 9 in section 3.4.1). In section 5.1 we found out that consistency decreases with time after announcement, thereby creating a *strategic dissonance* in the NTT and Deutsche Telekom organizations. Our findings in this section suggest that consistency to the next corporate strategy starts to increase even before the announcement, indicating that the course has been changed before the announcement of the next strategy.

The half-year alignment curves of NTT and Deutsche Telecom (see figure 12 and figure 13 in section 4.1.2) shows just as expected, that the consistency lines cross at a point in time, i.e. consistency to the second corporate strategy becomes higher than consistency to the first. NTT's second corporate strategy was announced April 1 2003, figure 12 however show that the intersection occurs already in April 2002, one year in advance. It is logical to believe that the *strategic inflection point*, and the optimal time to announce the new strategy, was in April 2002. By the same reasoning one could argue that the strategic inflection point for Deutsche Telekom was in October 2000 and not November 2001 when it actually was announced.

According to Burgelman and Grove (1996) it is very difficult to realize the strategic inflection point and time the formulation of new strategies. Perhaps consistency can be used retrospectively to evaluate if strategies have been formulated in strategic inflection points. Maybe studies of other firms would also point out that managers lag behind in strategy formulation (like in the case with NTT and Deutsche Telekom), emphasizing awareness and alertness in the strategy formulation process.

5.3.4 Reliability and External Validity

To sum up, there are many indications pointing toward adaptive strategy formulation in the deregulated telecom industry, but no evidence. The assumption is probable, but it is not possible to talk about reliability and external validity in this context. This is however an interesting assumption to investigate in future research. The theoretical implication regarding *strategic inflection point* is of general relevance and external validity. Burgelman (1996) applies the strategic inflection point concept to firms in high-velocity environments.

5.4 Economic Performance (H4)

H4: There is a positive relationship between consistency and the firm's economical performance in terms of market value.

The short time-frame in this study has limited the analysis in this section to NTT. Hence, hypothesis H4 is only tested on NTT Group.

Table 7. Test of hypothesis H4

Dependent variable: NTT Economic			Independent variable: Monthly consistency			
Delay (months)	Coeff.	Std. Error	t-value	Sig.	R2	Correlati
0	*0*	0,038	-0,001	*0,999*	0	0
1	*-0,074*	0,034	-2.170	*0.035*	0,095	-0,308*
2	-0,007	0,038	-0,192	0,849	0,001	-0.029
3	-0,057	0,037	-1,547	0,129	0,051	-0,225
4	-0,007	0,037	-0,196	0,845	0,001	-0,029
5	-0,055	0,034	-1,598	0,117	0,054	-0,232
6	-0,026	0,035	-0,741	0,462	0,012	-0,110
7	-0,033	0,035	-0,950	0,347	0,020	-0,140
8	-0,130	0,034	-0,377	0,708	0,003	-0,056

Observations = 55. See section 4.2.4 and 4.2.5 for variable definitions
* Statistically significant at 5 % level
** Statistically significant at 1 % level

5.4.1 Findings

With 0 months delay no interplay at all is found between consistency and stock-price. With 1 month delay a statistical significant *negative* relationship between consistency and stock-price is found, contradicting hypothesis H4. This emphasizes that consistency should be regarded as a neutral measure. It also indicates that NTT's first strategy was poor in creating shareholder value.

5.4.2 Statistical Interpretations

If stock-price responds to shifts in consistency, i.e. there is a relationship between stock-price and consistency, we still don't know if interaction occurs instantly or with a certain time-delay. I therefore conducted regression and correlation analysis between economic performance and consistency with a delay that I varied between 0 and 8 months. The results can be seen in table 7. With the delay set to 0 months, no signs of relationship are found. However with 1 month delay between consistency and economic performance there is a negative relationship which is statistically significant at the 5 % level. This is the only delay time that leads to a result that is statistically significant. All tests however point toward a negative relationship between consistency to NTT's first corporate strategy and abnormal returns in terms of market value.

As discussed before no studies investigating the potential relationship between consistency to the announced strategy and economic performance have been found.

5.4.3 Analysis

The result supports my research approach (see figure 1), suggesting consistency impact economic performance. The results also support the framework of the strategic decision process (see figure 10), stating a relationship between *decision outcomes* (consistency) and *economic outcomes* (stock-price).

