

Part III: Market niche model framework for strategic management

The third part of the thesis will be centered on model construction and theory. The first chapter of the third part deals with model building as a framework for theory construction. The second chapter, which represents the core of the thesis, creates the model of market niches which can serve as the framework for a strategic management theory of market niches. This model of market niches represents a synthesis of the key findings from the previous two parts and looks to achieve a high level of validity and limitation of the number of cases in the application of niche strategies in strategic management.

The main purpose of developing new models and theories is in achieving scientific progress, which can be described as the accumulation of scientific knowledge, where scientific progress is achieved when there is more knowledge at the end of a specific scientific process than at its beginning.³⁸⁵ Text Scientific progress, models and theories go hand in hand, but there is still a lot of controversy surrounding the question what constitutes a scientific model or theory because there is little consensus when discussing what and how models could or should look like.³⁸⁶

The focus of the first chapter is to clarify some basic questions about scientific models as a framework for theory construction, which will enable the market niche model construction in the second part of the chapter. Chapter III.1 is therefore structured into three parts, which are aimed toward the first goal of the third part (see figure III-1).

³⁸⁵ Cf. Bird/Alexander (2007), p. 64. Epistemology is the theory of knowledge and justification, it is concerned with the study of how we know what we do, what justifies us in believing what we do and what standards of evidence should be used to find out the truth about the world and the human experience in it. It is concerned with the nature and scope or limitations of knowledge. Audi (2007), p. 1f; Fumerton (2006), p. 1ff.

³⁸⁶ Cf. Schülein (2008), p. 7.

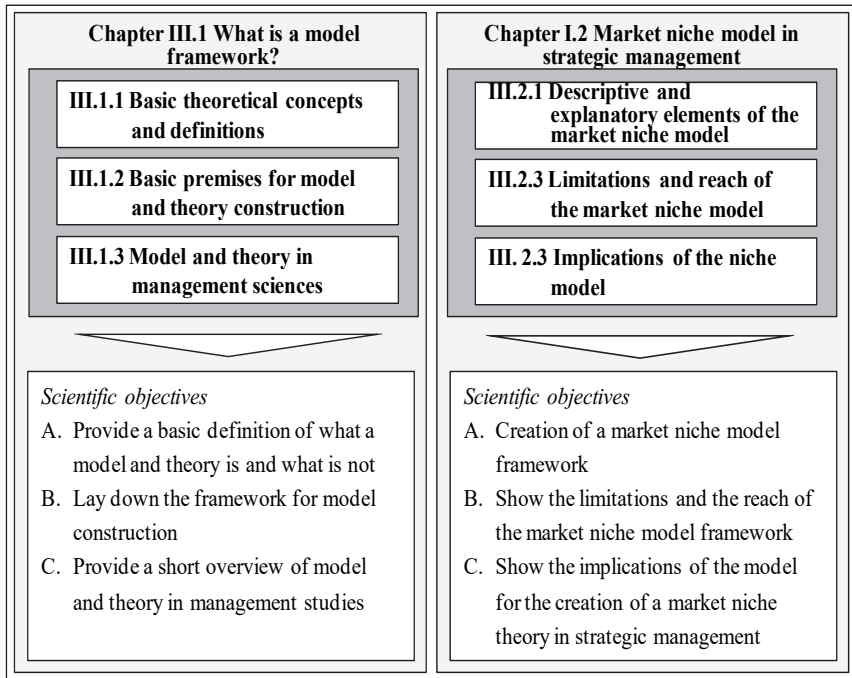


Figure III-1: Structure of Part III

The second chapter provides the model for the market niche. This chapter is also structured into three sub chapters, which provide the basic model definition, describe its limits and implications for the creation of a market niche theory (see figure III-1). Similarly to the structure of the previous two parts, the scope will be broad at the beginning, before narrowing it down towards to the topic in question.

III.1 What is a model framework?

The question about what a model and theory is seems perhaps a bit over-generalized at this point, but the following three sub chapters will explain that this question is not as easy to answer as it originally seems. Robert Merton explained the issue with the following statement:

“Like so many words that are bandied about, the word “theory” threatens to become meaningless. Because its referents are so diverse—including everything from minor working hypotheses, through comprehensive but vague and unordered speculations, to axiomatic systems of thought—use of the word often obscures rather than creates understanding.” (Merton (1967), p. 39)

What Merton was implying was that there is little agreement in the scientific community on what is actually understood when referring to theory. Disagreements arise on topics such as theory falsifiability, typologies and theory versus method among others.³⁸⁷ It is therefore of vital essence to identify formal methods and techniques that are vital for the formulation of effective theories.³⁸⁸ This is why it is important to have a clear understanding of several key factors that have to be considered in order to meet the scientific requirements when dealing with model and theory construction. These factors and their application will be key in the second chapter of the third part, where the market niche model will be formulated.

The structure of the chapter will be divided into three parts: the first part (*III.1.1 Basic theoretical concepts and definitions*) will explain and provide the basic definitions as well as a critical reflection of these definitions and their application. The second part (*III.1.2 Basic premises for model and theory construction in management sciences*) will focus on the framework and method that will be used for the construction of the model and the starting point for a comprehensive market niche theory in strategic management. The last part (*III.1.3 Model and theory in management sciences*) will show a critical assessment of model and theory in management sciences and its special features.

III.1.1 Basic theoretical concepts and definitions

The first part of the third chapter will be structured around definitions and theoretical conceptions. However, before going on to the definitions it is important to explain what definitions are and how they are constructed. This will not only contribute to a clearer understanding of the definitions in the following sub chapters, but it will also provide an important contribution for the second part of this chapter where new definitions will be created for the strategic market niche model in strategic management.

³⁸⁷ Cf. Sutton/Staw (1995), p. 371f.

³⁸⁸ Cf. Freese (1980), p. 187.

Definitions are fundamental tools of every research project because they represent the link between the objective and linguistic reality.³⁸⁹

A definition is a statement of the meaning of a word or phrase. It is composed of two parts, where one part includes the term to be defined (definiendum), and the other part the defining formula (definiens). The definiens is the defining component of the definition.³⁹⁰

Definiendum = Df Definiens

It was not until that the Austrian British philosopher Karl Popper made the distinction between two main methods of definition:³⁹¹

- The *Essentialist method*³⁹² which Popper defined as:

“(...) by thus describing the essence to which the term points...we determine or explain the meaning of the term also. Accordingly, the definition may at one time answer two very closely related questions. The one is “What is it?”, (...). The other is “What does it mean?” (...)” (Popper (1966), p. 13)

Popper traced the roots of this traditional method of definition back to the essentialistic interpretations of definitions, which already began with the philosophers Plato and Aristotle, where the objective of science is defined as the discovery and description of the essence of things. This definition explains the meaning of the word and at the same time answers the question of the essence of the word in question.³⁹³ The essentialist definition would read the formula in the text box above from left to right where the definiendum is “the name of the essence” and the definiens is the thorough description of the essence.³⁹⁴ Popper sees the epistemological objective of the essentialistic method in the transfer of knowledge. Therefore, the mission of science is to convey the essence of things with precise definitions;

³⁸⁹ Cf. Boysen/Ringle (2008), p. 10.

³⁹⁰ Cf. Chmielewicz (1994), p. 50.

³⁹¹ Sir Karl Raimund Popper was one of the most influential philosophers of the twentieth century and professor at the London school of Economics, but was most widely known among systematics for his work on the scientific method. His quest was to achieve a better understanding of science and society. Cf. Wettersten (2005), p. 119ff.

³⁹² Scientific essentialism as understood here is: “(...) the view that the fundamental laws of nature depend on the essential properties of the things on which they operate and not independent of them. These laws are not imposed on the world by God, the forces of nature, or anything else, but rather are immanent in the world.” (Ellis (2001), p. i).

³⁹³ Cf. de Queiroz (1994), p. 498.

³⁹⁴ Cf. Büttemeyer (2005), p. 16.

the science limits itself to conceptual and definition issues. This, according to Popper is the main reason that social sciences are lagging behind natural sciences.³⁹⁵

- *Nominal method.* is defined by Popper as:

“(...) a definition, as it is normally used in modern science must be read from back to front, or from the right to the left; for it starts with the defining formula and asks for a short label to it.” (Popper (1966), p. 14)

The nominal definitions substitute short terms for longer ones and they describe the meaning of the term in question. A nominalist definition does not start with a defined term but rather with a description of a concept or entity, which is described with many words and equates it with a definition to a single word or phrase (formula is read from left to right). Meaning that nominalist definitions simply introduce new names as abbreviations for complex expressions. This can happen in two ways: first, it can exemplify a meaning of the word and separate it from other meanings or terms and secondly, it can introduce a new term and determine its exact meaning.³⁹⁶ Nominal definitions cannot be judged as true or false statements because the logical value is not given and when alone the question of truth or numeration of a nominal definition is out of place. The demands on nominal definitions are less stringent than with essentialist definitions, they are primarily used to explain and specify the use of terms.³⁹⁷

Additionally, when talking about definitions there has to be a differentiation between *intensions* and *extensions*.³⁹⁸ Intension is the attribute belonging to the predicate. An intentional definition, also called a *connotative* definition, specifies the required and adequate conditions for an object being a member of a specific class. Any definition that attempts to set out the principal object of something by genus and differentia is an intentional definition. It corresponds with the definiens on the right side of the nominal definition.³⁹⁹ Extension is the class or the volume

³⁹⁵ Cf. Chmielewicz (1994), p. 49.

³⁹⁶ Cf. de Queiroz (1994), p. 498; Büttemeyer (2005), p. 18f.

³⁹⁷ Cf. Chmielewicz (1994), p. 49.

³⁹⁸ Intensions and extensions both come from the Latin language. The word intension comes from in-tendere which means to aim at something and extension comes from ex-tendere which means to stretch out.

³⁹⁹ A genus-differentia definition is one in which a word or concept that indicates a species -- a specific type of item, not necessarily a biological category - is described first by a broader category, the genus, then distinguished from other items in that category by a differentia. The differentiae of a species are the species' properties that other members of the genus do not have. In short, the genus is the broad category, the species is a type

of objects which can be attributed to its meaning. An extensional definition, also called a denotative definition of a concept or term specifies its extension. It is a list naming every object that is a member of a specific class.⁴⁰⁰

The practical definition problem is to first limit the object class, for which similarities can be identified and then formulate theoretical statements. Afterwards, the right attributes have to be identified in the definiens in order to circumscribe the object class in question. If the chosen class is too ample the statement formed with the concept will fail in reality and it will be falsified. On the other hand, if the chosen class is too narrow, the generality of the formed statements is lesser than its potential. This means that by increasing intension or additional attributes, the extension drops meaning that the objects are included in the class decline.⁴⁰¹

The nominalist definition represents a vital step in theory building because of the necessity for a clear conception of definitions as a precursor to theory building.⁴⁰² Therefore, there has to be a clear set of requirements or guidelines which a definition must fulfill in order to avoid misunderstandings and unclear definitions which could undermine the constructed theory. These requirements and guidelines represent the standards for definitions that were already used in the thesis and will also set the guidelines for the new definitions that will be built in the second part of this chapter. In the following paragraph ten such requirements or guidelines will be presented and analyzed:⁴⁰³

- The allocation of definiendum and definiens should be unequivocal, meaning that there should not be a definiendum with two or more different definiens.
- The accuracy of the concepts should dominate over the linguistic diversity or alternation. This means that if the linguistic expressions of definiendums are repeatedly used in the scientific text, it has to be repeated with the exact expressions and not substituted with similar but not synonymous expressions.
- The definiendum should not recur in the definiens because in this case the expression would only elucidate itself.

within that category and the differentiae are the distinguishing characteristics of the species. Cf. N.U. (2000b).

⁴⁰⁰ Cf. Boysen/Ringle (2008), p. 16.

⁴⁰¹ Cf. Chmielewicz (1994), p. 56.

⁴⁰² Cf. Chmielewicz (1994), p. 51.

⁴⁰³ Cf. Albers/Zottmann (1983), p. 452ff; Rhenius (2005), p. 38f; Friedrichs (2002), p. 73ff; Horstschäfer (1998), p. 106ff; Kornmeier (2007), 106ff.

- The problem of circle definition, which happens in the situation when the expression in the definiendum can be defined by the expression in the definiens and the other way around. Therefore, it is methodologically advisable that the two expressions should be defined independently from one another.
- The formation of sub concepts should not violate the definitional equation of the superordinate concept. Meaning that if certain facts are defined as genuine circumstances, then there can be no expression where these facts are wrong.
- There cannot be any inconsistencies or pleonasm in the employment of expressions within statements.
- The next requirement is called infinite regress, where each part of the definiens on the right can be defined again. This new definition can be defined again on its part. This regress can be discontinued with so-called undefined fundamental terms, which cannot be treated as a definiendum anymore.
- The problem of empty formulas is closely connected with the last point is. This means that statements are formulated, where central expressions of higher complexity are included, without an adequate exact definiens for these terms. These expressions are then relatively freely applicable depending on the focus of interest. The basic demand is to specify the definiens of empty formulas.
- The relational character in the definiens or in the statement built by the expression should be made clear if the expressions encompass relations instead of attributes.
- A traditional requirement is that negative terms or definitions are to be avoided.

This paragraph has provided some fundamental understanding regarding definitions, basic methods for definition building and requirements and guidelines for adequate and consistent definitions. Furthermore, the key definitions regarding theory and theoretical approach will be shown using a top down approach. Starting at the school of thought and working down towards theory. Each of these definitions will be explained and critically assessed and then presented in their relation to theory.

(1) School of thought and paradigm

Although the concept of school of thought is closely knit in regards to content with the paradigm concept, there are several identifiable differences between the two.

They still both represent a meta level for a model or theory which strongly influences the process of model construction in regards to the concepts and methodologies which will be applied. Therefore, the objective of this paragraph is to answer the following questions:

- *What is a school of thought and what is a paradigm?*
- *How do schools of thought and paradigms influence model creation?*
- *What is the role of the model and theory in paradigm and school of thought formation?*
- *Which are the main schools of thought and paradigms in business and organizational studies?*
- *What do they have in common and what sets them apart?*

A school of thought simply states that subgroups, circles, and networks can be built within different scientific disciplines.⁴⁰⁴ Recently, there has also been a lot of focus on different methods of empirical analysis for the study of structures of scientific research. The leading method that has established itself in the last 30 years is the co-citation analysis. This method studies the structures based upon the analysis of citations and co-citations. The co-citation method answers three main types of questions regarding the formation of a school of thought: Which publications exert most influence on the discipline? Which communities and areas of research does the discipline encompass? Which documents define the discipline's communities or areas of research?⁴⁰⁵ This allows researchers to have a sort of empirical cross-check of the scientific field in order to see if the identified school of thought corresponds with the literature identified as key for their for their research subject.

The definition of school of thought as understood in this thesis will be based on a combination of Morrell's and Geison's view of the subject. According to Morrell a school of thought which he labeled "research school", was an establishment that prospered in universities and research institutes. These research schools depended on the help of patrons, a constant influx of new students, a constant amount of problems that can be tackled in a limited amount of time by revisable methods and had the means to reach its core audience and leaders that were able to do from the efforts in profitable ways.⁴⁰⁶ According to Geison, a school of thought is a small

⁴⁰⁴ Cf. Olesko (1993), p. 16.

⁴⁰⁵ Cf. Gmür (2003), p. 48f.

⁴⁰⁶ Cf. Servos (1993), p. 10.

group of seasoned scientists that are following a closely knit research program where they are working together with advanced students in the same institutional context and where they engage in direct, lasting social and intellectual interaction. The role of the director of this process is to assist the new students by making their transition from learning to individual research as easy as possible.⁴⁰⁷ These two approaches use a very different viewpoint on the subject of the school of thought. Morrell's viewpoint is not as much on the content aspect but rather on the organization, external influence and the reach that a school of thought can achieve, hereby giving it legitimization and prominence within the scientific community. Geison (1981) on the other hand, saw the school of thought concept from an internal perspective where the formation, development, and advancement of schools depends on the collaboration and knowledge sharing between established scientists and the new generations of scholars.

