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List of Abbreviations

DCs dynamic capabilities

CA competitive advantage

SCA sustainable competitive advantage

RBV resource-based view

MNE multinational enterprise

FDI foreign direct investment

IB international business

1. Introduction

The problem statement and the objectives of this master thesis, which is concerned with the dynamic capabilities-based theory of the firm, are addressed in the following subchapters, followed by information regarding the organization and structure of this thesis.

1.1 Problem statement and objectives

Since 1997, when Teece et al. published their seminal article on dynamic capabilities (DCs), the field has developed into one of the most active and productive research areas within strategic management literature. In the last two decades, there has been a sharp rise in publications in journals, special issues, workshops and conference presentations dedicated to the subject of dynamic capabilities. According to the ISI Web of Knowledge, more than one thousand articles have been published on this topic between 2003 and 2013, and from 2006 to 2010, the publication rate in business journals adds up to more than one hundred per year (Peteraf et al. 2013: 1389; Di Stefano et al. 2010: 1f.).

One factor for the continuing, unbroken interest in dynamic capabilities is that both scholars and practitioners benefit from knowledge about how firms modify, generate, and sustain competitive advantage (CA) and create value. One of the most essential questions of strategic management thus concerns how to achieve sustainable competitive advantage (SCA). Nowadays, more than ever, firms operate in a global environment which is characterized by external dynamism, high uncertainty, and national and international competition. In this setting, sustainable competitive advantage is even more valuable than in national or local environments as it enables firms to win customers, defeat competition, and perform better than competitors. At this point, dynamic capabilities come into play. According to Teece (2007), the objective of the dynamic capabilities approach is to understand how firms achieve sustainable competitive advantage by reacting to and generating environmental change. This represents one of the fundamental questions in the strategic research field and “might well be characterized as the Holy Grail of strategic management” (Helfat/Peteraf 2009: 91).

Consequently, the field of dynamic capabilities is very broad. It involves strategy content and process and many levels of analysis, spanning from internal decision-processes to

organizational routines to modifications in the environment and competitive interactions (Helfat/Peteraf 2009: 91). From the intensity of research and the enormous interest in the field, one might assume that there is a widely accepted understanding of dynamic capabilities. Yet, the field is rather characterized by a complexity of theoretical underpinnings and a variety of conceptualizations. The lack of a consensus concerning the concept might at first seem surprising as Teece et al.'s (1997) article has had a very strong influence with more than 1900 citations by the end of 2009 (Di Stefano et al. 2010: 2). One explanation is that the research area has been strongly impacted by one additional seminal paper, an article by Eisenhardt and Martin (2000) which, even though it is complementary to Teece et al. (1997) in some aspects, also suggests differing and sometimes even contradictory perspectives (Peteraf et al. 2013: 1389).

This diversity of conceptualizations has, on one hand, led to a certain richness and variety of the dynamic capabilities research. On the other hand, it has without any doubt generated some confusion with respect to the usefulness and significance of the framework. However, in relative terms, the theory concerning dynamic capabilities has not yet had much time to develop. As a field of inquiry, it is still rather immature and in its infancy (Di Stefano et al. 2010: 2f.). However, "big ideas often take a long time to take on definition" (Williamson 1999: 1094). Kuhn (1970) also claims that "early versions of new theoretical ideas tend to be rough around the edges" (Helfat/Peteraf 2009: 92). The problems typically associated with a lack of clarity and consensus, like the impediment of theoretical progress and of accumulation of empirical work, may resolve themselves over time when the research field develops and evolves. Scholars who are cited more often or works which are included in renowned journals will be read more and hence have a larger influence. This is what is slowly happening to the field of dynamic capabilities, which is slowly starting to show broad agreement and more and more consensus on the most central questions about the framework (Di Stefano et al. 2010: 2f.).

The objective of this thesis is to highlight the significance and clarify the approach of dynamic capabilities research. The thesis reveals that dynamic capabilities are more than just an extension of the resource-based view (RBV) as they influence the capabilities and resource base that directly impact the generation of rents. This leads to the first part of the research question which is about if and how dynamic capabilities contribute to competitive advantage and firm performance, which is, like stated above, one of the major questions of strategic

management research. The second part concerns the question of how dynamic capabilities are linked to the theory of the multinational enterprise (MNE). Thus, another emphasis of the thesis lies in the discussion of the dynamic-capabilities based theory of the multinational enterprise and the ability of dynamic capabilities to help explicate the nature and essence of the MNE.