I found the results striking. Even though consistency has always been stated as a neutral measure throughout this study, I intuitively thought that external stakeholders would perceive consistent behavior positively. The result is inconsistent with Schmidt and Brauer's (2006) assumption that shareholders and other external stakeholders wish consistent behavior. Another effect of this is the rejection of hypothesis H4. Consistency with the announced strategy and market value are not positively correlated.

One conclusion is that consistency can't be perceived as a strict positive measure. Hence, the goals and aspirations of managers should not exclusively be to reach and maintain a high level of consistency to the corporate strategy. The consistency concept should be perceived as a neutral measure in first hand. This does not reduce the importance of measuring consistency.

In the case with NTT's first corporate strategy, market and shareholders responded negatively to consistent behavior to the corporate strategy. An increased level of consistency in the strategic decisions lead to a significant drop in stock-price, and a fall in consistency-level lead to a rise in stock-price (with a time-delay of one month). The interaction is statistically significant.

One possible explanation for this interaction is that market and shareholders have an aversion to strategic decisions that are in line with the announced corporate strategy. In other words, shareholders perceive the announced corporate strategy negatively.

If shareholders perceived NTT's strategy negatively, one might draw the conclusion that the corporate strategy was poor in the aspect of creating shareholder value. Perhaps something can be learned about strategy by studying consistency? Perhaps something can be learned about strategy formulation and strategy implementation by utilizing the consistency concept?

I believe that this leads to a possible field of application for the consistency concept.

Potential field of application for the consistency concept

Often companies expresses their fundamental mission as to create value for the shareholders, the linkage between strategy and shareholder value is hence relevant (Collis 1996). There is an immense amount of literature in strategic management research examining how strategy can create shareholder value. Consequently it is of great interest to evaluate strategies ability to create shareholder value in order to learn more about this interplay. This is however tricky and difficult to do.

One can not simply explain plunging stock price by a poor strategy. There are several reasons to this, but two important reasons are:

1. Such an assumption does not take into account to what extent the strategy was implemented. The firm could have made numerous poor decisions, affecting stock-price negatively, that were not in line with the announced strategy. Poor performance on the stock exchange may thus not be due to poor strategy.

2. There could be any number of other reasons that explains the stock-price variations. The strategic decisions are only a part by which the firm is evaluated. Hence, without separating and isolating different antecedents to stock-price it is impossible to say how strategy influences market value.

One way to cope with these two issues is to investigate the potential interplay between the dependent variable stock-price (adjusted by stock-index) and the independent variable consistency. In other words examining how the implementation-degree interacts with market value.

By looking at how consistency interacts with market value, regard is paid to the extent to which the strategy was implemented. The strategy is strictly linked to the analysis. Consequently, if an interplay is found then we know that the *strategy* is the antecedent. By looking at consistency we deal with the first issue above.

If a statistically significant relationship is found, we can conclude that *consistency* to the corporate strategy is the independent variable interacting with stock-price. In other words; consistency or the implementation-degree of the strategy affects stock-price. By regression analysis on consistency and stock-price we deal with the second issue above.

If a positive relationship is found, market-value rises when the consistency level rises. This means that shareholders perceive the strategy positively. The strategy creates shareholder value. Contrary, if a negative relationship is found, stock-price reacts negatively to increased levels of consistency to the strategy, which in turn means that shareholders perceive the strategy negatively. The strategy does not create shareholder value.

Perhaps strategies can be evaluated using this quantitative method. Presumable such a quantitative method can increase our understanding of strategy and in the next step learn us more about how strategy content create shareholder value. Empirical studies of a larger sample of strategies can perhaps identify successful and unsuccessful strategies when it comes to creating shareholder value, which in its turn could help executives and managers to formulate strategies where consistent behavior correlates positively with stock price.

5.4.4 Reliability and External Validity

The negative relationship between consistency and stock-price can't be regarded as a reliable and externally valid result. More data is required in order to increase reliability. Control variables and analysis to identify potential underlying variables is also required. More sophisticated statistical methods would probably increase reliability. The nature of the relationship is also assumed to be specific to each separate strategy. The reliability would probably also be higher if I would have used branch-index instead of Nikkei-index when adjusting stock-index. However, I believe that the theoretical implication could be of general interest.

6 Conclusions

This section will try to summarize the contributions of this study. Its purpose, and the purpose of the thesis, is to try and answer the research questions, which is clearly reflected in the structure of the chapter.