These two aspects lead us to the following definition of a school of thought:

A school of thought is an integrated theoretical framework that provides a clear point of view on specific scientific field and that is associated with an active stream of empirical research.⁴⁰⁸

Based on this definition, McKinley et al. (1999) presented a model, which he structures the formation of a school of thought into three core process factors;

- the detection and assimilation of a theory,
- the growing number of empirical studies and
- the development of a legitimate school.

This model showed that depending on the level of novelty and continuity of the state-of-the-art knowledge, which is included in a theory, it will be linked with the probability that the new theory will be recognized and accepted by scholars. Furthermore, the degree of relevance for a wide group of scholars to which the model refers to as scope, increases the amount of empirical studies that follow, which subsequently then support the formation of a recognizable and legitimate school of thought.⁴⁰⁹ One of the shortcomings of this model was the omission of the influence of environmental and contextual factors on a school's development.⁴¹⁰ It was at a

⁴⁰⁷ Cf. Geison (1981), p. 21ff; Olesko (1993), p. 17.

⁴⁰⁸ On the basis of McKinley et al. (1999), p. 635.

⁴⁰⁹ Cf. McKinley et al. (1999), p. 643ff.

⁴¹⁰ Contextual factors include social structure, culture and power relations amongst others, which can influence the process, by which knowledge is created. Cf. Pfeffer (Oct., 1993), p. 615; Mitroff (Jun., 1972), p. B-617; Merton (Dec., 1995), p. 389.

later time that Ofori-Dankwa and Juilan included the contextual factors alongside the content factors in the development of schools of thought and integrated them into the model developed by McKinley et al. These three main contextual factors are publication outlet, theory originator and university of theory originator, which complement the internal factors already in place.⁴¹¹

After defining the school of thought and gaining a basic understanding of methods for school formulation and critical examination, the focus will turn to different types of school of thought in organizational and management sciences. For this purpose a scheme developed by Astley and Van de Ven (see Figure III-2) will be used to highlight the major schools. These schools are divided along two analytical dimensions; the first showing the level of organizational analysis (micro and macro level), and the second based on the relative assumptions about human nature (deterministic and voluntaristic orientation).⁴¹² This classification into four basic perspectives (naturalistic, collective-action, system structural and strategic choice view) can classify the majority of schools of thought in organizational and business sciences, whether these borders are explicitly stated or not.⁴¹³

⁴¹¹ Cf. Ofori-Dankwa/Julian (2005), p. 1309.

⁴¹² Determinism and voluntarism explain that if structures constrain and enable action, they also result from action themselves. As a result they can be intentionally or unintentionally altered by action. Deterministic orientation focuses on the context within which action unfolds, instead on the individual. Individual behavior is seen as determined by and reacting to structural constraints that provide organizational life with an overall stability and control. Voluntaristic orientation on the other hand sees the individual as the basic the unit of analysis and source of change in organizational life. Individuals and their created institutions are autonomous, proactive, and self directing agents. Cf. Weaver/Gioia (1994), p. 582. The level of organizational analysis is determined by the focus, where the macro level takes into account groups or populations of organizations, under the assumption that these groups do not exhibit the same characteristics as individual populations. The micro level on the other hand focuses on the individual organization. The main reason for this distinction is in the part-whole relation that exists in organizational phenomena.

⁴¹³ Cf. Astley/de Ven (1983), p. 248.

<p>Macro level (populations and communities of organizations)</p> <p>Naturalistic view</p> <p>Schools: Population ecology, industrial economics, economic history.</p> <p>Structure: Environmental competition and carrying capacity predefine niches. Industrial structure is economically and technically determined.</p> <p>Change: A natural evolution of environmental variation, selection and retention. The economic context circumscribes the direction and extent of organizational growth.</p> <p>Behavior: Random, natural, or economic environmental selection.</p> <p>Manager role: Inactive.</p>	<p>Collective-action view</p> <p>Schools: Human ecology, political economy, pluralism.</p> <p>Structure: Communities or networks of semiautonomous partisan groups that interact to modify or construct their collective environment, rules, options. Organization is collective-action controlling, liberating and expanding individual action.</p> <p>Change: Collective bargaining, conflict, negotiation, and compromise through partisan mutual adjustment.</p> <p>Behavior: Reasonable, collectively constructed and politically negotiated orders.</p> <p>Manager role: Interactive.</p>
<p>Micro level (individual organizations)</p> <p>System-structural view</p> <p>Schools: System theory, structural functionalism, contingency theory.</p> <p>Structure: Roles and positions hierarchically arranged to efficiently achieve the function of the system.</p> <p>Change: Divide and integrate roles to adapt subsystems to changes in environment, technology, size, and resource needs.</p> <p>Behavior: Determined, constrained and adaptive.</p> <p>Manager role: Reactive.</p>	<p>Strategic choice view</p> <p>Schools: Action theory, contemporary decision theory, strategic management</p> <p>Structure: People and their relationships organized and socialized to serve the choices and purposes of people in power.</p> <p>Change: Environment and structure are enacted and embody the meanings of action of people in power.</p> <p>Behavior: Constructed, autonomous and enacted.</p> <p>Manager role: proactive.</p>
<p>Deterministic orientation</p> <p>Voluntaristic orientation</p>	

Figure III-2: Four views of organization and management.

(Source: Astley/de Ven (1983), p. 247)

Following the topic of school of thought, the attention now shifts to the paradigm concept and its role in sciences. The paradigm gained a more prominent status in the scientific community, with the 1962 book by Thomas S. Kuhn, “The Structure of Scientific Revolutions”, in which he analyses the history of science.⁴¹⁴ Kuhn argued that current science did not possess a logic or a fixed method and was therefore unable to add or progress beyond the existing body of knowledge.⁴¹⁵ He argued that scientific progress does not arise from the accumulation of knowledge but rather from a set of changing intellectual circumstances and possibilities. From his viewpoint science was a series of stable periods during which scientists are steered by a paradigm. These periods of relative stability are interrupted by scientific revolutions.⁴¹⁶ It is when these revolutions occur that normal science reaches a point where it can no longer sufficiently answer its own scientific problems and questions.⁴¹⁷ To better understand Kuhn’s approach there has to be an understanding of the pre-paradigmatic concept. The pre-paradigmatic science classified knowledge into two categories; science and non-science. Research of law-like generalizations of the world was the objective of science, which was bound by the scientific method used in natural sciences. Factuality and objective truth was the understanding of knowledge produced by science.⁴¹⁸

A paradigm represents a mutual understanding on the nature of phenomena (ontology), the nature of knowledge about this phenomenon (epistemology), and the nature in which this phenomenon is studied (methodology).⁴¹⁹ Kuhn gave the paradigm concept its contemporary meaning, where he defined the paradigm as:

“(…) an underlying notion of the nature of our subject matter that makes certain kinds of questions about it askable and others unaskable, that makes certain kinds of inquiries seem legitimate and promising and other kinds seem irrelevant, impossible, unnecessary, or fruitless.”(Catton (1983), p.4).⁴²⁰

⁴¹⁴ Thomas Samuel Kuhn was one of the most influential philosophers of science of the twentieth century, his most influential work, “The Structure of Scientific Revolutions” is one of the most cited academic books of all time.

⁴¹⁵ Cf. Bird (2002), p. 2.

⁴¹⁶ Cf. MacKenzie/House (1978), p. 7. These stable periods are labeled as “normal science”.

⁴¹⁷ Cf. Harvey (1982), p. 86; Gladwin et al. (1995), p. 880.

⁴¹⁸ Cf. Jackson/Carter (1991), p. 111f; Willmott (1993), p. 687.

⁴¹⁹ Cf. Fabian (2000), p. 351.

⁴²⁰ More simply put a paradigm is a range of theories, standards, methods, and beliefs, which are commonly accepted by the scientists in the field. Cf. MacKenzie/House

Looking at the definition above, it is possible to break the definition down into three parts, each of which must be met in order for a paradigm to achieve scientific validity. These parts are:⁴²¹

- the prescriptive model,
- theoretical assumptions, and
- methodological assumptions and procedures.

After Kuhn’s definition, which remained the dominant definition of the paradigm in sciences, Burrell and Morgan similarly developed a framework of definitions of the paradigm in organizational sciences. They developed a two by two matrix model in which they incorporated four different basic research paradigms according to the objective vs. subjective and regulation vs. radical change axis. The first one is the radical humanist paradigm, which has a subjectivist view, with an ideological orientation; the next is the radical structuralist paradigm which has an objective stance with and ideological concern. The third paradigm is the interpretive which is distinguished by a subjectivist view, with a tendency toward regulation. Last but not least, the functionalist paradigm is identified by the objectivistic view or the organizational landscape and a tendency toward regulation.⁴²²

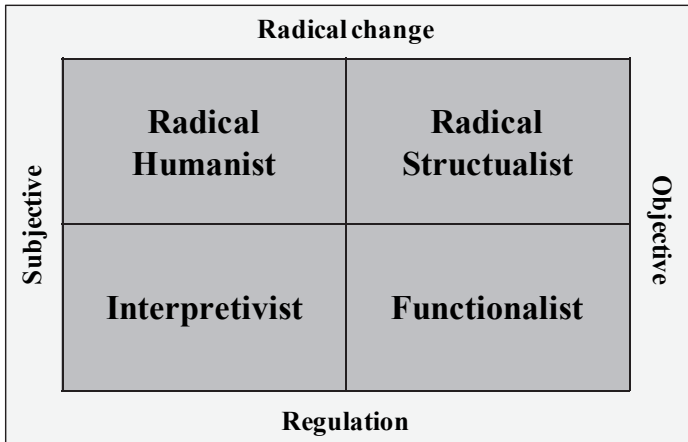


Figure III-3: Burrell and Morgan’s paradigm matrix.

(1978), p. 7. See also Bird (2002), p. 5f; Hazlett et al. (2005), p. 34; Morgan (2007), p. 49.

⁴²¹ Cf. McCourt (1999), 1012.

⁴²² Cf. Gioia/Pitre (1990), p. 585.

(Source: Burrell/Morgan (1979), p. 1et seqq)

This view was seen as an addition to Kuhn, who developed his definition of the paradigm exclusively for the study of natural sciences.

In the following five paragraphs, the function, use, influence, and shifts of the paradigm will be taken under the loop, in order to get a better understanding of its use in sciences.

Paradigms assist scientists with the organization of science and show a path for its development. Ideas and facts need a frame of reference in order to organize the growing accumulation of knowledge.⁴²³ A paradigm stands for a Metatheory of great reach; it can also be seen as a certain view of the world. Therefore, a paradigm is more than a single theory or a single hypothesis.

Paradigms influence certain aspects of reality which scientists then display in their research. This influence includes certain rules and standards, regarding the selection of scientific problems which are to be researched, the use of selected theories and methods which are seen as appropriate.⁴²⁴

Viewing from a functional point of view, a paradigm fulfills the cognitive, normative and social function. The cognitive function determines what the scientist that uses a certain paradigm sees or does not see. The importance of things in the field in which the scientist is active is determined by the normative function. Finally, the social function determines with which scientist they will share some general opinions about the scientific field in which they are active. This social component refers mainly to the fact that paradigms can be understood as groupings of scientists that hold a homogeneous opinion, which is different from the opinions of other groups of scientists.⁴²⁵

On the basis of this social component Kuhn makes a distinction between two types of scientists. The first type is the smaller group of scientists, who through their work in their academic field can be termed as trailblazers. The work of these scientists has a lasting effect on science; their work can be termed as innovative and unspecific. It is innovative in the sense that their research can attract other scientific colleagues to their field and unspecific in the sense that there are still an abundance of problems, which the scientific colleagues who were attracted to the field can

⁴²³ Cf. MacKenzie/House (1978), p. 7f.

⁴²⁴ Cf. Burrell/Morgan (1979), p. 3f.

⁴²⁵ Cf. Kurtz (2001), p. 69.

solve. The second group of scientists perform their research within the predominate paradigm in their field.⁴²⁶

Paradigms are perishable and they substitute one another. Kuhn said that scientific disciplines tend to paradigm shifts. This happens when a current paradigm runs into a dead end, which means that there can be no more adequate answers to present scientific problems on the basis of the accepted paradigm.⁴²⁷ This is followed by scientists who develop alternative solutions to this problem by presenting their case or alternative view of the world. The alternative view is usually the trigger for paradigm shifts; the new paradigm also usually presents an opposite view as the current predominant paradigm.⁴²⁸

Another important topic of debate concerning the paradigm is the incommensurability vs. the multi-paradigm perspective, which has caused quite a stir in the scientific community. It has proponents on both sides defending its stance with great passion and diligence. This issue is also very important from the theory building perspective as it can influence the different aspects and methodologies applied in the process of theory building, depending on the type of perspective applied.

The roots of incommensurability stem from the contradictory convictions of ontological vs. epistemological, human nature and methodological assumptions of objectivity vs. subjectivity and regulatory vs. radical change, which are the fundamental propositions in science. The objective of paradigm incommensurability is to institute the integrity of individual paradigms, which presumes that every paradigm has to be developed separately following its own scientific questions, whilst ignoring those of other paradigms as paradigmatically null.⁴²⁹ More simply put, each paradigm has to be developed and implemented individually.⁴³⁰ Kuhn's model identifies incommensurability as the difference in language between normal (old paradigm) and revolutionary (new paradigm) science. He contends that scientists in normal science use a certain language including specific signifiers and that the scientists in the revolutionary paradigm are using the same signifiers containing different signifieds. When the revolutionary paradigm replaces the normal paradigm and consequently becomes the normal paradigm, there is no more incommensurability

⁴²⁶ Cf. Borland (2003), p. 122f.

⁴²⁷ Cf. van Haften (2007), p. 71.

⁴²⁸ Cf. Harvey (1982), p. 87.

⁴²⁹ Cf. Jackson/Carter (1991), p. 110; Jackson/Carter (1993), p. 721; Weaver/Gioia (1994), p. 568; Bird (2002), p. 6f.

⁴³⁰ Cf. Schultz/Hatch (1996), p. 529.

because the previous (old) normal science has ceased to exist. This means that commensurability is achieved with the elimination of the protagonist (old normal science).⁴³¹ The modern use of incommensurability is oriented more towards scientific disciplines and the attributes of dominating paradigms within these fields. It is seen as more than just the characterization of theories but also a system of values, interest and cultures, which together with theory characterization form a system of orientation. Therefore, incommensurability represents relationships between different systems of orientation, which are incommensurable with one another based on certain rules of comparison. From this standpoint incommensurability has three main definable characteristics:

- radical difference,
- competition or conflict, and
- no objective standards of comparison.⁴³²

On the other hand, the objective of the multi-paradigm perspective is to explain the possible relationships between different theoretical approaches.⁴³³ The diversity of scientific phenomena implies that there is some level of common ground, for without this mutuality the researched phenomena would be insurmountably different. Each paradigm offers different perspectives on a scientific problem or topic, where it can develop notably diverse and one of a kind theoretic aspects on a subject of inquiry.⁴³⁴ There are currently three main strategies for multiparadigm research; the sequential, parallel and bridging strategy.⁴³⁵ All three of these strategies will be subject to a short review. According to the *sequential strategy* certain strategies complement each other in the sense that they disclose sequence of levels of understanding within a certain research project. The relationships between paradigms according to this strategy are linear and unidirectional.⁴³⁶ The *parallel strategy* is the second type of strategy of multiparadigm research. Here, the main objective is to use the paradigms on equal terms rather than as a sequence. This strategy compares

⁴³¹ Cf. Jackson/Carter (1991), p. 116f; Willmott (1993), p. 688; Weaver/Gioia (1994), p. 569f; Morgan (2007), p. 61f.