1.2 Organization of the paper

The thesis starts with a chapter about the relevant definitions important for the understanding of the paper. This includes the terms of the MNE, (sustained) competitive advantage, and of course, dynamic capabilities. The subchapter about dynamic capabilities includes, besides an overview of differing proposed definitions, the most important elements of the approach, a suggested definition for this thesis, and a disambiguation of terms. Next, the early perspectives and theoretical foundations of the dynamic capabilities framework are discussed, addressing the behavioral theory of the firm, the transaction cost theory, the evolutionary theory, and most importantly, the resource-based theory of the firm. Subsequently, the dynamic capabilities-based theory of the firm is presented. Here, the core building blocks (processes, positions, and paths) and the fundamental clusters of dynamic capabilities are introduced.

What follows is an interim conclusion which summarizes the major aspects of the foregoing chapters which are important to remember for the chapters to come. While the chapters before the interim conclusion mainly concern the state of research, the chapters after the interim conclusion are about the relationship between dynamic capabilities and competitive advantage and about the theory of the MNE. Based on the crucial finding that the dynamic capabilities framework is not yet considered a theory, the interim conclusion also leads over to the two main chapters which will help find answers to the research questions: *Do dynamic capabilities contribute to the firm's competitive advantage and how are they linked to the theory of the MNE?*

Chapter 6 deals with the link between dynamic capabilities and firm performance/competitive advantage. Besides the difficulties concerning the empirical measurement of those two concepts, an extensive exploration of the proposed nature of this relationship in literature, mainly a direct link versus more complex relationships, builds the center of this chapter. Some

limitations and a comment on the most promising definition of the nature of the relationship between dynamic capabilities and firm performance are presented.

The subsequent chapter is involved with the dynamic capabilities-based theory of the MNE. After a historical overview of the theory of the MNE and FDI, including a discussion of the internalization theory and the eclectic paradigm, an entrepreneurial theory of the MNE is depicted. Here, with regard to answering the research question, the emphasis is on the link between dynamic capabilities and theory of the MNE.

Following the chapter about future research opportunities, which are important in the case of the not yet consolidated dynamic capabilities framework, the thesis ends with a conclusion that once again addresses the research questions and summarizes the most important aspects.

2. Relevant definitions

In order to furnish this thesis with a useful and appropriate terminology, the following chapter provides three fundamental definitions which are required to understand in the research questions: the multinational enterprise (MNE), sustainable competitive advantage (SCA) and dynamic capabilities (DCs). While the former two are kept rather short, the concept of dynamic capabilities is presented extensively and in detail.

2.1 Multinational enterprise

Stephen Hymer is commonly seen as the founder of the theory of the MNE (Pitelis/Teece 2010: 1247). More than 55 years have passed since his 1960/1976 doctoral thesis, in which he examines the determining factors of foreign direct investment (FDI) and other modes of international operations (Yamin/Forsgren 2006: 168). Hymer (1960/1976) argues that firms which are controlling the markets of developed countries like the USA are apt to take foreign operations (for example, subsidiaries cross-border [FDIs]) into consideration because of their aspiration for monopoly profits. Hence, for Hymer, the monopoly theory explains the international leverage of domestic assets of firms (Pitelis/Teece 2010: 1249f.).¹ Before Hymer, many researchers considered the MNE to be “an arbitrageur of capital, transferring risk capital from countries where returns were low to those where it was higher, earning the arbitrageurs rents and contributing to efficient resource allocation” (Teece 2006a: 126). Hymer (1960/1976), however, offers different reasons for the existence of the MNE: the decrease of rivalry, the advantages due to intra-firm use of benefits, the advantages of FDI due to risk diversification, and the possibility to compete with rivals based in the foreign countries (Hymer 1960/1976: 46; Pitelis/Teece 2010: 1250).² With the advantage of hindsight, it can be stated that Hymer’s perspective has a variety of shortcomings, first and foremost being the strong emphasis on leveraging market power as the reason for international expansion and the disregard of the role of capabilities. Nevertheless, Hymer’s contributes greatly to the basis of the theory of the MNE (Teece 2006a: 127f.).

¹ This view was contested as defective and insufficient by Teece (1977a; 2006a).

² Chapter 7.1 gives a historical overview of the economic theory of the MNE and FDI and explains Hymer’s (1960/1976) perspective in more detail.