The concept of consistency has been examined. Consistency refers to the degree a firm's resource allocations are aligned with its previous announced corporate strategy (for the full definition see section 3.4.3). After a broad theoretical overview in chapter 3, the concept has finally been allocated in the strategy implementation field. The purpose of the hypotheses formulated in chapter 4 is to answer the research questions.

What factors influence consistency between the corporate strategy and resource allocation decisions?

In order to identify possible antecedents to consistency the *strategic decision process* has been studied (see section 3.5). My findings support the strategic decision process model that Rajagopalan and colleagues (1993) introduced and Richter and Schmidt (2005) utilized in their study. The model states that environmental, organizational and decision-specific factors affect decision outcomes (for instance consistency with corporate strategy), which in turn affects the economic outcomes (see figure 10 in section 3.5).

Investigation how *timing*, which is a *decision-specific factor* in the strategic decision process, interacts with consistency leads to interesting results. A very strong negative relationship between consistency and time after announcement of the corporate strategy has been found. The relationship is statistically significant at 1 % level for both NTT and Deutsche Telekom. This result supports Rajagopalan's model and indicate that decision-making factors (timing) influence decision outcomes (consistency with the corporate strategy).

The result is consistent with some research (Burgelman and Grove 1996, Richter and Schmidt 2005, Greiner and Bhambri 1989) and inconsistent with other research (Mintzberg et. al 1976, Miller and Friesen 1980, Tushman and Romanelli 1985).

My results imply that the announcement of a new corporate strategy has a significant impact on the consistency level (compare with Richter and Schmidt 2005). This could benefit executives and managers in their strategic work. By providing a new corporate strategy before the momentum of the old one is exhausted, the organization can maintain a high strategic momentum and keep the different functions of the organization working coherently in the same course.

It is likely to believe that this effect vanishes if new corporate strategies are formulated too frequently. Mintzberg and Westley (1992) present a method to deal with this particular issue. Summarized the method means to build a long-term strategy that can be broken down in smaller parts that are formulated and implemented in a coherent order. The purpose of doing this is to enable higher frequencies in strategy formulating and implementing without loosing the long-term strategic course and impact-effect.

A statistically significant negative relationship was discovered between *decision making level*, which is an *organizational factor*, and consistency. In other words, consistency to the corporate strategy decreases on higher decision making levels. The result supports Rajagopalan's model (see figure 10) and indicate that organizational factors (decision making level) influence decision outcomes (consistency with corporate strategy).

The result is inconsistent with most research that I have found (Shrivastava and Grant 1985, Burgelman 1983). However the result supports Richter and Schmidt's findings from their examination of Ciba and Sandoz.

I believe there can be several reasons for this interesting relationship. High-level managers and executives might have strong personal interests that influence them in the decision making process. For instance "empire building motives", resulting in large acquisitions, larger organizations and more power to the executives (Trautwein 1990, Haunschild at. al 1994). These decisions are however not necessarily consistent with the corporate strategy. It might also be top-managers responsibility, with their general view of the organization and the environment, to sometimes look beyond the strategy and take inconsistent decisions (Richter and Schmidt 2005).

On the other hand, lower-level managers might be observed and controlled more in detail. Controlling systems might push them to be conformant with the announced strategy. The pressure to act conformant might dominate over the business-specific demands and opportunities and threats that become clear close to operations. Decisions might also be more comprehensive, easier to survey and closer to operation on lower levels. When handling such decisions it might be easier to act consistently. This is however only speculations which aren't proven by my tests.

I believe that *decision-specific factors* constitute a greater influence on consistency than *organizational factors*. This is controversial; it reduces the importance of the organizational context in strategic decision making. It is important to press that this is just an assumption. The significance level was higher for my decision-specific factor than for my organizational factor, this points in same direction as my assumption. Richter and Schmidt's study (2005) also indicate the same thing. However, a confirmation of this assumption would require cross-sectional regression studies with larger samples of independent variables in several industries.

Since this is a case study, the results concern NTT Group and Deutsche Telekom in the first hand. I believe that the findings on *timing after announcement* have greater external validity than the findings on decision making level (see section 5.1.5 and 5.2.5). Comparison with Richter and Schmidt's study (2005) increases the external validity.