⁴³² Cf. Scherer/Steinmann (1999), p. 520.

⁴³³ Cf. de Cock (1995), p. 699.

⁴³⁴ Cf. Weaver/Gioia (1994), p. 577.

⁴³⁵ Cf. Schultz/Hatch (1996), p. 533f.

⁴³⁶ Cf. Lee (1991), p. 343ff. See also Gioia et al. (1989), p. 524.

paradigms but does not foresee any tampering with the paradigms, where it emphasizes their differences instead of similarities.⁴³⁷ The last strategy is called the bridging strategy, where as opposed to the sequential and parallel strategy; the borders between different paradigms are more penetrable than assumed by the supporters of incommensurability. A bridge is constructed with the use of second-order theoretical concepts, which serves for the bridging of paradigms.⁴³⁸ The paradigm has been a subject of controversy and criticism since its rise to prominence with Kuhn's work "The structure of scientific revolutions". For Kuhn's ideas were as controversial as they were revolutionary at that time within the scientific community. It is therefore very important, to also take a look at some of the main points of criticism regarding the paradigm and the reasons this criticism came about.

One of the main points of criticism was that Kuhn's research was done exclusively for natural sciences and therefore fails to transfer the analytical elements of the word paradigm into social sciences. The usage of the term has been used to describe different meanings, such as exemplar, methodical style, theory, theoretical orientation, ideology, philosophical perspective, and different combinations of these.⁴³⁹ Another point of criticism is Kuhn's ambiguity of the use of the paradigm.⁴⁴⁰

The subject of incommensurability is also a highly controversial one which has divided the scientific community into two camps, the ones defending incommensurability and those opposing it, advocating the multi-paradigm perspective. This situation led to the so called "paradigm wars" in the 1980's and 1990's. This paradigm war was especially evident in organizational and management sciences where there is a large amount of opposing perspectives and theories. This can mainly be attributed to the increased specialization and rapid growth of new disciplines within the scientific field of organizational and management studies. According to Kuhn, scientific revolutions occur when scientists do not follow the existing methods and criteria of rationality, but rather achieve their objective with the use of irrational methods. Many discussions took place as a response to Kuhn's claims, with the end result being that the complete acceptance of Kuhn's model would mean a complete disregard of the universal concept of reasoning and rationality.⁴⁴¹ Many

⁴³⁷ Cf. Hassard (1988), p. 257f.; Hassard (1991), p. 278.

⁴³⁸ Cf. Gioia/Pitre (1990), p. 591ff.

⁴³⁹ Cf. Harvey (1982), p. 86.

⁴⁴⁰ Cf. Ruse (1987), p. 98.

⁴⁴¹ Cf. Scherer/Steinmann (1999), p. 520.

scientific disciplines deemed this idea useless and asserted that instead theories depended on the standard and specifics of rationality in their respective paradigms.

Another critique point of the paradigm came from Robinson, who said:

“Progress in science is won by the application of an informed imagination to a problem of genuine consequence; not by the habitual application of some formulaic mode of inquiry to a set of quasi-problems chosen chiefly because of their compatibility with the adopted method.” (Robinson (2000), p. 41).

With this statement Robinson primarily criticized Kuhn’s understanding or role of the paradigm. Especially Kuhn’s belief that science is paradigmatic where as Robinson understands it as imaginative and self creative. He argues that science is becoming a set of methodologies which are applied by a “hired hand” to solve scientific problems.

The vital part of this thesis will be to choose an appropriate paradigm in business sciences which will then guide the theory building process. This will be especially relevant in the second chapter of the third part of the thesis. As we can see from figure III-4, there are a lot of paradigms in the field of business sciences. The question which paradigm(s), depending on the decision between incommensurability and multi-paradigm approach to choose, will have an important influence on the theory building process and on the outcome of the niche theory itself.

The emphasis on the fact that scientists spend the majority of their academic careers in teacher student relationships be it as a student or a teacher, is much stronger within a school of thought than within a paradigm. The social and familiar aspects of theory building are being put at the forefront much more than with the paradigm, where the emphasis lies much more in the acceptance of the same scientific beliefs, theories and methods.⁴⁴² Although the social aspect is being emphasized much more lately, in regards to the paradigm. The other significant difference between the school of thought and a paradigm is in the fragmentation and scope of the scientific disciplines. This means that scientific disciplines such as biology, economics and physics where one paradigm dominates the field are much different than disciplines such as organization and business sciences, where the field is much more fragmented. This means that although several paradigms can be identified in these fields, a school of thought would still provide a more general orientation point of the discipline.⁴⁴³

⁴⁴² Cf. Wolf (2008), p. 31f; Dorow/Blazejewski (2006), p. 199.

⁴⁴³ Cf. Ofori-Dankwa/Julian (2005), p. 1309.

Paradigm	Year	Founder
Context determinism paradigm	-	Early situational theorists
Hard-factors-paradigm	-	Strategy structure scientists
Structure-paradigm	-	Older organization theory
Hierarchical paradigm	-	Older organization theory
Market paradigm	-	Newer organization theory
Universalist paradigm	1911	Taylor
Prescriptive decision theory	1921	Knight
Functionalistic paradigm	1937	Parsons
Shareholder concept	1951	Gutenberg
Functional area analysis paradigm	1955	Koontz/O'Donnell
Structure-conduct-performance paradigm	1956	Bain
Resource-conduct-performance paradigm	1957	Penrose
Descriptive decision theory	1958	March/Simon
Situational paradigm	1961	Burns/Stalker
Structure-follows-strategy-paradigm	1962	Chandler
Stakeholder concept	1963	Cyert/March
Proactive paradigm	1972	Child
Brevity-Variety-Fragmentation paradigm	1973	Mintzberg
Strategy-follows-structure-paradigm	1974	Rumelt
Soft-factors-paradigm	1981	Pascal/Athos
Interpretational paradigm	1983	Smircich
Process-Paradigm	1990	Hammer/Champy

Figure III-4: List of some of the main paradigms in business sciences

(Source: own interpretation)

In summary, a school of thought and a paradigm provide structure for a model or theory or a model or theory building process on a meta level. They provide already established guidelines and methods, which scientists incorporate in their research, and have enough scientific problems and questions in their respective field, to guarantee progress. These guidelines and methods were developed through research done by peers who belong to a certain school of thought or a paradigm. They can both be addressed as first orientation points, when choosing a field of study in a scientific discipline, in which to start the process of theory building.

The next point will offer a more basic view on theory and model building, where the focus will shift from the meta level towards the building blocks and their influence on the model building process.

(2) Hypotheses, Axioms and Theorems

The second point will focus on the understanding of hypotheses, axioms and theorems. Main emphasis will be placed on hypotheses as they will be significantly more important for the model construction as axioms and theorems. This point will provide answers to what are hypotheses, which requirements they must meet, how they are constructed, which different types of hypotheses there are and how they are formulated. Lastly the relationships between hypotheses axioms and theorems will be examined.

Hypotheses are widely underestimated in our everyday life. People are constantly confronted with hypotheses; they can be seen in the character of assumptions that causes them. It is always necessary to hypothetically forecast reality to a certain degree. This forecasting may be done subconsciously in daily routines. It is therefore the role of science to identify and research this hypothesis (in a broader sense). The hypothesis plays an integral role in research and science, and is typically one of the basic principles of research, which can suggest new experiments and observations. It describes what we are looking for. They are not essential parts of a scientific project but rather induce distinctiveness and focus into it.⁴⁴⁴ Plato labeled all scientific knowledge hypothetical, by which he meant that it was built on assumptions, which can be confirmed or rejected by firsthand experience.⁴⁴⁵ Hypotheses build relationships between two or more variables. A hypothesis can be defined as:

A tentative statement that proposes a possible explanation to some phenomenon or event, whose validity is unknown and in the majority of cases states a relationship between two or more variables.⁴⁴⁶

The objective of a hypothesis is to offer explanations for the relationships between those variables that can be empirically tested. Furthermore, it provides the proof that the researcher has sufficient background knowledge to enable him to make suggestions in order to extend existing knowledge. It also gives direction to

⁴⁴⁴ Cf. Kumar (2008), p. 73.

⁴⁴⁵ Cf. Muirhead (1894 - 1895), p. 102.

⁴⁴⁶ Cf. Kumar (2008), p. 74; Töpfer (2008), p. 146; Rao (1998), p. 55.

a research project and structures the next phase of the research and therefore provides continuity to the examination of the problem.⁴⁴⁷

Both a hypothesis and a problem contribute to the body of knowledge which supports or refutes an existing theory. A hypothesis differs from a problem. A problem is formulated in the form of a question; it serves as the basis or origin from which a hypothesis is derived. A hypothesis is a suggested solution to a problem. A problem (question) cannot be directly tested, whereas a hypothesis can be tested and verified. On the other hand, a hypothesis can also play a vital role in theory construction. However, sometimes the line between theory and hypothesis is not quite clear and confusion arises on what constitutes a theory and what constitutes a hypothesis. The main difference is in the complexity, abstraction level, and the number of variables where theories tend to dominate. The hypothesis on the other hand, involves more real live situations, less complexity and a limited number of variables.⁴⁴⁸

Hypotheses can also be labeled as general statements without limitations in regards to space and time. The area of application of a hypothesis is expanded if it is empirically confirmed in reality, or narrowed if it is falsified. There are different characteristics or requirements which a hypothesis must meet:

- A hypothesis should be *verifiable*. Simply put, there has to be an available method or technique which enables the verification of a hypothesis. Otherwise the formulation of a hypothesis is purposeless. However, there is an exception to this rule, if the research formulates a hypothesis for which there is no known method of verification, then additional techniques have to be developed in order to verify the hypothesis.⁴⁴⁹
- A hypothesis should be *functional*. This characteristic is closely related to the point about verifiability, emphasizing that it should be conveyed in such a way that it can also be measured. This means that a hypothesis cannot be tested, which leads to inconclusiveness of the statement, if this requirement is not met.⁴⁵⁰
- A hypothesis should be *specific*. This means that the activities and predictions stated in the hypothesis have to be expressed clearly and to the point. The mistake is often made that the hypothesis is conveyed in general terms and

⁴⁴⁷ Cf. Kumar (2008), p. 75.

⁴⁴⁸ Cf. Cooper/Schindler (2008), p. 68.

⁴⁴⁹ Cf. Kumar (2008), p. 76.

⁴⁵⁰ Cf. Kumar (2008), p. 76.

with great scope which does not increase its importance, but much rather makes it untestable. If a hypothesis cannot be made specific enough, it is better to divide it into sub-hypotheses, which can then clearly state the relationship between the sought data and the drawn implications.⁴⁵¹

- A hypothesis must be *falsifiable*. What this means is that a hypothesis is deemed as a scientific hypothesis if and only if it is empirically falsifiable. This requirement is fulfilled when there are conceivable empirical circumstances, which would refute the hypothesis. If that is not the case and a hypothesis is unfalsifiable, which means that the statements made in the hypothesis can occur in any way or form in the world, without somehow conflicting with the statement. Therefore, it is the aim of scientific laws or theories to provide us with assertions and conclusions on how the world really operates and disregarding the ways in which it does not, but potentially could. Leading to the conclusion that a scientific hypothesis has to be empirically testable.⁴⁵²
- A hypothesis must be *formulated in simple, understandable terms and conceptually clear*. A hypothesis cannot be constructed equivocally, because it will make its verification very difficult. It is very important that the definition and terminology that is used to construct the hypothesis are commonly accepted and without one's own creations. Another requirement is that it is constructed in a way that it can only test one relationship at a time. A good hypothesis can be developed on the basis of pre-existing knowledge and diligent research in the field of interest, which then leads to a relatively simplified hypothesis construction.⁴⁵³
- A hypothesis should be in *continuation with the existing knowledge*. There is no clear requirement put on this statement but it is considered as an important part of scientific research, as it contributes to the growth of science. The core of the newly formulated hypothesis has to have its roots in the existing body of knowledge and thereby making an addition to it. The advantage of this approach is in the fact that if a hypothesis stems from a broader theory any

⁴⁵¹ Cf. Kumar (2008), p. 75.

⁴⁵² Cf. Chalmers (2006), p. 61ff. A scientific hypothesis does not mean that a hypothesis has to be accepted or confirmed by science, it is an attribute, which confirms that a hypothesis can be admitted to scientific testing procedures. The scientific hypothesis is closely related to the demarcation problem, which concerns itself with how and where to draw the lines around science.

⁴⁵³ Cf. Kumar (2008), p. 75.

test against this hypothesis can be viewed as a test against the foundations of the broader theory.⁴⁵⁴

In summary, the main characteristics and requirements of a hypothesis can be summarized as: firstly, there is a given possibility for empirical testing, secondly, the hypothesis has to be conceptually clear, and thirdly, the meticulous and inherent relation towards theory should be given.

A hypothesis is usually formulated after the problem has been stated and the literature study has been concluded. It is created when the empirical and theoretical background of the problem has been completely enlightened. Although there is no distinct method for hypothesis creation, which is why a hypothesis is often referred to as an educated guess, there are some aids which assist in the creation process. This can be done with the assistance of simple enumeration, the method of conformity, analogy or associated differentiation, which will then help shape the core of the hypothesis.⁴⁵⁵

The process of hypothesis creation in science can be divided into a discovery and a justification context. Hypotheses are constructed in the discovery phase whereas they are empirically tested in the justification phase.⁴⁵⁶ Hypotheses can be classified in terms of their derivation and in terms of their formulation. The derivational categories which include deduction, induction, abduction, and hermeneutics, will be the focus of the following four paragraphs.

Deduction is by definition applying general knowledge to a specific situation, hence going from the general to the specific. It is often treated as the only legitimate form of inference for a respectable science. Spangler defines deduction as:

"(...) the human process of going from one thing to another, i.e., of moving from the known to the unknown (...). Utilizing what he knows, the human being is able to move to what he doesn't see directly. In other words, the rational person by means of what he already knows is able to go beyond his immediate perception and solve very obscure problems. This is the nature of the reasoning process: to go from the known to the unknown." (Spangler (1986), p. 101)

The objective of deduction is to derive the hypothesis out of the existing body of theory, which requires an extensive literature review. As stated in the definition from Spangler, this method of hypothesis construction is a step by step process,

⁴⁵⁴ Cf. Kumar (2008), p. 76.

⁴⁵⁵ Cf. Mouton/Marais (1990), p. 134f.

⁴⁵⁶ Cf. Kornmeier (2007), p. 77ff.

where the conclusions rest upon previously known facts. The deductive hypothesis makes a conclusion about a group of things, where one specific example is then given. The hypothesis constructed by this process can be seen as a valid form of scientific proof. The validity of a deductive hypothesis is mainly compromised if the premises of the hypothesis are incorrect. This is one of the most important steps because if the premises are wrong, the foundations on which the hypothesis stands are incorrect. Every conclusion drawn on the basis of this premises can be incorrect and unreliable. The most important issue with deductive hypothesis building is that all premises have to be true and each step of the process must logically follow the previous one.⁴⁵⁷

Induction is the opposite of deduction; it builds general knowledge from particular situations, thus going from the particular to the general. Induction creates a hypothesis through experience.⁴⁵⁸ Johnson-Laird and Byrne define induction on the basis of the following example:

“(...) a process whereby from sensible singulars, perceived by the senses, one arrives at universal concepts and principles held by the intellect. Thus, from the sense experience of even a single yellow tulip, the intellect grasps that it is a special kind, a kind found in every single tulip. The person proves not only that he sees the tulip but also that he knows what kind of thing the tulip is by the following. He is able to point out all the others of the same kind. If the individual did not know the essence or whatness existing in each tulip, he could not group them together.” (Johnson-Laird/Byrne (1991), p. 16)

According to this illustrative definition an inductive hypothesis would then represent an argument in which the premises claim to support the conclusion in such a way that if the premises are assumed to be true then based on that assumption it is probable that the conclusion is true.⁴⁵⁹ Some general characteristics of inductive hypotheses are that they do not necessarily preserve the truth, and often use specific cases to formulate general principles as can be seen from the definition above. Another characteristic is that the basic premises already provide some support for the conclusion.⁴⁶⁰ The problem of induction stems from the fact that it uses sets of observations to arrive at conclusions, the method by which proof is collected is not

⁴⁵⁷ Cf. Canfield/Lehrer (1961), p. 205; Ackermann (1965), p. 155; Dietl (1968), p. 172.