A more recent approach to the MNE presented by Cantwell et al. (2010) is in line with Dunning and Lundan (2008). They think of “the MNE as a coordinated system or network of cross-border value-creating activities, some of which are carried out within the hierarchy of the firm and some of which are carried out through informal social ties or contractual relationships” (Cantwell et al. 2010: 569). This means that not only the productions sites abroad but also the overall sum of the MNE’s value-creating activities specifies the MNE. Cantwell (2014) moreover describes Dunning’s later writings using a rather general definition of the MNE as “the coordinator or orchestrator of international business networks” (Cantwell 2014: 3).

Teece (2014: 8) also offers a feasible definition of MNEs. His approach to the MNE will serve as a basis for the thesis at hand:

“A multinational enterprise (MNE) is a business firm that sets strategy and manages operations for the development and utilization of income-generating assets in more than one country in the pursuit of profits over time.” (Teece 2014: 8)

A suitable theory of the firm should furthermore offer findings concerning the international scope, network properties, and the foundation of sustainable competitive advantage. An extensive dynamic-capabilities based theory of the MNE is presented in Chapter 7, including early approaches and an entrepreneurial theory of the MNE.

2.2 (Sustainable) competitive advantage

As one of the research questions is concerned with the relationship between dynamic capabilities and (sustained) competitive advantage, the concept of competitive advantage needs to be further evaluated and defined.

Clearly, the creation or achievement of (sustained) competitive advantage is one of the most important objectives of all firms’ business policies in all industries across the world. However, literature and reality have indicated that firms are confronted with a plurality of possibilities of how to create competitive advantage (Geroski 1995: 2). For a deeper understanding and a reasonable response to the research question, it is indispensable to precisely examine what factors influence competitive advantage and how it can be sustained.

Barney (1991) provides key definitions of both competitive advantage and sustained competitive advantage. According to him (1991: 102), “a firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors”. On the contrary, “a firm is said to have sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy” (Barney 1991: 102).

More recently, Helfat et al. (2007) defines the terms in a similar yet differing way: “Competitive advantage holds when a resource or capability (or a set of resources and capabilities) creates relatively more value than do comparable resources and capabilities of competing organizations” and “sustainable advantage from resources and capabilities is a competitive advantage that persists in the face of competitive efforts to duplicate the value created by a resource or capability (or a set of resources and capabilities)” (Helfat et al. 2007: 121f.). These definitions are of higher relevance for this present thesis than the definition presented by Barney (1991) because they refer to the role of capabilities in the process of the achievement of competitive advantage. As this is the essence of what is being examined in this thesis, they provide a suitable terminology and facilitate the understanding of this thesis.

For the sake of completeness, two well-known models that analyze the concept of (sustainable) competitive advantage are briefly presented in the following.

The first one, the Model of the Five Forces, is a very popular framework by Porter (2008) that focusses on competitive advantage. It indicates that the competitive advantage of a firm increases with the decreasing threat of new entrants, bargaining power of suppliers, bargaining power of buyers, threat of substitute products or services, and rivalry among existing competitors (Porter 2008: 27f.).

The second model, the Model of the Cornerstones of Competitive Advantage, was developed by Peteraf (1993). It points to four conditions that competitive advantage is based off of. This model depicts the requirements for a firm to generate sustainable, above-normal returns. It additionally puts the emphasis on each of these four conditions and differentiates them. The four conditions are clearly not independent but interact with each other and impact one another. The first condition, *resource heterogeneity*, produces monopoly or Ricardian rents. *Ex post limits to competition*, as the second condition, secures that rents are not competed away

but are sustained. The third factor for competitive advantage, *imperfect factor mobility* due to switching costs, ensures that rents are sustained within the firm. And *Ex ante limits to competition*, as the last requirement, guarantee that rents are not offset by costs (Peteraf 1993: 185f.). The model is graphically illustrated in Figure 1.