To conclude, my findings indicate that Rajagopalan's model seems to give a proper and explanatory picture of the consistency process (see "process as explanation for variance theory" in section 3.2.2). Decision-specific factors and organizational factors influence consistency to the corporate strategy. The investigation of two factors has lead to both interesting theoretical and managerial implications.

Is there a relationship between consistency and economic performance?

In order to examine the topicality of the consistency concept, the potential linkage between consistency (monthly average) and economic performance (stock-price) has been examined. I don't claim equivalence between economic performance and stock-price. Expressing myself a bit carefully, market-value can be seen as an important part of economic performance. Due to the limited time-frame I needed to demarcate the study. Furthermore, the value perceived by market and shareholders is of particular interest since I have an outside-in approach in the study. Another reason for the second research question is to obtain greater clarity of the consistency measure, whether consistency is a positive, negative or should be regarded as a neutral measure. The hypothesis assumes a positive relationship.

With zero months in delay no relationship at all is found between consistency and stock-price. With one month in delay between consistency and stock-price a *negative* relationship which was statistically significant at 5 % was found. The result supports my research approach (see figure 1 in section 1.2), suggesting that consistency impact economic performance. The results also support the framework of the strategic decision process (see figure 10 in section 3.5), stating a relationship between *decision outcomes* (consistency) and *economic outcomes* (stock-price).

I found the results striking. Even though consistency has always been stated as a neutral measure throughout this study, I intuitively thought that external stakeholders would perceive consistent behavior positively. One important conclusion that can be drawn from this result is that consistency

can't be perceived as a strict positive measure. Hence, the goals and aspirations of managers should not exclusively be to reach and maintain a high level of consistency to the corporate strategy. The consistency concept should be perceived as a neutral measure in first hand.

In the case with NTT's first corporate strategy, market and shareholders responded negatively to consistent behavior to the corporate strategy. The interaction was statistically significant. One possible reason for this recognized interaction is that market and shareholders have an aversion to strategic decisions that are in line with the announced corporate strategy. In other words, it might be that the shareholders perceive the announced corporate strategy negatively.

If shareholders perceived NTT's strategy negatively, I draw the conclusion that the corporate strategy was poor in the aspect of creating shareholder value. With a more extensive analysis, introduction of control variables and identification of potential underlying variables, a potential field of application for the consistency concept might be evaluation of strategies' ability to create shareholder value.

The evaluation is carried out by investigating the potential interplay between the dependent variable stock-price (adjusted by the Nikkei-index or even better, branch-index) and the independent variable consistency. In other words examining how the implementation-degree interacts with market value. By looking at how consistency interacts with market value, regard is paid to the extent to which the strategy was implemented. The strategy is hence strictly linked to the analysis. If a statistically significant relationship is found (and the right statistical measures are taken), we can conclude that consistency to the corporate strategy is the independent variable interacting with stock-price.

Perhaps strategies can be evaluated using this quantitative method. Perhaps such a quantitative method could increase our understanding of strategy and in the next step learn us more about how strategy content create shareholder value. Empirical studies of a larger sample of strategies could perhaps identify successful and unsuccessful strategies in creating shareholder value, which in is turn could help executives and managers to formulate strategies where consistent behavior correlates positively with market-value.

How can consistency between resource allocations and corporate strategy in the deregulated telecom industry be characterized?

The third research question is overriding. It comprises the whole thesis and all the analysis. Since this is a case-study of two companies in the deregulated telecom industry, the results are in first hand and to the largest extent applicable on this particular industry. Thus in one sense, all the findings in this study tells us how consistency is characterizes in the deregulated telecom industry.

My results indicate increasing consistency to the next corporate strategy before the announcement. Theories that are connected to the telecom industry and high-velocity environments suggest that this signals adaptive strategy formulation (Chaffee 1985). My results hence indicate adaptive strategy formulation in the telecom industry. The indications can't be regarded as being proved though.

The announcement of a new corporate strategy does not seem to influence the consistency to the old corporate strategy. One possible explanation for this is that the corporate strategy might just be an adjustment to the company's actual strategic behavior, i.e. just a formulation of the course the company is already following. The indicated behavior fits well into Chaffee's (1985) definition of *adaptive strategy* (see section 3.3.2). Firm's that utilizes an adoptive strategy approach in strategy formulation align their behavior to the environment, and then the strategy is formulated in the next step (see figure 7). The results indicate that NTT and Deutsche Telekom utilize an adaptive strategy formulation approach. When studying portfolio configuration allocations the regression coefficient is negative but this is not statistically significant. So even though the indications point toward adaptive strategy formulation this needs further research to be proven.