⁴⁵⁸ Cf. Burks (1946), p. 301.

⁴⁵⁹ Cf. Moggridge (1992), p. 156f; Poincaré/Larmor (1952), 13.

⁴⁶⁰ Cf. Harris (2002, 1970), p. 32f; Poletiek (2001), p. 17.

valid in itself. In reference to the Johnson-Larird and Byrne definition, an observation of a number of situations in which a certain pattern or event is upheld, does not guarantee that this pattern or event is valid in all situations. Nonetheless a hypothesis that is based on induction can lead to a more diligent study of a pattern or an event. In conclusion, induction cannot be used to provide proof as its value lies in the fact that it enables the grouping of real life phenomena.⁴⁶¹

Abduction is a form of reasoning, which goes from general to the particular, with the exploitation of knowledge in order to give the best possible explanation for a particular situation.⁴⁶² Hence, abductive reasoning is a method of reasoning where the hypothesis is selected, which would, if true, best explain the relevant evidence. Abductive reasoning starts from a set of accepted facts and infers their most likely, or best, explanations. This method is often used to create a new hypothesis.⁴⁶³ In conclusion, summarizing the positivistic research hypothesis, deduction proves to us that something has to be, induction shows if something actually is, and abduction suggests that something simply may be.⁴⁶⁴

Hermeneutics is the interpretation and understanding of the researched phenomena.⁴⁶⁵ It was developed in business and organizational sciences as an answer to the positivist research tradition, where knowledge is produced through quantitative and qualitative approaches. The interest in interpretative research in business and organizational studies has increasingly grown in the last couple of decades. The main reason for this rise to prominence can be found in the fact that the disenchantment with the positivistic research and the methods by which knowledge is produced. This is mainly due to the epistemological limitations of the positivist approach.⁴⁶⁶ Hermeneutic hypothesis places concepts in dialogue with one another and to look for deeper meaning through exploring their relationships to each other. It involves the comparative study of various sources of origin the researched phenomena. Statements and their meaning are observed within their context. This contextuality is the assumption that the details can only be understood if the whole is

⁴⁶¹ Cf. Swann (1988), p. 369.

⁴⁶² Cf. Psillos (1996), p. 32.

⁴⁶³ Cf. Burks (1946), p. 303.

⁴⁶⁴ Cf. Paavola (2006), 32ff.

⁴⁶⁵ Hermeneutic has a long history that dates back to ancient Greece, where Hermes was known as the Greek god of communication. It is usually defined as the theory and practice of interpretation. The traditional Hermeneutics involve the quest for meaning in/ and between various contexts including texts, stories people tell about themselves. Cf. Gallagher (2004), p. 162f.

⁴⁶⁶ Sandberg (2005), p. 41; v. Zweck et al. (2008), p. 118f.

understood and the other way around.⁴⁶⁷ In the field of business sciences, the contents of hermeneutics have advanced from simple research that interprets texts and other documents concerning the organization, to general research on an organization and all of its attributes and other economic phenomena. Exploring topics such as corporate strategy, motivation, leadership, technological change on both micro and macro levels, instead of plain corporate documents. Hypotheses in business sciences that originate from a hermeneutical background have to be especially aware of the context and historical background of the researched phenomena and have a distinct capability for self reflection and auto critique.⁴⁶⁸ The formulation has three types of hypotheses:

- *Research hypothesis* is a complete, specific, testable statement which, when verified, will generate knowledge relevant to the problem area being investigated. It makes a claim or predicts a relationship, difference or cause between two or more phenomena. It also represents a predictive statement, which is capable of being tested by scientific methods that relates an independent variable to some dependent variable. A research hypothesis may exist as a general claim or as a directional claim.⁴⁶⁹
- *Null hypothesis* is the simplest hypothesis form, which states that there is no real difference in the sample and it is formulated for the purpose of rejecting or nullifying it.⁴⁷⁰ In tests of statistical hypotheses it is conventional to focus attention on the more serious of the possible errors, and to arrange things so that the more serious error is equivalent to "rejecting the hypothesis when it is true." In a broad sense, one can accomplish this by studying the matters of interest, identifying the more serious of the two errors and then wording or re-wording the hypothesis in such a way that the more serious error occurs when the decision is to believe that the hypothesis is false even though in reality the hypothesis, as stated, is true. So stated, the hypothesis is called the "null hypothesis." The phrase "null hypothesis" should be taken as an abbreviation for "the hypothesis being tested" (given the arrangement just described as to hypothesis and more serious error), and it should be noted that null hypotheses are not necessarily stated in negative terms.⁴⁷¹

⁴⁶⁷ Cf. Arnold/Fischer (1994), p. 55f.

⁴⁶⁸ Cf. Prasad (2002), p. 29.

⁴⁶⁹ Cf. Vogt (2005), p. 276.

⁴⁷⁰ Cf. McKillup (2007), p. 12.

⁴⁷¹ Cf. Rees (2001), p. 141; Poletiek (2001), p. 32f.

- A *statistical hypothesis* is either a statement about the value of a population parameter (e.g., mean, median, mode, variance, standard deviation, proportion, total), or a statement about the kind of probability distribution that a certain variable obeys. In more technical statistical terms a statistical hypothesis that specifies a single value for a population parameter is called a simple hypothesis; every statistical hypothesis that is not simple is called composite. Statistical hypotheses are statements about real relationships; and like all hypotheses, statistical hypotheses may match the reality or they may fail to do so. Statistical hypotheses have the special characteristic in that one ordinarily attempts to test them (i.e., to reach a decision about whether or not one believes the statement is correct, in the sense of corresponding to the reality) by observing facts relevant to the hypothesis in a sample. This procedure, of course, introduces the difficulty that the sample may or may not represent the population from which it was drawn well.⁴⁷²

Hypothesis formulation is a necessity in the process of s research, because it makes the scientific investigation easier, if it is constructed according to the methods described above.

It is the last step in the hypothesis formulation process. Although making observations is an important part of the scientific process, scientists also focus on asking questions of causality, that is, questions that address why the observed patterns exist. Attempting to answer “why” questions is referred to as hypothesis testing (hypothesis testing in turn is commonly referred to as using the “scientific method”). Hypothesis testing is simply an extension of our everyday use of inductive reasoning to come up with explanations for patterns as well as the deductive reasoning that helps us come up with predictions that if true, support our explanations. Due to the potential to elucidate causality, hypothesis testing is a powerful tool in science.⁴⁷³

The next two concepts are closely related to some of the characteristics of hypothesis. The first one that will be highlighted is the axiom and the second one is a theorem.

To understand the definition of an axiom, one has to take a step back and define what proof and proposition are. Proof can be defined as a method which objective is to ascertain the truth. Formal proof of a proposition is a chain of logical

⁴⁷² Cf. Rothman et al. (2008), p. 156; Ford (2002), p. 226f.

⁴⁷³ Gatti (2005), p. 223f; Blaikie (2003), p. 178.

deductions leading to the proposition from a base set of axioms. There are three key ideas in the definition of proposition, logical deduction, and axiom. A proposition is a statement that is either true or false. An axiom is a proposition that is assumed to be true. There are two basic properties that one would want in any set of axioms; they should be consistent and complete. A set of axioms is consistent if no proposition can be proven to be both true and false. This is an absolute must. One would not want to spend years proving a proposition true only to have it proven false the next day. Proofs would become meaningless if axioms were inconsistent. A set of axioms is complete if it can be used to prove or disprove every proposition. Completeness is an attractive property; we would like to believe that any proposition could be proven or disproven with sufficient work and insight.⁴⁷⁴

Theorems are statements that are deduced from axioms. According to the level, there can be a distinction made between two types of theorems; those of middle level, which are deduced straight from axioms and those of lower level, which come from the middle level theorems. As opposed to a single isolated hypothesis, a theorem is better supported by an entire system of proven theorems and axioms, and for this reason theorems are considered more reliable than a hypothesis.⁴⁷⁵

The rules and procedures in this point on construction of hypothesis, axioms and theorems, will serve as a methodological basis in the second part of this chapter, where the market niche model in strategic management will be developed. The next point will focus theory and postulates.

(3) Theory and postulates

The last part of the definitions will be centered on theory and the rules that they have to oblige in order to be deemed scientifically acceptable. Following the structure of previously defined terms, the first question answered will be what is a theory and how is it applied and what is its role in sciences. The second question will provide answers to the postulates which a theory must adhere and how they are constructed.

A theory can be defined as:

“(...) a set of systematically interrelated concepts, definitions, and proposition that are advanced to explain and predict phenomena (facts). In this sense, we have many theories and use them continually to explain or predict what goes on

⁴⁷⁴ Cf. Schanz (1988), p. 30.

⁴⁷⁵ Cf. Schanz (1988), p. 30f.

around us. To the degree that our theories are sound and fit the situation, we are successful in our explanations and predictions.”(Cooper/Schindler (2008), p. 69).

According to the definition above, theory is a means to an end. It represents a subject matter or an abstraction of reality which is meant to support the comprehension and decision making process regarding specific phenomena. This is a general explanation of what a theory is, but it does not answer the question what theories are used for or what their purpose is. Four different general categories can be identified that describe the purpose of theories: *explanation and model construction*, *forecasting*, *technological use*, and *critical assessment*.⁴⁷⁶ In the following there will be a short summary of each category in order to understand the demands and roles of each of them.

Firstly, the explanation and model construction will be highlighted. The main objective of the explanation is to determine the cause and answer the “why” questions. Explanatory model buildings are used to illustrate reality with specific generalized phenomena. The purpose is not in the exact reflection of reality, but rather in the construction of the most typical situations where the specifics of the individual situations are abstract. These models can be seen as general patterns of interpretation and can be used to explain the special characteristics of individual cases.⁴⁷⁷

Forecasting represents a bridge between science and practice; it represents a challenge for business sciences, whereby theories are often concerned with planning the future. Theoretical statements are interesting tools for forecasting because they can eliminate certain circumstances based on their empirical content. Therefore the statements of a theory carry a higher information value if the possibilities that are compatible with the statement are scarce. Forecasting, typically applies a general theoretical framework because of their high level of abstraction; the special criteria of individual cases is only used when specific situations are applied.⁴⁷⁸

Technological use regarding theories is different than the everyday use of the word. The technology in the theoretical sense is a system of statements and the application of these statements is the technique. The necessity for the technology

⁴⁷⁶ Cf. Schanz (1988), p. 56. According to the objective of the thesis, the appropriate category will be selected for this thesis.

⁴⁷⁷ Cf. Sternberg (1998), p. 156.

⁴⁷⁸ Cf. Rescher (1998), p. 3f; Hendry (2001), p. 17.

stems from the fact that theories have to be transformed before their practical relevance becomes obvious. Therefore, they have to be transformed into their technological form.⁴⁷⁹

The use of theories for critical assessment can be separated in a socially critical and an ideological component. The socially critical component effectively assesses and criticizes the circumstances and consequences of empirical objectives, the system of values and general social relations. Ideological criticism on the other hand is used to dismantle diverse prejudice. The information derived from critical assessment has a much higher information value, which is due to their higher significance as compared to noncommittal formulations.⁴⁸⁰

A postulate (also sometimes called an axiom) is a statement that is agreed by everyone to be obvious and correct. This is useful for creating proofs in mathematics and science and postulates are often the basic truth of a much larger theory or law.

The *consistency postulate* demands that the axioms and systems of statements have to be free of contradictoriness. This postulate is important because even in a contradictory system of statements it can be deducted even further, which would lead to false conclusions. As a result, special attention has to be paid on the one side, where this concerns the axiom or axioms used in the system of statements and on the other side the statements which are deducted from these axioms.⁴⁸¹

The *economical postulate* is related to the hierarchical arrangement of part-statements. It postulates an economical use of higher level axioms and theorems. This means that a good theory is based on a very small number of axioms; it should therefore have the objective to use as few axioms as possible. As can be concluded from the definition in the previous sub-chapter, axioms are only propositions that are assumed to be true. Their excessive use in theory building would lead to an unfounded and ideological system of statements; therefore one should not use many axioms and theorems in the process of theory building. A good theory is built upon a number of proven statements and few axioms, to have ensured that the theory is consistent within.⁴⁸²

⁴⁷⁹ Cf. Halloun (2006), p. 30.

⁴⁸⁰ Cf. Sabia (1983), p. 3ff.

⁴⁸¹ Cf. Schanz (1988), p. 31.

⁴⁸² It is important to know that sciences are based on axioms, this not only holds true for business and social sciences but also for proof based sciences such as biology, physics and mathematics.

The *integrity postulate* makes a demand on theories to be more than simply porous explanation outlines. This postulate is very difficult to realize in practice, because of the call for the inclusion of affecting and affected variables into the theory. The difficulty comes from the scope of the research field and the volume of variables that have to be included, which makes it nearly impossible to include everything in the scope of research. Therefore, theories are usually partial explanations of the field of study. The implementation of the economical and integrity postulate is very problematic and is therefore only used with several limitations as requirements of a theory.⁴⁸³

The *independency postulate* is closely tied to the economical postulate, more specifically in a situation when a theory uses more than one axiom. It stipulates that if a theory has more than one axiom, they have to be independent from each other with regards to their content. This postulate has been instituted for two reasons, firstly the theory should not be completely one-sided and secondly if one of the axioms is taken away the validity of the whole theory could be jeopardized.⁴⁸⁴

The *universality postulate* is another postulate that is difficult to transfer into practice one to one. According to this postulate the constructed theory should include the widest possible number of examples in the field of study. The lower the number of exceptions, and the higher the number of examples that confirm the theory, the more chances it will lead to a higher universality of the theory and higher compliance with this postulate.⁴⁸⁵

Following the universality postulate, is the *accuracy and assertiveness postulate*, which demands as many details as possible about the consequences of actions that a theory provides. According to this postulate, it is of vital importance to describe what the result of certain actions will be with the highest possible level of detail. This postulate along with the universality postulate constitutes the information content of theories. The complete comprehension of these two postulates would represent a perfect theory, which means that there would be no need for further explanation of the occurrences within the researched phenomena. This is almost impossible to achieve and therefore the higher the universality and accuracy and assertiveness of the theory the better are the chances for higher acceptance of the theory.⁴⁸⁶

⁴⁸³ Cf. Schanz (1988), p. 31.

⁴⁸⁴ Cf. Schanz (1988), p. 31.

⁴⁸⁵ Cf. Schlick/Mulder, p. 86 ff.

⁴⁸⁶ Cf. Clark et al. (1991), p. 125f.

The postulate of a small logical margin requires that the developed theory rejects the highest possible number of examples. It is the task of this postulate to determine what number of possible examples can be eliminated through the statements brought forward by the developed theory.⁴⁸⁷

In reference to Popper, the falsifiability postulate is also one of the quality criteria regarding theory construction. The falsifiability of statements within a theory stipulates that the constructs and variables within these statements have to be operationalized and the type of the relationship clearly specified. It is because of this reason that the falsification of a theory does not have to prove the theory, but rather has to achieve consensus among the members of the specific scientific community concerned with the research field.⁴⁸⁸

Law-dutiful postulate sets the prerequisite that a theory should include in deterministically deduced statements. The “then” component of the statements should be included every time the “when” component is applied.