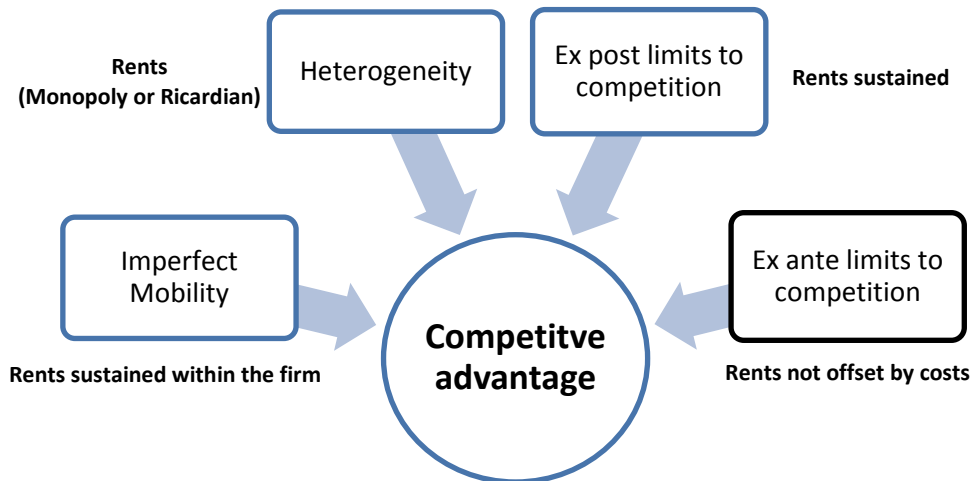


Figure 1: The cornerstones of competitive advantage (own representation based off of Peteraf 1993: 186).

2.3 Dynamic capabilities

The concept of dynamic capabilities is supported by a large amount of definitions by many different authors which are often not consistent in their approaches and views. In a first step, an overview is given, followed by an examination of the different elements of the dynamic capabilities approach and by the introduction of a definition that will build the basis of this master thesis.

2.3.1 Common definitions of dynamic capabilities in literature

In their seminal article from 1997, Teece et al. (1997: 516) define dynamic capabilities “as the firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments”. Since then, many more authors have examined the concept of dynamic capabilities and have come up with a proliferating amount of definitions (Eisenhardt/Martin 2000; Helfat et. al 2007; Teece 2007; Winter 2003; Zollo/Winter 2002; Augier/Teece 2009; Katkalo et al. 2010; Ambrosini/Bowman 2009). According to Easterby-Smith et al. (2009: 2) the reason for this plurality of definitions might be “the fact that the definition provided by Teece, Pisano and Shuen (1997) was broad enough to provide

opportunities for others to refine, reinterpret, and expand the concept". The diversity of definitions did not only lead to a growing body of research and literature concerning the construct of dynamic capabilities, but also to differing definitions and consequently to confusion among researchers and scientists. Barreto (2010) states that in order to prevent this confusion from causing slow or inefficient progress in this field of research, "a consolidation of the concept of dynamic capabilities seems required" (Barreto 2010: 257). Before presenting a new conceptualization, the main definitions of dynamic capabilities in the literature are presented and an overview about the main elements of the constructs are given.

| Scientists/Researchers | Definition |
|--------------------------------|--|
| Teece/Pisano (1994:541) | "Dynamic capabilities are the subset of the competences/capabilities which allow the firm to create new products and processes, and respond to changing market circumstances." |
| Teece et al. (1997: 516) | "The firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments." |
| Eisenhardt/Martin (2000: 1107) | "The firm's processes that use resources—specifically the processes to integrate, reconfigure, gain, and release resources—to match and even create market change; Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die." |
| Teece (2000a: 35) | "The ability to sense and then seize opportunities quickly and proficiently." |
| Zollo/Winter (2002: 340) | "A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness." |
| Winter (2003: 991) | Those (capabilities) that operate to extend, modify, or create ordinary capabilities |
| Zahra et al. (2006: 924) | "The abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision maker(s)." |
| Helfat et al. (2007: 4) | "The capacity of an organization to purposefully create, extend, or modify its resource base." |
| Wang/Ahmed (2007: 35) | "A firm's behavioural orientation to constantly integrate, reconfigure, renew and recreate its resources and capabilities, and most importantly, upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage." |
| Teece (2007: 1319) | "Dynamic capabilities can be disaggregated into the capacity (a) to sense and shape opportunities and threats, (b) to seize opportunities, and (c) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets." |
| Ambrosini/Bowman (2009: 34) | "Organizational processes in the most general sense and their role is to change the firm's resource base." |
| Augier/Teece (2009: 412) | "The ability to sense and then seize new opportunities, and to reconfigure and protect knowledge assets, competencies, and complementary assets with the aim of achieving a sustained competitive advantage." |

| | |
|-----------------------------|--|
| Katkalo et al. (2010: 1179) | “Reflect the capacity a firm has to orchestrate activities and resources/assets within the system of global specialization and co-specialization. They also reflect the firm’s efforts to create/shape the market in ways that enable value to be created and captured.” |
| Helfat/Winter (2011: 1244) | “One (capability) that enables a firm to alter how it currently makes its living.” |
| Teece (2012: 1395) | “Dynamic capabilities are higher-level competences that determine the firm’s ability to integrate, build, and reconfigure internal and external resources/competences to address, and possibly shape, rapidly changing business environments.” |
| Schilke (2014: 180) | “Organizational routines that affect change in the firm’s existing resource base.” |

Table 1: Common definitions of dynamic capabilities in the literature (own representation).