However, the findings point out another interesting implication. We have found out that consistency decreases with time after announcement, thereby creating a *strategic dissonance* in the NTT and

Deutsche Telekom organizations. My findings also suggest that consistency to the next corporate strategy starts to increase even before the announcement, indicating that the course has been changed before the announcement the next strategy. The half-year alignment curves of NTT and Deutsche Telecom (see figures 12 and 13 in section 4.1.2) shows just as expected, that the consistency lines cross at a point in time, i.e. consistency to the second corporate strategy becomes higher than consistency to the first. NTT's second corporate strategy was announced April 1 2003, however figure 12 show that the intersection occurs already in April 2002, one year in advance. It is logical to believe that the *strategic inflection point*, and the optimal time to announce the new strategy, was in April 2002. By the same reasoning one could argue that the strategic inflection point for Deutsche Telekom was in October 2000 and not November 2001 when it actually was announced.

According to Burgelman and Grove (1996) it is very difficult to identify the strategic inflection point and time the formulation of new strategies. Perhaps consistency can be used retrospectively to evaluate if strategies have been formulated in strategic inflection points. Maybe studies of other firms would also point out that managers lag behind in strategy formulation (like NTT and Deutsche Telekom), which would emphasize awareness and alertness in the strategy formulation process.

To conclude, in the deregulated telecom industry, my results indicate that consistency follow the patterns of adaptive strategy formulation. Furthermore, the consistency behavior appears to signal change of course previous to the announcement of a new strategy.

7 Further Research

Measuring consistency requires an in-depth study. The short time-frame and limited resources has limited this study to two companies in one industry. The results are thus primarily valid for the deregulated telecom industry.

Further research should therefore be conducted to lift the results and findings to more general levels. This study has not taken into account industry-specific factors, research is therefore needed to test the findings in other industries and on other geographical areas.

It would be interesting to study the strategic decision process more in detail. A study of a larger sample of independent variables from environmental, organizational and decision-specific factors on a larger amount of data would enable a more extensive explanation of the dependent variable consistency. It could also make possible comparison and weighting of the three groups of factors against each other.

I believe that it would be relevant to study the fourth hypothesis more thoroughly. Factors that could improve the analysis could be larger amount of data from more companies, discretization in weeks instead of months, off-setting stock price with branch-index instead of Nikkei-index, control variables and analysis of eventual underlying variables. If I would have more time I would find it very interesting to study this area further.

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APPENDIX A: Description of Statistical Methods

Linear regression
Linear regression is the process of fitting the best possible straight line through a series of points. Linear regression is often used to reduce a set of calibration points to a simple mathematical relationship. The straight line is calculated by the *least square method*, adding the squares of the distances from the data points to an arbitrary straight line and then minimizing this sum which generates the optimal regression line. The method can be used to test if two variables interact with each other. For more detailed information I refer to Blom and Holmquist (1998) or Körner and Wahlgren (2002).

Correlation analysis
The purpose of correlation analysis is to measure the strength of the relationship between two variables. As defined, correlation is a number between +1 and -1 that reflects the degree to which two variables have a linear relationship. A strong positive (negative) relationship corresponds to a correlation close to 1 (-1). A correlation of 0 means no relationship between the variables.

Measure	Explanation
Regression coefficient (Coeff.)	The slope of the straight line that most closely relates two correlated variables.
Standard error (Std. Error)	The error-interval for the regression coefficient.
Significance level (Sig.)	Probability that there is no relationship.
t-value	(Coeff.)/(Std. Error)
R Square (R2)	How big share of the variation of the dependent variable that is explained by the relationship.
Correlation coefficient (Correlation)	The strength of the relationship (see correlation analysis above).
Standard deviation (Std. Deviation)	Measure of how spread or scattered the data is.

APPENDIX B: Corporate Strategy (April 1, 2000)

GOALS

-Become full service provider by diversifying services and increasing market-shares.
-Become world market leader in telecom by focusing on IP networks and mobile communications.
-Global expansion through investments, tie-ups and strategic alliances with powerful external partners.
-Expanding into U.S. and European markets from its Asian base.