The elements described above are the integral part of any model or theoretical construct and the methods and rules which they postulate will be included into the model construction in the second chapter of the third part. After defining these basic elements the focus will now turn to the basic premises for the model construction.

III.1.2 Basic premises for model and theory construction in management sciences

Now that the basic understanding and definitions regarding model and theory have been established, attention will turn to model construction. More specifically, the objective of this sub-chapter will be to create the premises, steps, and methodological building blocks. The defined approach in this sub-chapter will be followed in the second chapter of the third part, where the content and core of the market niche model framework will be constructed.

Most models and theories that one encounters through the study or research process are not vast superordinate intellectual concepts. The majority of theories

⁴⁸⁷ Cf. Keita (1992), p. 112.

⁴⁸⁸ To avoid any misunderstanding, the falsifiability postulate is not to be understood in the same line as falsification of a hypothesis. A demand for falsification of theories would be pointless as it would imply that a refuted theory is a good theory. Cf. Popper (2002), p. 68ff.

are specific systems of statements focused on a scientific field of research. Therefore the basic premises for model and theory building in business sciences will be examined and build in the model construction of this thesis.

(1) Premises for model and theory building in business sciences

The premises for model and theory building are not exact rules by which theory building is conducted but rather a decision on “the way to go”. After inspecting the various possibilities that these premises allow, a decision will be made on what premises this thesis will follow based on the objectives of the thesis.

Model and theory building in business sciences is based on two basic premises, which are interrelated and built on one another. These premises then lead to two different possibilities of derivation. The first question answered will be what is the basis of these two premises and how they are related. The second question will answer which are the two forms of theory derivation and which are the sub-forms and how they achieve theory derivation.

The first premise of model and theory building sets the assumption that the complex world is somehow classified. This means that there are various regularities, recurring relationships between different variables, patterns and analogies that can be found in actual phenomena. These events are caused by the complexities of the multiple causalities found in the real world. If the assumptions above would not hold true, then all superordinate statements would be rendered useless as there would be no relationships and connections between events in the real world.⁴⁸⁹

The second premise builds on the key assumption of the first premise. It states that it is possible to approximate real phenomena with the use of coherent logical arguments. However, the premise does not imply that the behavior that causes this phenomenon has to be rational, instead there only has to be the potential to intellectually comprehend this phenomenon. Whereby, according to the two basic premises described above, model and theory building substantiates itself to a core objective of identification of regularities in reality.⁴⁹⁰

Following these premises, one can now make two additional distinctions based on the method of derivation of theory construction; the first one is *theoreti-*

⁴⁸⁹ This premise is based on theory building concerned with actual phenomena. Cf. Wolf (2008), p. 34.

⁴⁹⁰ Cf. Wolf (2008), p. 34.

cally-intellectual oriented and the second one *empirically* oriented. The mutual aspect of all theoretically-intellectual methods of theory derivation is the fact that there is no direct contact with the field of research. This is based on the presumption that the hypothesis constructed on the foundation of the perception of the senses can be flawed and ambiguous. Therefore, theories and hypotheses have to be developed on the basis of logical conclusions. There are three different theoretically-intellectual methods, which can be distinctively separated from each other:⁴⁹¹

- *Deduction from superordinate theories*. The first method is the deduction from superordinate theories which draws on general theories and applies them to the specific field of research in the form of analogies. The objective is to identify parts of the research field in the superordinate theories and then try to specify the statements of the superordinate theory and apply them to the research field.
- Following superordinate theories is the *unproven speculation*, where the objective is to find new relationships between things and find out what the interplay is between these two objects of analysis.⁴⁹²
- The final theoretically-intellectual oriented method is the *assembly of individual references*. This method uses the existing literature to find partial statements from which new theory can be developed.⁴⁹³

After going through the theoretically-intellectual methods, the focus will turn to the empirically oriented methods, which are the opposite of the theoretically-intellectual methods. Empirically oriented methods can be summarized as the methods that seek to replicate reality. This is done with the process of induction, where facts are generalized and summarized in a theory. There are two distinct ways in which empirical research can be conducted:⁴⁹⁴

- the first one is by *doing empirical research*, and the second one by maintaining constant *contact with practice*. Theory building through empirical research is conducted through a sample of researched data from which a correlation between the data and the researched phenomena can be observed and generalized. This is usually done with carefully constructed hypotheses (see

⁴⁹¹ Cf. Lakatos et al. (1980), p. 106f; Hardy (1992), p. 241ff.

⁴⁹² It does not necessarily have to be a new type of relationship; one can also focus on the viewpoint of potential relationships that have been neglected thus far.

⁴⁹³ This method can have both a theoretical and an empirical foundation.

⁴⁹⁴ Cf. Kumar (2008), p. 8; Creswell (2006), p. 5f; Ghauri/Grønhaug (2005), p. 14ff; Ethridge (2004), p. 20f.

section III.1.1. Basic theoretical concepts and definitions, in the part which describes scientific hypothesis construction).

- Direct contact with practice or the field of research is done with a structured observation of reality and hereby looks for obvious relational patterns.

The theoretically-intellectual approach will be used for the purpose of this thesis as the theory building will be done by using the deductive approach. The applied method of theory building will therefore be the deduction from superordinate theories as they will build the basis for the niche theory. Empirical observations will only be included on the basis of previous research done in the field of strategic niche management. After deciding on the applied method to theory construction, the next step will be to determine the exact process or steps by which the theory will be constructed for theory building in business sciences.

(2) Steps in model and theory building in management sciences

There are two basic possibilities by which model and theory construction can be observed: the content and process standpoint. This section will analyze both of these steps and highlight its basic characteristics.

When analyzing models and theories from a content standpoint, one can determine five different steps on which they can be differentiated. These steps are on different levels of the complexity of the model and theory building, ranging from simple to very complex (see figure III-6).⁴⁹⁵

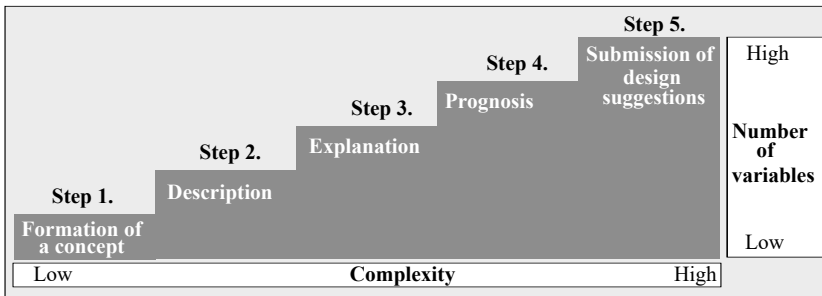


Figure III-6: Steps in theory building from a content standpoint
(Source: own interpretation after Wolf (2008), p. 8)

⁴⁹⁵ It is also interesting that theories differ between American and European researchers. Whereas in the USA theories tend to be relatively compact with few constructs or variables, theories developed by European researchers tend to be comprehensive with many constructs and variables. Cf. Geddes (2003), p. 43ff.

The main characteristics of these five steps are:⁴⁹⁶

- The first step of theory building is the *formation of a concept*. This is based on the development of a system for a concept, which is clear and comprehensively covers the field of research. The identification of concepts is usually done with the identification of the characteristics which constitute the concept. The end result of a clearly defined concept is a detailed representation of the core of the researched phenomena or circumstances. The objective of theory building that focuses on the formation of concepts in the scope of scientific research, is the identification of founded coherent statements.
- Following the concept formation is the second step in theory building, namely the *description*. According to the understanding of description, the main purpose of scientific research is in the presentation of the situation or development of the clearly identified concepts that characterize the scientific phenomena. This presentation does not necessarily have to have a static nature, it can also show, how the observed phenomena changed over time. A descriptive theory building is especially useful with state-of-the-art scientific phenomena, because it is unclear in the early stages when the phenomena is introduced; If it should receive a high level of attention or not. Similarly to the concept formation, the description is also a low theory building level, because it does not create sustainable “when-then” statements.
- The next step which bridges this gap between is the *explanation*. One of the main difference between explanation and the previous two steps is in the fact, that explanation does not merely record the formation, changes and simultaneous development of variables. Explanation also looks for reasons for this occurrences with variables and defines the relationships between the examined dimensions. Theory building done by explanation is interesting only if the reason for the change or interrelation can be determined, everything else could be classified under statistical coincidence. One of the key characteristics of the explanatory theory building is that it looks for explanations or reasons for things that have happened or are currently happening.
- *Prognosis* is the fourth step in theory building. As one can already gather from the word, prognosis is aimed at the future. The main question is which

⁴⁹⁶ Cf. Wolf (2008), p. 8ff; Graumann (2004), p. 210f; Miles/Huberman (2006), 28f; Denzin (2005), p. 447f; Huber (1995), p. 79; Christensen/Raynor (2007), p. 12f; McInerney (2004), p. 92f.

developments are conceivable or probable. Prognostic statements are deducted on the basis of explanatory statements; this makes prognostic statements well founded.⁴⁹⁷ These statements can be divided into two different ways by which they are deducted. Firstly, there is a clear understanding of how and why a certain parameter is affected by the shape of another parameter that happens before the parameter in question. Following this is the presumption that the relationship between the parameters in the future will remain the same and that the change in the parameter that sets into effect first, will have a certain influence on the prognosticating parameter. Secondly, the prognosis is based on the future shape of the parameter, which is based on the past developments of the parameter itself. Similarly to the first type the assumption is met, that if something had validity in the past it will also possess the same validity in the future. The difference between the two ways of deduction is that the first one is based on interrelation and the second one on trends. Prognostic theory building has a passive descriptive nature because it does not give any information on what can or should be done, so that the topic of research will change in one way or the other. It simply states why the topic of research will probably change in the future.

- The final step in theory building is the *submission of design suggestions*. The aim of this step is to provide solutions for problems in the selected field of research. As with all four previous steps, the fifth step also represents substantiated forms of statements, with the difference that the statements designed with this approach are not descriptive but have a rather prescriptive nature of statements. The design suggestions do not offer any universally valid suggestions and they rather clarify which measures are appropriate with certain objectives and which frameworks are suitable. This step has been very controversial in the scientific community for a very long time, as the preference has been to produce descriptive, explanatory and prognostic statements in theory building instead of design suggestions.

⁴⁹⁷ If a prognosis would ignore this prior step of explanation and thereby neglect the reasons and causes, then the statement could no longer be considered a prognosis but rather a prophecy.

Besides the content standpoint, model and theory also have to be conceptualized from a process standpoint, which includes the various necessary properties for theory development. These steps are made of four key elements or questions, which define a model or a theory:⁴⁹⁸

- *What.* This element deals with the question of which factors should be included in the scope of the research, on the object of interest. The two limitations set are comprehensiveness and economical use of factors. Comprehensiveness is concerned with the inclusion of all factors which are relevant. Economical use on the other hand oversees if all included factors are really relevant for the scope of research and if some factors can be omitted as they are not of key importance for the research.
- *How.* Deals with the relationships between the identified factors and brings order to the conceptualization. These relationships are usually defined within the scope of the necessary cause and effect relationships between these factors.
- *Why.* The “why” explains the main reason for the research on a specific topic or event by substantiating the main assumptions of a theory. It is the coherence of the argumentation as to why the research is conducted, that is the main pillar behind the meaningfulness of the proposed conceptualization.
- *Who, where, and when.* These three prerequisites provide limitations on the scope and reach of a theory. These factors which determine the context, place and time, draw the boundaries for the generalizability and thereby constitute the range of a model or theory.

These four elements are closely related and complement each other in the process of theory creation. The what (definitions) and the how (relationships), build the subject of the model or theory together, which serves as a framework for the interpretation of patterns or discrepancies. With the addition of the why element, a simple theory is created. What and how are descriptive elements and why on the other hand is an explanatory element; together these three elements descriptive and explanatory constitute a simple model or theory.⁴⁹⁹

⁴⁹⁸ Cf. Whetten (1989), p. 490ff; Wacker (2008), p. 7.

⁴⁹⁹ Cf. Whetten (1989), p. 491.

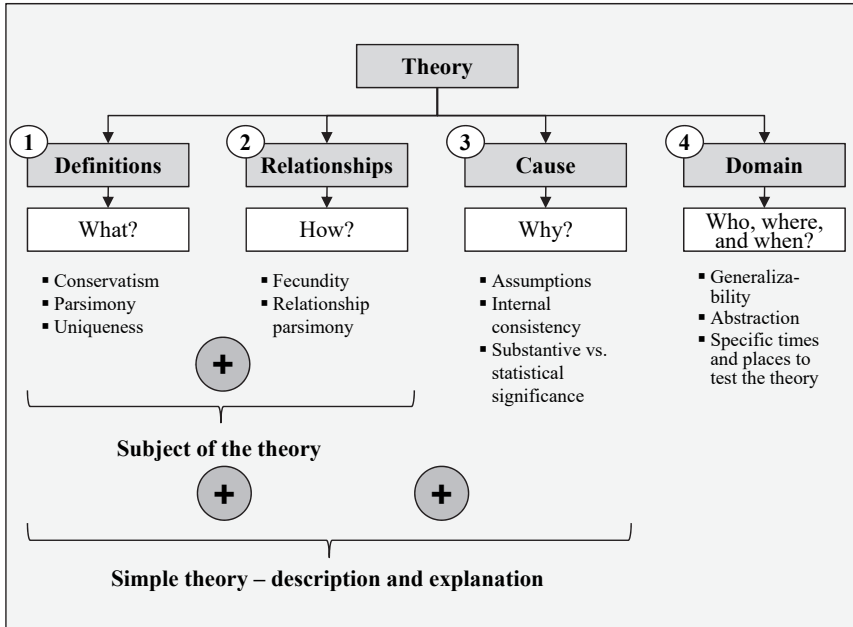


Figure III-7: Guidelines of a theory
 (Source: own interpretation on the basis of Wacker (2008), p. 13)

There are many model definitions and it is therefore of vital importance that the required steps for theory development are precisely defined and followed in order to create a “good” model as framework for theory construction. These guidelines defined in this point will help with the fulfillment of the theoretical requirements to build a soundly founded model.⁵⁰⁰

(3) Conceptual framework for model and theory building in management sciences

The final point in of the basic premises for model and theory construction will explain the definition and role of the conceptual framework, how it is set up and applied in scientific research.

Model and theory building faces many challenges among which one of the most important ones is, when one is confronted with the analysis of the research

⁵⁰⁰ Cf. Wacker (2008), p. 8.

question, which is more often than not multilayered, diverse and can have multiple interpretations. These features produce a complex network of cause-and-effect. Conceptual framework plays a vital role in the systematization, ordering and understanding of the field of research and its cause-and-effect characteristics. The conceptual framework is a graphic presentation or configuration of several theoretical constructs or variables or the statements that describe them. Additionally, it shows which relationships exist between these constructs, whereby it is important to point out that a conceptual framework does not explain the nature of the relationship itself, it only states that such a relationship exists.⁵⁰¹

After defining the conceptual framework, the focus will turn to its setup. The framework in business sciences usually consists of three parts: design variables, context variables and success variables. The main characteristics and contents of these parts will be explained in the following. The design variables are the constructs, variables and indicators which represent the field of research. Context variables are the variables which influence the field of research directly or have to be taken into account when discussing the design variables.⁵⁰² Lastly, the success variables are process and output related performance indicators. The formation of the success variables is largely dependent on the formation of the design variables and the interaction between the context and design variables. The inclusion of the success variables in the conceptual framework is significant because if they were to be omitted from the research project the descriptive instances or unproven speculation would dominate.⁵⁰³

After defining the basic premises upon which the market niche model will be build upon, the focus will turn to the role of the model and theory in management sciences in the next sub chapter.