Although the definitions differ in their focus and in some aspects, they do agree that dynamic capabilities are organizational processes in a broad sense and that they have the intention to change the resource base of a firm. The resource base of a firm “includes tangible, intangible, and human assets (or resources), as well as capabilities that the organization owns, controls, or has access to on a preferential basis” (Helfat et al. 2007: 122). Besides, dynamic capabilities are built inside the firm (in contrast to being bought on the market) and are path dependent and embedded in the firm (Ambrosini/Bowman 2009: 34; Makadok 2001: 389; Teece et al. 1997: 522; Madhok/Osegowitsch 2000: 326).

Furthermore, the definitions and the past research give an idea of what dynamic capabilities are not. First of all, a dynamic capability is not a spontaneous, ad hoc problem-solving procedure, not a “one-time idiosyncratic change to the resource base of an organization” (Helfat et al. 2007: 5), but rather a repeatable event with patterned and practiced activity (Winter 2003: 993; Helfat et al. 2007: 5; Schreyögg/Kliesch-Eberl 2007: 920; Ambrosini/Bowman 2009: 34). This directly leads to the second aspect: Luck is not considered to be a dynamic capability, as it lacks intention and deliberation (Helfat et al. 2007: 4ff.; Zahra et al. 2006: 924; Ambrosini/Bowman 2009: 34f.). And thirdly, although the concept of dynamic capabilities gives attention to strategic change, it is not synonymous with it (Ambrosini/Bowman 2009: 34f.).

2.3.2 Elements of the dynamic capabilities approach

The most important elements of the dynamic capabilities approach by Teece et al. (1997) serve to further explain the theoretical mindset and center around the nature, role, context, creation and development, and heterogeneity of dynamic capabilities (Barreto 2010: 259).

However, the perceptions of different authors vary profoundly in their approach towards these elements. Therefore, they are examined in more detail.

Nature. Different authors have considered dynamic capabilities to be abilities/capacities, to be processes, or to be routines. Teece et al. (1997) and other authors like Winter (2003), Zahra et al. (2006), and Helfat et al. (2007) think of dynamic capabilities as abilities/capacities and emphasize not only the ability to fulfill the task but also the repeatability in contrast to a onetime change. In opposition to the abilities/capacities approach, Eisenhardt and Martin (2000) look upon dynamic capabilities as specific processes whose nature can change depending on market dynamics, while Zollo and Winter (2003: 340) consider them to be “learned and stable patterns of collective activity” and link them to a modification in the firm’s operating routine (Barreto 2010: 260ff.). The challenge concerning the nature of dynamic capabilities is clearly to make the construct more specific and to permit different levels of dynamic capabilities in contrast to a “‘have it or not’ approach” (Barreto 2010: 270).

Role. In the past literature, the specific role of dynamic capabilities has been correlated with the modification of integral internal elements of a firm. Some researchers consider dynamic capabilities to be the capacities or routines (Helfat et al. 2007; Eisenhardt/Martin 2000) that firms use to change their resources base, while others distinguish two different kinds of capabilities (Winter 2003; Zahra et al. 2006; Barreto 2010: 261). Winter (2003: 992f.) differentiates *zero-level* capabilities, which firms employ to keep earning their living “by producing and selling the same product, on the same scale and to the same customer population over time” (Winter 2003: 992), and *higher-order* capabilities, which are capable of inducing change (Winter 2003: 994; Barreto 2010: 261). Zahra et al. (2006) make a similar distinction between *substantive capabilities* and *dynamic capabilities*. The latter are both influenced by and based on the substantive capabilities (Zahra et al. 2006: 927f.). In a less direct approach, Makadok (2001) compares two ways of economic rent generation: the *resource-picking* mechanism which is closely tied to the concept of the RBV, and the *capacity building* mechanism that is used by managers to increase the productivity of the acquired resources and which is associated with the dynamic capabilities concept (Makadok 2001: 387; Barreto 2010: 261). More recently, the role of dynamic capabilities has been amplified to decision-making abilities and the ability to sense opportunities or risks. The challenge with respect to the role of dynamic capabilities is to unite the older and newer opinions and views.