BUSINESS

Market conditions:

-Deregulated, new and fast growing markets. Globalization of markets.
-Fusion between telecommunication and broadcasting, bringing enormous development of EC.
-IP services and Mobile communications are key growth areas.
-Fast expansion, diversification and globalization of businesses.

NTT West, NTT East and NTT Communications

Phone service market:

-Shrinking market which is regulated with a price cap system.
-Enforcing management efficiency
-Restructuring plan, cost reductions, reducing number of employees.
-Diversifying services and lowering charges (NTT Communications)

Products and services:

-IP connection service
-ADSL service
-High-speed optical IP connection service
-LAN-style communication service

NTT DATA

-Expand information sharing services.
-International expansion
-Greater competitiveness

NTT DoCoMo

-Mobile communications is perceived as a fast growing market
-Expand information sharing services. Diversification of services.
-International expansion. Build investment and financial ties with the world's major telecom players.
-Form tie-ups with leading multimedia companies toward establishing mobile communication standards.
-Upgrading of *i-mode* (Internet through cell phones)
-IMT-2000 (multimedia services)

FUNCTIONS

Investment and growth strategy

-Dynamic business development through investment in and tie-up with powerful external partners.
-Expansion out into U.S. and European markets from its Asia base.
-Diversification of services.

Financing

-Consideration of listing in line with growth stage for companies
-Emphasis on investment return
-Increase profitability and competitiveness
-Reallocation of staff (NTT East and West)

APPENDIX C: Corporate Strategy (April 1, 2003)

GOALS

-Concentrate on viable core competences. Focus on core businesses with growth potential and future importance.
-Increase shareholder value by strengthen finance.
-Increase profitability and efficiency in existing alliances and businesses.
-Contribute positively to the development of society and environment.

BUSINESS

Market conditions:

-Maturing telecom market. Severe business climate after the collapse of the IT bubble.
-Consolidation and reorganization of businesses and strategic alliances on the international markets.
-Focus on Asia. Reductions in expenses.
-New broadband era. Retain and increase market share in the new broadband industry.
-Lead the development of the new resonant communication industry (video communication)

NTT West and East, NTT Communication

Phone service market:

-Cost cutting and heavy restructuring and reorganization.
-Making management more efficient, performance based evaluations.
-Expand regional level outsourcing and more flexible employment. Reduction of employment.

Products and markets

-Focus: IP-telephony and ADSL in the Asian market.
-Product: -B-FLET'S optical service
-Alliances in order to increase the penetration of broadband content.
-Increase presence in System Integration, SI (NTT Communication)
-Aggressive marketing of IP Services (NTT Communication)

NTT DATA

IT services is a maturing market with increasing competition. Still weak demand since the IT bubble

-Increase marketing capabilities
-Strengthen competitiveness in Systems Integration (NTT Data's competitive advantage).
-Proactively create new products and services.
-Expanding costumer base in industrial sector.
-Consistent reductions in base costs.
-Flexibility towards costumers detailed costumer needs.
-Provide an environment that nurtures human resources

NTT DoCoMo

Maturing mobile communications market, increasing competition

-Quantitative growth of mobile subscribers slowing down. More focus on value added services.

Products:

-FOMA 3G Services
-i-mode services (mobile multimedia)
-Value added services

FUNCTIONS

Investment and growth strategy

-Promote international operations by utilizing existing business structure and alliances with strategic partners.
-Focus on Asia.
-IPO of high performance companies (non core businesses). When sufficient market competitiveness in order to promote growth
-Increase independence and effectiveness of the outsourcing companies.
-Heavy R&D in fundamental technologies (in order to keep competitive advantage)
-Heavy R&D in cutting edge technology (long term strategy)

Financing

Increase shareholder value by strengthening finances. These actions due to the severe business environment, the matured telecom market and the increased competition

-Strengthening total cash-flows by Group cash-flow management
-Reduce interest-bearing debt (incurred by structural reform-related expenses)
-Repurchase stock
-Restructuring and reorganization of existing business, including reducing number of employees.
-Liquidate real estate holdings in order to improve returns on assets and to reduce real estate management costs.
-Risk management. Prevent business risk. Place effective measures to prevent business risk (natural disasters for instance)

Business ethics

The business operations of NTT Group have an extremely import impact on society. NTT group is fully aware of that full legal compliance and the maintenance of high moral and ethical standard in the operation of its businesses are essential requirements. Follow “NTT Group Corporate Ethics Charter”. Contributing positively to the development of society and environment.