⁵⁰¹ Cf. Kaplan (1998), p. 59.

⁵⁰² During the course of the research process it is not always easy to draw a clear line between design and context variables. To separate these two categories of variables one must ask the question, how the variable impacts the field of research. If the impact is significant then it is a design variable, if it is only partial, then it can be attributed to the context variables.

⁵⁰³ Cf. Wolf (2008), p. 37; Kirsch et al. (2007), p. 22f.

III.1.3 Model and theory in management sciences

After defining and assessing the basic theoretical concepts and setting the premises for the construction of a market niche model in strategic management, chapter III.1.3 will deal with the main critique points and drawbacks of model and theory construction in management sciences. As it was already pointed out several times in this thesis, there are a lot of misconceptions about models and theory or more specifically models and theory in management sciences. Therefore, this sub-chapter's focus will be to expose the most vital misconceptions in order to avoid them in the market niche model construction.

In order to achieve these objectives the scientific goals and approach in management sciences will be addressed in the following point.

(1) The scientific goals and approach in management sciences

The scientific objectives and approaches in management sciences differ greatly based on the type of research done or its purpose. Therefore before the focus can shift completely to the goals of business sciences, there first has to be a clarification if business sciences should be treated as part of the fundamental or pure sciences or as part of applied sciences.⁵⁰⁴

The perception of the majority is that business science is part of the applied science, meaning that its main objective is to provide solutions for problems in practice. Although this may be the predominant view, it did not remain without objections from the proponents of business science as pure science. Part of the problem stems from the different understanding of business sciences. Applied science sees the role of business science in providing support for decision making to the practice and orients itself on the strategy, trends and guidelines of the economy. On the other hand, formal science sees the role of business science in the ability to comprehend and explain the phenomena that occur in business sciences.⁵⁰⁵ This thesis will take the corner of the applied science as the research topic comes from

⁵⁰⁴ The objective of fundamental or pure science is the acquisition of knowledge and is used for the exact development of scientific theories. The research is done without regard for practical application. Applied science on the other hand has the practical application of knowledge at its core. It is viewed as the application of knowledge from one or more natural scientific fields to solve practical problems. Cf Raffée (1993), p. 15.

⁵⁰⁵ Cf. Raffée (1993), p. 65.

practice and the developed theory will provide help for companies in implementing a niche strategy.

After defining the type of scientific approach the next point will deal with the issues and assessment which is critical for model and theory construction in management sciences.

(2) Issues and critical assessment of model and theory in management sciences

The final point of theory in business science will deal with its shortcomings, the reasons and implications of these shortcomings and ways with which they are dealt with in the process of business science theory building.

To understand the main criticism of theory in business sciences or looking more broadly in social sciences, one has to revert back to the definition of science. Science is the use of controlled methods to discover and understand how physical reality works.⁵⁰⁶ Although this definition is clear and simple, it only works well for natural sciences. On the other hand, social sciences are often characterized as immature partially due to the shorter history of existence and partially due to the nature of the scientific phenomena they investigate.⁵⁰⁷ From the viewpoint of natural science, all social sciences have justification deficiencies. These deficiencies can be traced back to a series of methodological problems of social sciences, which are hard to solve regardless of the progress made in scientific research methods. These problems are divided into three interrelated groups:⁵⁰⁸

- *The measurement or validity problem.* The measurement or validity problem mainly concerns itself with the question of validity of research in social sciences. It puts the validity of empirical research in social science into question, in the sense that social science phenomena are not capable of measuring, what it promises. This is evident when applying operational criteria, which measures change or progress in the company because the researcher is confined to the available organizational criteria, which may or may not measure what the researcher had in mind.
- *The problem of explanation.* This is mainly the consequence of the contradictory role of the universality postulate and the accuracy and assertiveness postulate. These two postulates build the information value of a theory. Although

⁵⁰⁶ Cf. Hardy (1992), p. 4et seq.

⁵⁰⁷ Cf. Smith (1998), p. 27f.

⁵⁰⁸ Cf. Kirsch et al. (2007), p. 22f.

this is very difficult to achieve in practice since theory on the one hand is supposed to be universally valid and at the same time be very rich in content. This presents the problem, where it is difficult to maintain a balance between universality and the scope of empirical content. In most cases, social science theories are either universal statements, which are scarce in content or detailed and specific statements, which cannot be generalized.

- *The problem of values.* This deficit is mirrored in the fact that each researcher has their existing system of values and norms. These values and norms are a major influence on the angle from which the research subject is going to be considered. Therefore, the work of the researcher will reflect this valuation as a result of the subjective view in the field of research because of the affiliation with a certain school of thought or paradigm.

This concludes an analysis of the shortcomings of the model building and theory in management sciences and also the first chapter of the first part. This completes the theoretical framework, which is necessary for the market niche model construction. The defined theoretical conceptions will be applied in the market niche model and together with the necessary steps for model construction will form a comprehensive framework. In the second chapter, which represents the core of the thesis, a market niche model will be constructed along with the implications the model has for the construction of a strategic market niche management theory.

III.2 Market niche model in strategic management

After determining the steps and requirements for model building, the last chapter of the third part will focus on the core of this thesis – the creation of the market niche model for strategic management. For this purpose, the following chapter will be divided into three sub chapters: *III.2.1 Descriptive and explanatory elements of the market niche model*, *III.2.2 Limitations and reach of the market niche model*, and *III.2.3 Implications of the market niche model*.

“Economic theory has suffered in the past from a failure to state clearly its assumptions. Economists in building up a theory have often omitted to examine the foundations on which it was erected. This examination is, however, essential not only to prevent the misunderstanding and needless controversy which arise from a lack of knowledge of the assumptions on which a theory is based, but also because of the extreme importance for economics of good

judgment in choosing between rival sets of assumptions.” (R. H. Coase (1937), p. 386)

This citation from Coase (1937) best describes the work done so far in the thesis. The first part has contributed to the clarification of the foundations of niche research and to clear any potential misunderstandings. The second part provided a sound methodological framework upon which the model can be based so that the assumptions which will be developed will have a good theoretical background. Activities such as abstracting, generalizing, relating, selecting, explaining, synthesizing and idealizing, were performed to give the clearest possible picture of the task at hand, before moving on to the actual process of model construction.⁵⁰⁹ Part of the reason why such diligent work was invested into the foundations and methodological conception lies in the lack of consensus on what a model or theory actually is.⁵¹⁰

Based on the insight gained on the process of model and theory construction in the first chapter of the third part, the following characteristics of the model and theory building will conceptualize the market niche model:

- Paradigm: the construction of the market niche model will employ the *dynamic capabilities* paradigm as the conceptual framework.
- Hypothesis: will be formulated in simple understandable terms, conceptually clear and will be derived with the use of *deductive* reasoning.
- Model: the model construction will apply the theoretically intellectual orientation, with the use of *deduction* from *superordinate theories and models*. From the content standpoint, the model will have a medium level of complexity and variables, using the method of *explanation*. Additionally, it will try to conform to the eight theory postulates to the largest possible extent.

⁵⁰⁹ Cf. Weick (1995), p. 389.

⁵¹⁰ Cf. Sutton/Staw (1995), p. 371f.

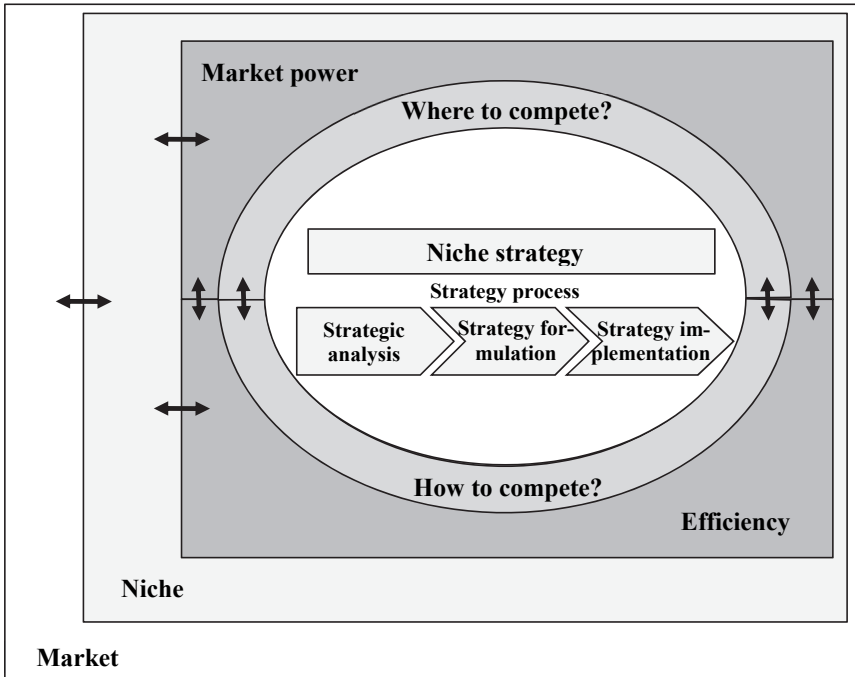


Figure III-8: Conceptual framework of the niche theory.

(Source: own interpretation)

Based on the characteristics described above, the market niche model will be constructed within the scope of the following conceptual framework (see figure III-8):

- Design variables: strategic management with its objectives, objects and structures presents the main design variable. Additionally, the dynamic capabilities are added as a framework upon which the model will be built. The objectives of strategic management determine the market position of a company and its resource configuration. The objects are used for the realization of the objectives, with the coordination of strategies, processes, and systems, in a way which is aligned with the company objectives. The strategy process then determines how these objectives and activities are realized. Dynamic capabilities provide an integrative perspective between the MBV and RBV and provide the action dimension to the static MBV and RBV.

- Context variables: the niche and niche strategy is at the center of attention of this research. The niche presents a specific market constellation within strategic management. The niche strategy is aimed at protecting the company against scale of other competitors, by determining where to compete, and focusing on satisfying unfulfilled demand, better satisfying existing demand or creating new demand altogether in determining how to compete in the market.
- Success variables: are the creation of competitive advantage, efficiency and market power. Competitive advantage is at the center of strategic management and is the focus of every company competing in the market. This competitive advantage is achieved as the interplay of the market - (market power) and resource-based (efficiency) capabilities of a company in a dynamic environmental setting. The fit between design and context variables, enables the creation of a competitive advantage for companies active in a niche. This competitive advantage is achieved through the execution of a niche strategy, by enabling higher efficiency and market power in the selected niche of a company.

The conceptual characteristics and framework will enable the rest of the chapter to develop a systematic handling of the research objectives. They will provide the baseline for the operationalization and comprehension of the constructs defined in the characteristics and framework.⁵¹¹ The following sub-chapters will provide the content part to the developed framework, by firstly defining the descriptive and explanatory elements of the market niche model.

III.2.1 Descriptive and explanatory elements of the market niche model

The objective of this sub-chapter is to state the definitions, relationships and cause of the niche model. Answering the what and how questions will provide the subject of the model. Answering the why question, together with the subject of the model will outline the simple model, which will consist of the description and explanation. To achieve these objectives the sub-chapter will be structured in three points: (1) *Main definitions of the niche model*, (2) *Relationships between elements*, and (3) *Cause*.

⁵¹¹ Cf. Wolf (2008), p. 41.

(1) Main definitions of the niche model

Main definitions of the niche theory will answer the what question, which refers to the definition of the factors, which are relevant for the research topic. This point is especially important as it sets the groundwork for the rest of the model. The main concepts have to be precisely and clearly defined in order to assure the conceptual consistency of the model.⁵¹²

The first definition will define the academic field of strategic management in which the niche theory will be constructed. Strategic management, as already defined in sub-chapter I.2.1 are all key decisions on a current and planned initiative, which the managers of a company undertake on the owner's behalf. These decisions determine the ways in which the resources of a company are utilized in order to increase the performance of a company in regards to their external environments.⁵¹³ Based on this definition one can conclude that strategic management represents a superordinate perspective on decision making about the general development of the company, which will ensure the long term success of the company. This process includes both the internal and external company perspective.⁵¹⁴

Following the definition of the academic discipline is the definition of the paradigm upon which the model will be based. Similarly to the definition of strategic management, the definition of dynamic capabilities will be based on the understanding defined in sub-chapter II.1.2. This definition states that dynamic capabilities are the unique capability of a company to integrate, build, and reconfigure its external and internal competences. This change is the response to the changing conditions in the company's environment. Thereby dynamic capabilities are the company's ability to achieve new and innovative forms of competitive advantage, which are limited by past decisions (which may or may not be relevant anymore) and market position.⁵¹⁵

The niche is the main object of observation in this thesis. It is understood as a specialized market constellation that protects against scale, by satisfying unfulfilled demand, better satisfying existing demand or creating new demand altogether. This definition is partly based on the research done on the niche by Danner (2002) and own research on the niche subject.

⁵¹² Cf. Wacker (2008), p. 8.

⁵¹³ Cf. Rajiv Nag (2007), p. 944.

⁵¹⁴ Cf. Hungenberg (2000), p. 4ff.

⁵¹⁵ Cf. Teece et al. (1997), p. 516.

Based on this definition of the niche, the definition of a niche strategy was developed. Whereby the niche strategy represents a competitive strategy that determines where the company will compete and how it will utilize its resources, processes, and network relationships in order to achieve a competitive advantage in its niche.

These definitions present the basic framework of the model; however, additional definitions are required to place the niche theory in a competitive context. Therefore, three competition based definitions and three strategy level definitions will be provided. The competition based definitions are competitive advantage, market power and efficiency. The strategy level definitions are the market, corporate strategy and the business level strategy.

The understanding of competitive advantage will be based on Porter (2004), where:

“Competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm’s cost of creating it. Value is what buyers are willing to pay, and superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits than more than offset a higher price.” (Porter (2004), p. 3)

Or more simply put, competitive advantage is a firm specific advantage, which a company develops in comparison to its competitors. This competitive advantage is then achieved with the successful implementation of the company’s competitive strategy.⁵¹⁶

In economic terms, market power is defined as power over price, meaning the ability of a company to maintain prices above competitive levels over a significant period of time. Market power determines the extent to which a company is able to influence the price of a product or service, by using its control over its demand or supply, or both.⁵¹⁷

Efficiency is defined through the amount of output which is gained from a given input and is represented through a ratio of inputs and outputs. Efficiency refers to the internal view of the company and describes the internal functioning of the organization.⁵¹⁸ Inputs usually represent the tangible and intangible resources

⁵¹⁶ Cf. O'Donnell et al. (2002), p. 205; Walley/Des Thwaites (1996), p. 163.

⁵¹⁷ Cf. Boulding/Staelin (1990), p. 1160; Glick/Campbell (2007), p. 231; Zhiqi Chen 2008, p. 242.

⁵¹⁸ Cf. Davis/Peri (2002), p. 87f.

of a company, which enable the efficient production of the product or service which has value in the market.⁵¹⁹

A precise definition of a market is very difficult to achieve because markets are complex multidimensional arenas of competition, which entail a number of different categories, segments and niches. Therefore, it is very difficult to clearly map out or border a market, as it is subject to constant change. As these borders and barriers are constantly changing, they create new opportunities and threats for new market positioning.⁵²⁰ As one can gather from the outset of this problem, there is no clear market definition because there are always different viewpoints:

“Market - (1) An aggregate composed of a prospective buyer (or buyers), and seller (or sellers) that brings to focus the conditions and forces which determine prices. (2) The aggregate demand of the potential buyers of a commodity or service. (3) The place in which buyers and sellers function.” (Brand (1948), p. 209)

The definition of the market should be thus based on the context upon which it will be used. Therefore, for the purpose of this thesis a market will be defined by two factors; competition and demand. The competition side includes all companies which produce products which are important substitutes (product market) and the geographical market, that determines which geographical areas can this product be potentially sold in.⁵²¹ The demand side is represented by the elements related to the consumers needs and demands, which is represented by all potential buyers of the product or service.⁵²² After defining the main components of a market, it can be defined as the sum of all products, which are relative substitutes and satisfy a certain existing consumer demand for which potential customers are prepared to pay.