Context. The context refers to the external environment to which dynamic capabilities are linked. Among researchers there are four different predominant views. Some authors, like Teece et al. (1997) associate dynamic capabilities with highly dynamic environments which are rapidly changing. Others recognize different degrees of environmental dynamism and therefore allow both moderately and highly dynamic markets like Eisenhardt and Martin (2000: 1110). A third group of authors, represented by Zahra et al. (2006: 922) and Zollo and Winter (2002: 346), state that dynamic capabilities are existent and beneficial in stable environments with low rates of change, but at the same time admit that they are more valuable in very dynamic markets. The fourth approach does not explicitly mention the characteristics of the external environment which leads to the conclusion that these conditions are considered to be of no relevance (Makadok 2001; Barreto 2010: 261f.). Thus, the question concerning the context of dynamic capabilities is if it is advisable to imply any kind of external conditions of the environment in the study of dynamic capabilities.

Creation and Development. The creation and evolution of dynamic capabilities is, according to the majority of researchers, based on learning mechanisms. The most important mechanisms mentioned by Eisenhardt and Martin (2000: 1114f.) are repeated practice, mistakes in the past, and the pace of experience. Zahra et al. (2006: 937ff.) furthermore emphasize the importance of trial and error, improvisation and imitation for the creation and development of dynamic capabilities, especially for newly founded firms in contrast to established firms (Barreto 2010: 262).

Heterogeneity. Concerning the degree of heterogeneity among dynamic capabilities of firms, the literature is also split in two camps. The majority of authors, especially those who think of dynamic capabilities as an enhancement of the RBV (Teece et al. 1997; Makadok 2001), suppose that dynamic capabilities “are essentially firm specific and unique” (Barreto 2010: 263). Eisenhardt and Martin (2000), on the contrary, state that firms often have similar dynamic capabilities due to the same or similar approaches of performing a task. Hence, the main challenge resulting from the discussion about heterogeneity is how to explain the existence of dynamic capabilities in most firms and at the same time the allocation of dynamic capabilities in terms of the potential to increase performance and competitive advantage of a firm (Barreto 2010: 263ff.).

2.4 A multidimensional construct

The above investigation of the different elements shows that the concept of dynamic capabilities is still not sufficiently consistent. There are many disaccords and limitations, which Barreto (2010) addresses with by using new definition:

“A dynamic capability is the firm’s potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.” (Barreto 2010: 271)

As it is indispensable to provide meaningful terminology in this thesis, this definition will serve as the conceptual basis for the concept of dynamic capabilities. It presents four different but interrelated dimensions, namely a firm’s propensity to sense opportunities and threats, to make timely decisions, to make market-oriented decisions, and to change the resource base of the firm, and puts them into one theoretical framework. Consequently, one dimension alone is not able to represent the construct, but rather all dimensions and their interrelations need to be considered. At this point, it is necessary to mention that the correlation among the four dimensions is not fixed, which means there can be, but there does not have to be, a linkage. A weak correlation is especially probable in the case of firms with a high likelihood of changing the resource base who usually have a low propensity to make timely decisions (Barreto 2010: 271f.).

The first dimension, *the propensity to change the resource base of the firm*, which can include the creation, extension, and reconfiguration of the resources, is part of the earliest and most recent approaches, like in the articles of Teece et al. (1997), Eisenhardt and Martin (2000) and Helfat et al. (2007). Dimension two, *the propensity to sense opportunities and threats*, is in line with Teece (2007: 1322ff.) and Schreyögg and Kliesch-Eberl (2007: 913ff.) who reveal the capability monitoring function as a main characteristic of dynamic capabilities. Capability monitoring includes the constant scanning of the firm’s internal and external environment in order to detect and interpret upcoming opportunities, threats, and crisis signals (Schreyögg/Kliesch-Eberl 2007: 928). However, these searching and monitoring factors are not dynamic capabilities themselves, but rather elements or processes which allow the development and application of dynamic capabilities (Ambrosini/Bowman 2009: 93). Teece (2007) refers to them as the microfoundations or fundamental clusters of dynamic capabilities (see Chapter 4.2). The third and fourth dimensions revolve around decision-making

propensities. *The propensity to make timely decisions*, according to Teece (1997), is crucial when a firm needs to compete with other players and “quickly accomplish reconfiguration and transformation ahead of competitors” (Teece 1997: 521). Eisenhardt and Martin (2000: 1117) further emphasize that competitive advantage is not only earned by changing resources but particularly by changing them more quickly. Besides the timing of a decision, the direction or content of the decision plays an important role, too. This is why *the propensity to make market-oriented decisions* is the final fundamental dimension of the dynamic capabilities concept.