The niche strategy will also be distinct on a corporate and business unit level. A corporate level strategy determines the purpose and markets in which the company will be compete, and how its business unit will be managed. Corporate level strategy provides the answer to the question where the company will compete and

⁵¹⁹ Cf. Hunt/Duhan (2002), p. 100.

⁵²⁰ Cf. Day (1981), p. 298.

⁵²¹ The majority of research done on product and geographical markets is concluded usually within the scope of antitrust commissions, whose main purpose is to determine the extent of a company's power over price and output or its power to exclude markets. Cf. Hosken/Taylor (2004), p. 465; Harris/Jorde (1984), p. 4.

⁵²² Cf. Sissors (1966), p. 21.

it sets the course, objectives and means the company will apply to achieve its envisioned future position in the planned time frame.⁵²³ On the other hand, the business level strategy deals with the objective to put the company in the position to achieve its corporate strategy. The business level strategy answers the question of how to compete. It is concerned with the achievement of its market objectives, by defining the product or service and technology, which will be offered to its target consumers in order to achieve a competitive advantage in the market.⁵²⁴ If a company does not possess more than one business unit, the objectives of corporate strategy also become the objectives of the business unit, while still maintaining the difference that the corporate strategy determines where the company competes, and the business level strategy, how it competes.

After defining the main definitions, which concern the building of a niche model, the focus of the next point will be on the relationships between these defined elements.

(2) Relationships between elements

The relationships between the defined objects represent one of the key elements, which point out the nature and causality of these relationships. As already outlined in the conceptual framework (see figure III-8), which graphically outlines these relationships, their nature will be detailed in the following.

At the core is the strategy process which determines implications and outcomes of the niche strategy. The creation of a niche strategy is the result of the strategy process of strategic analysis, formulation and implementation. Strategy analysis first deals with the internal and external analysis of the company's environment. On the basis of the initial assessment of the internal and external environment, strategies are developed, evaluated and a decision is made on an appropriate strategy. After the determination and decision on the appropriate strategy is made, the strategy is implemented and its success evaluated.⁵²⁵ The foundations of the relationship between the niche strategy and the strategy process are mainly established in the first two process steps; strategic analysis and formulation. The analysis of the internal and external environment determines the fit between company capa-

⁵²³ Cf. Hinterhuber (1984), p. 132.

⁵²⁴ Cf. Steinle (2005), p. 305.

⁵²⁵ Cf. Hungenberg (2000), p. 9.

bilities and the shape of its external environment which leads to the strategy creation. This fit has to identify the relevant characteristics or conditions in order for the niche strategy to be a viable option. These characteristics mainly refer to the heterogeneous market structure, which leads to partly or unsatisfied demand and the internal competences of a company which enable the satisfaction of this demand.

This developed niche strategy of the company determines where and how the company will compete on two different levels: the corporate level and business level strategy. Corporate strategy determines the intention and the markets in which the company will compete and how it will manage its business units.⁵²⁶ Hence, the result of the niche strategy at the corporate level is market power. This market power is not manifested as overall market power but rather as market power in a specific market segment, which lies in the nature of the niche. The realization of market power in a niche is crucial because it shields the company from its competitors in the mass market. The duration of market power is dependent upon how long the company is able to maintain its competitive advantage. The basis of the competitive advantage lies in the nature of the business level strategy, which determines how the company will compete. This becomes clear with the objective of the business level strategy, which is to be amongst the leading competitors in the market segment, in which the company is active.⁵²⁷ How the company achieves its competitive advantage is the task of the company's internal resource configuration and competences, which lead to a higher efficiency. The unique constellation of this efficiency in the sense as understood by the RBV,⁵²⁸ will determine, the level of difficulty for other competitors to copy the resource constellations and competences. These corporate and business level niche strategies complement each other in the sense that the corporate level strategy will determine in which market niches the company can achieve its corporate advantage and the business level strategy determines the source and duration of this competitive advantage.

The final relationship, which will be enlightened, is the relationship between the niche and the market. Before focusing on this relationship, it is important to clarify the difference between a niche and a market segment. The main difference

⁵²⁶ Cf. Steinle (2005), p. 304.

⁵²⁷ Cf. Steinle (2005), p. 305; Hinterhuber (1984), p. 76.

⁵²⁸ Meaning that the company's unique resources have to possess a certain value, are rare so that not all competitors can have access to them, are perfectly imitable, and there are few or no equivalent substitutes. Cf. Barney (1991), p. 106.

is that a market segment is defined more broadly than the niche. Where market segmentation is the process of breaking up a large market into smaller pieces, the niche only applies to a specific part of a market segment. The other difference is that the niche fulfills a specific need, whereas a market segment only points out a part of the market, which can be managed.⁵²⁹ Similarly to the relationship between market power and efficiency, the relationship between the market and the niche can be viewed from two perspectives; top-down and bottom-up. The success of a strategy in large part depends on the correct definition of a market, which is in many cases not an easy task. The top-down perspective can be viewed as:

“(…) a view of markets as arenas of profitable competition where the corporate resources can be used to achieve a differential advantage. These resources are usually supply factors: such as raw materials, production processes, and technologies, plus the base of experience gained in serving the present market.” (Day (1981), p. 285)

And the bottom-up perspective as:

“(…) positioning the company's offering and choosing target customer segments whose distinct patterns of needs dictate separate marketing programmes. The objectives of both segmentation and positioning are the same: to seek competitive advantage through doing a better job of satisfying customer requirements.” (Day (1981), p. 286)

This would mean that markets are the places where competition takes place and the company's resources are profitably employed. In the case of this thesis the focus would be placed on the niche market from the top-down perspective. A market niche in which a company operates is occupied by customers, who have special requirements and needs regarding the products they purchase. This bottom-up approach sees the market as a changing pattern of consumer requirements and needs, which have different ways in which they can be met.⁵³⁰ The top-down and bottom-up market definitions are complimentary as well; the top-down approach determines which cost advantages, competitor's weaknesses and new technologies can be exploited in the market niche and the bottom-up approach deals with the identification of unsatisfied consumer needs, changes in consumer needs and requirements and capabilities in the market niche.

⁵²⁹ Cf. Dalgic/Leeuw (1994), p. 41f.

⁵³⁰ Cf. Day (1981), p. 288.

The definition and relationships together provide the domain or the subject of the niche model. As one can gather from the relationships and definitions, the subject of the model is centered on the niche as a management system in the internal and external environment of a company. This management system focuses on the niche strategy as a specialized market constellation, in which the company outcompetes all other competitors in the market, with the coordinated effort of the internal and external competences of the company. The reasons for the main assumptions of the subject of the niche model will be the main focus of the following point.

(3) Cause

The cause or the why question will explain the reason and significance of the research subject with the creation of assumptions. The combination of cause together with the definitions and relationships provides the basis from which the basic propositions of the model can be tested. The definitions and relationships provide the description of the research objective and the cause provides the explanation.⁵³¹ This explanation will be done through the construction of a hypothesis, these will primarily be basic hypotheses, which explain the basic background of the niche phenomena with a more complex hypothesis coming in sub-chapter III.2.2.

H1: Heterogeneity of demand, industry consolidation and new technologies contribute to the creation of new market niches.

The underlying reason for the heterogeneity of demand, industry consolidation, and new technologies that lead to the creation of new niches is industry maturation.⁵³² As a result of industry maturity companies new market opportunities were becoming exhausted, which led to market consolidation, as companies were looking to increase their profits.⁵³³ Another reason for the emergence of distinct market niches is the result of the different forms of heterogeneity of consumer preferences. These are the results of different consumer groups, which are heterogeneous in the benefits they seek from the product or services offered by the companies in the market.⁵³⁴ The last factor which contributes to the creation of new market niches is technological development. The changed consumer preferences and heterogeneity

⁵³¹ Cf. Whetten (1989), p. 491.

⁵³² Cf. Agarwal/Audretsch (2001), p. 24f; Audretsch/Woolf (1986), p.46f.

⁵³³ Cf. Deans et al. (2003), p. 2f; Kröger et al. (2006), 7f.

⁵³⁴ Cf. Malerba et al. (2007a), p. 375; Allenby et al. (1998), p. 384.

have influenced the rate of innovation of companies. This has reduced the R&D cycles and increased the availability of products with different characteristics.⁵³⁵

H2: The market niche is a specialized market constellation that protects against scale.

This is the primary and the most basic proposition of the niche strategy. This understanding is partly consistent with the ecological understanding of the niche, where the niche represents an n-dimensional hyperspace in which a species can survive and out-compete all other species.⁵³⁶ In most industries today, economies of scale provide a competitive advantage.⁵³⁷ The build-up scale advantages leads to the rise of a selected number of large competitors which dominate the industry through the creation of market power.⁵³⁸ This market power enables the market leaders which have economies of scale to earn higher profits, without the fear of an entry of new competitors.⁵³⁹ The niche as a specialized market constellation places the focus on avoiding this mainstream competition, by finding new ways of overcoming resource deficiencies and scale barriers.⁵⁴⁰ The objective of the company is to employ a niche strategy, which will enable it to be more successful in these market niches than any of its competitors, thereby ensuring the company protection against the scale advantages of larger mainstream competitors.

This realization leads to two additional basic hypotheses, which complement the first hypothesis in gaining a comprehensive understanding of the niche strategy.

H3: In order to avoid the scale based competition the niche strategy has to better satisfy existing, or satisfy unfulfilled demand or create new demand altogether, in its target niche.

The basic assumption behind this hypothesis is pretty simple; a company which employs a niche strategy faces less competition for its customers than its competitors.⁵⁴¹ A company active in the niche has generally two possibilities of

⁵³⁵ Cf. Adner/Levinthal (2001), p. 616; Agarwal/Bayus (2002), p. 1025.

⁵³⁶ Cf. Grinnell (1928), p. 436; Vandermeer (1972), p. 107; Elton (2001), p. 63f.; Hutchinson (1944), p. 20.

⁵³⁷ Cf. Porter (2004), p. 11.

⁵³⁸ Cf. Dobrev et al. (2003), p. 233f.

⁵³⁹ Cf. Nahata/Olson (1989), p. 236. This work on entry barriers was pioneered by Bain (1956), where he argued that a company has to have a large market presence and thus generate economies of scale and generate entry barriers for other competitors. Schmalensee (1981), p. 1228.

⁵⁴⁰ Cf. Shelton (2005), p. 333.

⁵⁴¹ A company which takes after the strategy of the mass market, which includes many competitors and negatively affects the performance of the company. A company that

satisfying this “niche” demand; the first one involves the approach to identify demand gaps in the market and the second one focusing on the competences which the company has developed that better satisfy this demand. The first approach focuses on the market side where the company looks for partly or insufficiently satisfied demand. This demand gap is the result of market specific conditions, which are the result of low attractiveness of certain market segments. The unattractiveness of a market segment can be the result of remote geographical area or the fact that the mainstream market companies show little or no interest in satisfying certain market segments. Another reason for this gap on the market side is the changes in the consumer requirements or preferences, which create new or differentiated demand in the market.⁵⁴²

The second approach comes from the internal company perspective, where the company’s capabilities are key for creating new market demand or satisfying existing demand. These capabilities include the creation and exploitation of new technologies, different cost advantages which the niche strategy can enable and the exploitation of the weaknesses of competitors. The creation and development of these capabilities enables the identification and handling of demand gaps, which these new capabilities create or shape. Additionally, this internal perspective also enables the creation of new demand for which there was previously no demand. These technology based niches will be detailed in sub-chapter III.2.2.⁵⁴³

H4: a niche strategy has to provide above average returns in comparison to the industry average in order for this strategy to be a viable option.

One of the primary objectives of a management strategy is to ensure the long-term success of the company. A strategy describes the ways and means with which the company will achieve this objective. Therefore, strategy can be seen as planned development or evolution of a company, as opposed to a random or unplanned development, which would take place, if there were no strategy, which the company would follow.⁵⁴⁴

The profitability of a company has usually been associated with market share; as a consequence companies with the largest market share were large companies,

looks for differentiation in order to reduce competition and increase its own performance will try to select a market position in a niche, which has a low of ineffectively satisfied demand. Cf. Deephouse (1999), p. 150f.

⁵⁴² Cf. Day (1981), p. 288.

⁵⁴³ Cf. Day (1981), p. 288.

⁵⁴⁴ Cf. Hungenberg (2000), p. 8.

which dominated the market.⁵⁴⁵ If this claim would hold true, no other company except for market leaders would be able to achieve a profit in the market. However, numerous small companies or strategic business units of larger corporations are able to capture profits in the market without controlling a significant market share. These companies of SBU's were able to find niches, which build up barriers on the basis of which they were able to reverse or decrease the profitability advantage of larger companies on the basis of a large market share.⁵⁴⁶ Therefore, a niche strategy has to enable the company or business unit to achieve higher rates of return in order for the strategy to be a viable option in the market. The intentional decision to focus on special market groups, thereby forgoing many scale based advantages which other companies possess, has to be compensated with a higher capability, which can be achieved in the selected niche.

These four basic hypotheses of the niche model along with the definitions and relationships between the main elements represent the simple niche model, which describes and explains the fundamentals of the niche model. The limitations and reach of the model in the next sub-chapter will build upon the simple niche model and expand it with additional and more complex hypotheses.

III.2.2 Limitations and reach of the market niche model

The limitations and the reach of the niche model will place boundaries on the propositions, which were generated in the simple niche model and put them in the perspective of time and context. The questions of who, where and when set the boundaries of the range of the model and thereby determined its scope of application.⁵⁴⁷ This definition of the range and model limitations will be the focus of the following three points.

(1) Who does the model apply to?

The first point in determining the limitations and the range of the theory will be in determining the subjects to which this model applies to. In order to determine this limitation the following hypothesis will apply:

⁵⁴⁵ Cf. Rumelt (1982), p. 368; Szymanski et al. (1993), p. 1.

⁵⁴⁶ Cf. Bradburd/Ross (1989), p. 258.

⁵⁴⁷ Cf. Whetten (1989), p. 492.

H5: Niches can be found at both the corporate and business unit level, meaning that company size is not the limiting factor, rather the strategic direction that is aligned on the niche.

This hypothesis states that the presumption that the niche strategy or the niche as a market constellation in general is associated with small companies is not valid. The decisive factor is the niche strategy and in what sense it is discussed; as a corporate strategy or as a business level strategy. The corporate level strategy concerns itself with the question of where to compete and it deploys the company's resources among the industries in which a company is active. This corporate level strategy incorporates primary activities, which determine the objective of long-term revenue and profitability growth.⁵⁴⁸ The business level strategy on the other hand is concerned with the question of how to compete in a certain industry or product market segment. The unique competences or competitive advantage are the main elements, which a company employs at this strategic level.⁵⁴⁹ These unique competences enable a company to achieve a superior level of performance than its competitors, whereby this superior performance is the result of resources of skills, which the competitors do not possess and can take on many different forms.⁵⁵⁰

Since the main research interest of this thesis is at the corporate level, the model will only include the niche strategy at the corporate level. This will also reduce some of the complexity in the model due to the exclusion of the niche as a business level strategy in a diversified company. This limitation puts forth the following hypothesis:

H5a: Companies, which pursue a niche strategy as a corporate level strategy, possess certain identifiable characteristics, which separate them from the rest of the industry. The extent and form of these characteristics is industry specific and has to be determined on a case by case basis.