The definition proposed by Barreto (2010: 271) has a couple of advantages over other definitions of the dynamic capabilities concept. First, it is set apart from unidimensional propositions and accommodates the four most important dimensions of the construct. This directly leads to the second advantage, or the resolution of the heterogeneity problem. As soon as the four different dimensions are taken into consideration, it becomes clear that some firms may have the same dynamic capabilities in one, two, or three (but not four) of the dimensions, making it possible to explain the potential competitive advantage of one firm over the other through the fourth dimension, which may be more unique and more valuable in one firm than in the other (see Chapter 2.3.2 on heterogeneity). And third, the deployment of the noun *potential* not only stresses the need that the dynamic capability still has to be executed, but also illustrates that there are higher and lower levels of potentials in contrast to having or not having the potential (Barreto 2010: 273). This was already discussed when examining the nature of dynamic capabilities in Chapter 2.3.2.

2.4.1 Disambiguation of terms (terminology)

Following the definition of dynamic capabilities that this thesis is based on, the terminology is another important topic to examine. As the terminology defining dynamic capabilities has not yet been standardized, two aspects need to be considered: First, the terminology of dynamic capabilities itself and, second, the differentiation from similar terms. Concerning the latter, it is noticeable that, in order to carve out the characteristics of dynamic capabilities, many authors compare the construct to one or more other concepts. Unfortunately, the authors either choose different concepts to put the dynamic capabilities construct against, or at least use different notations for the presentation of the same content. It is therefore necessary to clarify the terms and provide some lucidity of the terminology.

The expression dynamic capabilities can be separated into the noun, *capabilities*, and the adjective, *dynamic*. In literature, capabilities are generally regarded as processes. The confusion though stems from the separation of the word *capability* from the adjective *dynamic*. When talking about dynamic capabilities, it is advisable to not separate the two words but rather to see them as one term and to refrain from using what capability is usually defined as by the RBV. The reason is that a dynamic capability is neither a resource nor a capability in the RBV sense. It is a process that influences resources (Ambrosini/Bowman 2009: 36f.). “Dynamic capabilities are about developing the most adequate resource base. They are future oriented, whereas capabilities are about competing today, and they are ‘static’ if no dynamic capabilities are deployed to alter them” (Ambrosini/Bowman 2009: 36). Ambrosini and Bowman (2009: 36), in line with literature, moreover suggest that dynamic capabilities are repeated processes which have developed over the course of time and are then to be looked at as rather stable phenomena. The same applies to resources in the sense of the RBV as steady and consistent sources of advantage. Thus, when dynamic capabilities influence the resource base, a stable phenomenon, the dynamic capability influences another stable phenomenon, the resource base. Correspondingly, the dynamism refers to the interrelation of the dynamic capability and the resource base, in other words, the alteration or renewal of the resource base through the dynamic capability (Ambrosini/Bowman 2009: 36). This is an important fact to remember as, according to Ambrosini and Bowman (2009: 37), literature also offers some incorrect explanations of the meaning of the word *dynamic*. It is sometimes related to the dynamism of the external environment, which is a fallacy because dynamic capabilities are not necessarily tied to instable, dynamic environments (see Chapter 2.3.2). Another incorrect assumption is that the dynamism refers to the capability itself, which would mean that the capabilities are dynamic and modify themselves in the course of time. Thus, it should be noted that the correct definition of the word *dynamic* in dynamic capabilities relates to the influence on and the modification of the firm’s resource base so that a new bundle or quality of resources is established which helps the firm to preserve its competitive advantage. The output, the newly established resources, then defines the value of the dynamic capabilities (Ambrosini/Bowman 2009: 37).

In the following paragraphs, the focus is set on the differentiation of dynamic capabilities from similar terms. In his seminal article about firm resources and sustained competitive advantage, Barney (1991: 101) broadly defines resources as “all assets, capabilities,

organizational processes, firm attributes, information, knowledge etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness". Thus, following his train of thought, capabilities are one kind of resource among others. And the holding of a valuable resource base, of which capabilities are part of, enables organizations to make a living in the here and now (Ambrosini/Bowman 2009: 36f.). A resource "in the broadest sense is anything upon which an organization can draw in an effort to accomplish its aims. In a narrower sense, a resource is a tangible, intangible, or human asset upon which an organization can draw" (Helfat et al. 2007: 122). When resources correspond to the VRIN requirements (see Chapter 3.4), which means that they are impossible or at least tough to imitate, they are also referred to by the term firm-specific asset (Teece et al. 1997: 516; Katkalo et al. 2010: 1176). These assets are hard to transfer between organizations firstly due to transaction and transfer costs and secondly because of the tacit knowledge they might embody. Examples of this are specific specialized production sites, trade secrets and engineering experience as they are hard to transfer due to transaction and transfer costs as well as the influence of tacit knowledge (Teece et al. 1997: 516). Resources are stocks (in contrary to flows), must be built rather than bought, and can be important sources of advantage.