Companies usually employ clear and distinctive corporate level strategies. This strategy places the competitive environment of a company into a single industry. However, many large multinational corporations or global leaders are actively present in several industries.⁵⁵¹ A niche strategy is a viable option for some of their

⁵⁴⁸ The majority of the corporate level strategies are growth based strategies, except for those companies, which have reached a certain size and have to stabilize before they can grow any further, or companies in economic decline. Hitt/Ireland (1985), p. 794.

⁵⁴⁹ Cf. Beard/Dess (1981a), p. 666f.

⁵⁵⁰ Cf. Hitt/Ireland (1986), p. 402.

⁵⁵¹ Cf. Beard/Dess (1981a), p. 666.

business units. Unfortunately, the inclusion of these business units would exponentially increase the complexity of the model. It should therefore be noted at this point that the niche strategy of a multidivisional company structure is noted and recognized as a viable niche strategy, but will be left out of the further development of the model.

According to this restriction, the niche strategy of a company therefore incorporates both strategic aspects of where to compete and how to compete within the scope of the corporate strategy. The companies that will be the focus of the model display unique identifiable characteristics within their individual industries, which separate them from other industry competitors and the mass market. These characteristics are among others specialization, technology, service, quality, channel selection and so on.⁵⁵² One has to consider that these characteristics differ in importance and scope between industries. Industries are constructed on the basis of different factors e.g. production inputs, raw materials, demand and outputs, which are the result of these inputs. Therefore these niche companies have to be considered and identified according to the industry specific characteristics.

The defined limitation on the object of the model includes those companies for which the niche strategy represents the sole strategic direction on a corporate level. This is also supported by certain identifiable characteristics which differentiate the company from the rest of the industry. The next point will focus on the question of where this object applies to.

(2) Where does the model apply?

Following the limitation on the “who” the model applies to, is the question of where this model can be applied. To determine the “where” component, the source of niche strategy creation will be observed from the internal and external company perspective:

H6: The niche strategy is the product of market (external) or resource (internal) based competences of a company.

The decision upon a niche strategy in most companies is based predominantly on the external environment of the company, although the importance of the internal company perspective should not be ignored because internal competences are harder to create.

⁵⁵² Cf. Varadarajan/Clark (1994), p. 95.

The niche strategy based on the market competences of the company is the result of the outside in perspective. This perspective focuses on three main elements of the niche strategy: market, consumer and geographical region. The outside-in perspective starts off by looking at the entire market and then focuses on specialized market segments in which it can prosper. The objective is to find a suitable niche somewhere within these three elements, which enables the company to gain a competitive advantage by better satisfying or understanding the needs in one or more of these niches.⁵⁵³

The inside-out perspective builds on the unique company internal capabilities and competences, which are the source of competitive advantage in the market.⁵⁵⁴ As opposed to the outside-in perspective, the inside-out perspective places the focus on the company instead of the market. The objective of the niche strategy according to this perspective is to identify the unique market capabilities and competences and apply these competences in the market. An existing demand gap in the niche is identified, which these capabilities and competences satisfy better than the competition.⁵⁵⁵

Although the niche strategies created with the outside-in and inside-out perspective are applicable across industries, a differentiation between simple and complex industries should be made. This differentiation is shown in hypothesis H6a and H6b.

H6a: The niche strategies developed on the basis of the inside-out perspective are characteristic for dynamic technologically intensive industries.

The inside-out perspective is based on the internal functioning of the company. Its core is based on efficiency, which is the product of efficient use of the tangible and intangible resources of the company that leads to the creation of products or services, which have a market value and represent the company's source of competitive advantage.⁵⁵⁶ The superior performance of the company is the result of the resources and capabilities which a company owns.⁵⁵⁷ This efficiency is characterized by innovation and technological advancements, fundamental to the renewal of the

⁵⁵³ Cf. Porter (2004), p. 234; Danner (2002), p.52.

⁵⁵⁴ Cf. Barney (1991), p. 106.

⁵⁵⁵ Cf. Teece et al. (1997), p. 514.

⁵⁵⁶ Cf. Davis/Peri (2002), p. 87f; Hunt/Duhan (2002), p. 100.

⁵⁵⁷ Cf. Shantanu Dutta (2005), p. 277.

organization and it represents a driving force behind the strategic change, which is conducted within the company.⁵⁵⁸

The inside out perspective views competition as a process rather than a top line view, which determines if optimal conditions are achieved in a static environmental setting. This process views the economic conditions affecting a certain industry in a constant state of disequilibrium or as dynamic. Market forces try to move towards the state of equilibrium but that state cannot be reached because of market imperfections, which influence the equilibrium. To understand the results and the outcome of the competitive process the analysis has to consider the environment in a dynamic setting.⁵⁵⁹

Consequently, the niche strategies, which are based on efficiency, are usually found in dynamic, technologically intensive industries, where the competitive advantage is not lasting and has to be constantly upgraded to accommodate the path dependencies and changing market conditions.⁵⁶⁰

The outside-in perspective displays exactly the opposite characteristics and can be conceptualized as:

H6b: The niche strategies developed on the basis of the outside-in perspective are characteristic for stable and technologically less-intensive industries.

The niche strategies which are based on market discontinuities are usually located in industries, which are not technologically intensive and where competitive advantage is the result of access to specific resources or customers or geographical regions. The outside-in perspective is based on Porters (1980) competitive advantage on the foundation of the typologies developed in the competitive forces, according to which the ease of entry is the primary of the five determinants of industry attractiveness.⁵⁶¹ The niche strategies which are developed according to this perspective are usually located in industries, where technology and innovation are not the decisive factors. These strategies are rather based on the diligent industry analysis, which enables the company to create a competitive advantage by shielding itself from the competition, by focusing on a market segment which has no or a low degree of existing competition.

Based on the inside-out and outside-in perspectives and the industry dynamic and technological intensity, the niche can be classified as a growth or defensive

⁵⁵⁸ Cf. Ljungquist (2007), p. 393.

⁵⁵⁹ Cf. McWilliams/Smart (1993), p. 70.

⁵⁶⁰ Cf. Teece et al. (1997), p. 516.

⁵⁶¹ Cf. Porter (2004), p. 4f.

type strategy, based on the industry context, within which it is observed. Hypothesis 7 builds on the statements from hypothesis 6a and is defined as:

H7: The niche strategy is classified as a growth type strategy within the context of a dynamic and technologically intensive industry environment.

This hypothesis states that the niche strategies based on the inside-out perspective represent growth strategies in the market. These strategies are not concerned with the creation of entry barriers for other competitors but rather focus on achieving growth through own competences and capabilities, which enable the company to remain successful in the market despite the highly competitive and dynamic environmental setting.⁵⁶² Since the markets never reach equilibrium status and the competitors respond to the strategies and the creation of competitive advantage of companies, the industry keeps changing and evolving. In order to keep up the pace, the company employing a niche strategy has to continuously reconfigure and evolve its competences.⁵⁶³ This can only be achieved with the application of a growth strategy, which is aggressive enough to enable the company to remain competitive in the long term.

The opposite of growth strategies are defensive strategies, which are found in the domain of the outside-in perspective and are defined in hypothesis H7a.

H7a: The niche is classified as a defensive type strategy within the context of a stable and technologically less-intensive industry environment.

The main objective of defensive strategies is the creation of entry barriers which prevent competitors from actively pursuing the same markets as the company in question, whereby the industry structure affects the sustainability of the performance of the companies, the positioning of the company and the ability to establish a competitive advantage over its competitors.⁵⁶⁴ This advantage is the result of the effective deployment of resources and selecting market niches which shield the company.⁵⁶⁵ On the basis of this advantage the company is able to exercise market power, which is the result of the company's abilities to defend itself against the competitive forces. The niche strategy according to this view is in the creation of

⁵⁶² Cf. Spanos/Lioukas (2001), p. 909.

⁵⁶³ Cf. Malerba et al. (2007b), p. 372.

⁵⁶⁴ Cf. Teece et al. (1997), p. 511.

⁵⁶⁵ Cf. Day et al. (1987), p. 1537.

defenses against industry forces, which enable the company to find a defensive position.⁵⁶⁶ These niche strategies are usually manifested in the form of regional, target group or product niche strategies.⁵⁶⁷ These defensive strategies can be found in industries where innovation is not the key driver of industry development and the companies are therefore able to identify niches which shield them from competition without having a distinct competence based advantage, which would separate it from the rest of the industry.

This summarizes the who and where component of the model and to conclude the limitation and the reach of the model, the when component will be analyzed in the next point.

(3) When does the model apply?

The final component of the model will deal with the question of when this niche model can be applied. The following hypothesis describes the when component:

H8: A niche strategy is better suited for dynamic and changing environments than a generalist strategy.

This hypothesis states that the niche companies would outperform generalist companies in a dynamic and constantly changing market environment. This is due to the different characteristics of generalist and specialist strategies of companies. A generalist company maintains some level of excess capacity, which can be seen as a sort of insurance policy to make sure the company can maintain reliable performance, despite the change in its environment. Niche companies, which specialize, have a much lower requirement for excess capacity as their operations are focused on a narrow part of the market. In dynamic markets, where there is a lot of environmental change, the generalist companies require a lot of time to apply their structure to new environmental states. On the other hand, niche companies are much more flexible because they are smaller than generalists and they can adapt faster to different changes in the environment.⁵⁶⁸ This means that a niche strategy is better suited for changing environmental conditions than a generalist strategy because of

⁵⁶⁶ Cf. Spanos/Lioukas (2001), p. 909f.

⁵⁶⁷ Product niches refer to those products, where their appeal is not based on their innovativeness but rather on the unique or special characteristics which separate them from the rest of the market.

⁵⁶⁸ Cf. Hannan/Freeman (1977), p. 948ff; Swaminathan (1998), p. 390; Deephouse (1999), p. 151; Usher (1999), p. 144; Olav Sorenson (2006), p. 917.

the flexibility. In a dynamic market or industry environment, niche companies can respond faster to demand and other environmental fluctuations.⁵⁶⁹

Part of this reasoning is also due to the niche being a sort of sanctuary, where new technologies are able to develop without being threatened by the mainstream competition. Thus, when a company that follows a niche strategy introduces a new technology it usually does so by looking for market space, which is neglected or insufficiently served by the main market. Thus, a company can make two decisions after the technology has achieved a certain stage of maturity; either to remain and effectively dominate the niche or try to compete in the main market. If the latter choice is made, the niche strategy does not apply any more for this company.⁵⁷⁰

However, this hypothesis does not state that a niche strategy cannot be a viable or successful strategic option in stable market or industry environments. These companies can successfully occupy their market niches but face much more formidable competition from the generalists as their competitive advantage can be copied easier.⁵⁷¹

This concludes the second part on the limitations and the reach of the niche model, where the questions who, where, and when this model applies to were answered. For this purpose, several hypotheses were constructed in order to provide an explanation and applicability of the niche phenomena in strategic management. The final sub-chapter will focus on the implications of the developed niche model.

III.2.3 Implications of the market niche model

The final sub-chapter of the third part will deal with the implications of the market niche model for the field of strategic management and for the construction of a strategic management theory of market niches. Therefore, this sub-chapter is divided into two parts: (1) the first part analyzes the effects this market niche model has on the current research and its original contribution to the body of knowledge, (2) it builds a connection to the potential theory of market niches.

⁵⁶⁹ Cf. Das et al. (1993), p. 52.

⁵⁷⁰ Cf. Malerba et al. (2007a), p. 371.

⁵⁷¹ Cf. Hannan (2005), p. 65.

(1) What are the implications of the model?

The implications of the model will answer the role which the constructed niche model has in the scope of existing research on the niche and what are its original contributions to the further development of niche research.

The market niche model constructed in this thesis goes away from the classic research of the niche phenomena from the market based perspective.⁵⁷² Instead the focus of the model is equally on the market-based as well as the resource-based perspective, which is achieved through the integrative framework of dynamic capabilities.

This new approach does not see the essence of the market niches in determining unsatisfied or better satisfying existing market demand, rather the identification of new market opportunities is only one side of the coin. According to this model, market niches can be the result of the market-based opportunities as well as the internal capabilities of companies to create new market demand, which are both placed in the underlying context of the core capabilities of companies.

This model separates different types of niche strategies. This has often been a cause for confusion in the past where there was no clear consensus on what a niche player is. A niche strategy can generally be applied by any company, either as a corporate or as a business level strategy. The so called “pure” niche players are identified as companies, which apply a distinct market niche strategy at the corporate level, meaning that the main company strategy is focused on a niche market. If a niche strategy is employed as a complementary business strategy, the company is not a pure niche player.

A further distinction is made in the model based on the type of market niche strategy a company employs, which is connected with the company’s core competences and its industry type. A niche as a defensive strategy is mainly used in industries where there is little room for new technological advancements or product and service improvements. The market niche strategy in these markets is focused on the creation of market barriers, which disable other companies from harvesting its profits. This is usually connected with certain geographical regions or demographic characteristics of consumers, which enables the niche strategy to better cater to the needs of these customers. The servicing of these consumers by companies

⁵⁷² See Danner (2002), Rosenbaum (1999), Cavalloni (1991) among others.

from the main market is usually unattractive or costly and time consuming, therefore giving the niche player a defensive position which protects them from competition. However, this defensive position usually means that a company is restricted in growth and can only protect its market and a growth strategy is not a viable option for these companies as their product or services would not be successful in the main market. On the other hand, companies which employ a market niche strategy as a growth strategy usually face main market competition as their product or service offering is also attractive for competitors to imitate. The advantage of these niche players is in their flexibility and constant development of their core competences, which enables them to stay one step in front of the competition. However, this growth alternative also presents additional risks, if the company is not able to protect or redevelop their competences and loses its competitive advantage in comparison to competitors which can imitate their core competences and bring them to the market on a larger scale. The niche company faces the risk of losing its target market in such a situation. A growth strategy also offers more potential for a breakthrough in the mass market if competitors are not able to duplicate the product or services and if these products or services become appealing for the mass market.

Based on these implications of the model, the final point will focus on the market niche model as a framework for the construction of a strategic management theory of market niches.

(2) How does the model connect to a potential theory?

The market niche model framework presents a first step towards the creation of a strategic management theory of market niches. This section will discuss the implications this model has for the creation of such a theory.

A model does not possess the detail and the reach that a theory does but it represents a good first step towards the creation of a comprehensive theory. A comprehensive theory identifies and explains the connections between different phenomena and explains why certain events, acts and structures happen. Therefore, theory places the focus on the nature of casual relationships and determines the time certain events take place and their order.⁵⁷³ A theory upgrades the reach of a model because it:

⁵⁷³ Cf. Weick (1989), p. 517.

“(…) delves into underlying processes so as to understand the systematic reasons for a particular occurrence or nonoccurrence. It often burrows deeply into microprocesses, laterally into neighboring concepts, or in an upward direction, tying itself to broader social phenomena. It usually is laced with a set of convincing and logically interconnected arguments. It can have implications that we have not seen with our naked (or theoretically unassisted) eye. It may have implications that run counter to our common sense.” (Sutton (1995), p. 388)

However, a model can provide a good framework for the construction of a theory by:⁵⁷⁴

- Providing basic definitions
- Describing the domain of a theory by detailing, where and when a certain event happened
- Describing the phenomena which predict their behavior in the future
- Providing a framework and key guidelines upon which a theory can be constructed

The niche model constructed in this thesis provides all of the checkpoints stated above, which could enable the creation of a comprehensive strategic management theory of market niches.

This concludes the third and final part of the thesis. The first chapter of third part provided the theoretical foundations for model and theory development, with the definition, analysis and critical reflection of key constructs. These foundations have enabled the development of a market niche model framework for strategic management in the second chapter of the third part. The developed model is a synthesis and upgrade of the existing research on market niches in strategic management and provides a good framework for the construction of a strategic management theory of market niches.

⁵⁷⁴ Cf. Freese (1980), p. 191.