This points to the *substantive* capabilities addressed by Zahra et al. (2006: 927f.), Winter's (2003: 992f.) *zero-level* capabilities, Cepeda and Vera's (2007: 426f.) *operational* capabilities, and Teece's (2012: 1396; 2014: 18) *ordinary* capabilities. All these authors juxtapose this one other kind of capability in order to bring out the distinctiveness of dynamic capabilities (Teece/Al-Aali 2013). It is very interesting to note all of them roughly describe the same kind of capability; they simply name it differently.

To ordinary capabilities, Teece (2014: 18f.) ascribes the production and sale of defined, static products and services. They make it possible to produce, sell, and offer the services for an existing product or service, but do not enable MNEs to expand and prosper in external environments or other than in environments with very weak competition, no international influences, and no technological innovations. As they strengthen the technical fitness³ of the enterprise, which in turn stimulates static efficiencies, ordinary capabilities are an important

³ "Technical fitness is defined by how effectively a capability performs its function, regardless of how well the capability enables a firm to make a living" (Teece 2007: 1321). For the role of technical fitness in the measurement of performance see chapter 6.1.

resource for MNEs. However, with some exceptions, e.g. poor countries with low competition, ordinary capabilities are not responsible for sustained competitive advantage (Teece 2014: 19).

At this point, the similarities with Winter's (2003) zero-level capabilities become apparent. He puts them in a setting of a "hypothetical firm 'in equilibrium', an organization that keeps earning its living by producing and selling the same product, on the same scale and to the same customer population over time" (Winter 2003: 992). If not for the zero level capabilities, a firm could not achieve a turnover which enables it financially to repeat the whole process. On the contrary, Winter (2003: 992) sets first-order dynamic capabilities as capabilities that allow a change in the product, the production process, the scale, or the customers. Dynamic capabilities thus regulate the rate of change of ordinary capabilities.

Zahra et al. (2006) introduce the substantive capability. They lean on Winter (2003) by defining the substantive (ordinary) capability as the firm's capacity to produce output, while the potential to modify this capability is considered to be a dynamic capability and therefore a higher-order ability (Zahra et al. 2006: 921ff.).

Other authors have named the "how you earn your living now" capabilities as operational capabilities and also see their purpose in keeping up the operational functioning of the organization. In contrary to dynamic capabilities, operational capabilities make possible the performance of an activity, like the production of a specific product, and the organization and management of tasks necessary for the purpose of performing this activity. They are generally built, integrated, or reconfigured by dynamic capabilities (Cepeda/Vera 2007: 426f.; Helfat/Peteraf 2003: 999; Teece et al. 1997).

To describe the previously explained concept, the term of ordinary capabilities will be adopted in order to guarantee terminological uniformity. As discussed above, ordinary capabilities permit the firm to fulfill different tasks. They are usually based on non-VRIN resources and on (best) practices. Nowadays though, with internet and the quick diffusion of best practices, everybody has access to ordinary capabilities. As the barrier of transferring ordinary capabilities has evolved to be comparatively low, ordinary capabilities can be imitated rather easily, and possible advantages they can provide can be quickly eroded away. In consequence, it is not advisable for MNEs to exclusively count on their ordinary capabilities in case they are imitable and new competitors can enter the market. New market entrants are

able to make use of know-how due to employee turnover, and the initial advantage of the MNE is reduced until it disappears. To sum it up, if there are no barriers that prevent ordinary capabilities from being transferred throughout the economy (e.g. by governmental intervention), they will not be able to provide for sustained competitive advantage (Teece 2014: 19f.).

After having identified and distinguished the different types of capabilities, the term routine and its relation to capabilities should be clarified. According to Teece (2012: 1396), a routine is a “repeated action sequence, which may have its roots in algorithms and heuristics about how the enterprise is to get things done”. In his definition, Winter (2003: 991) also emphasizes the repetitious and systematic character of routines: A routine is “behavior that is learned, highly patterned, repetitious, or quasi-repetitious, founded in part in tacit knowledge”. He explicitly states that improvisation, even of extraordinary quality, is not a routine (Winter 2003: 991). Miller et al. (2012: 1536) adds that the tasks are carried out by networks of individuals who developed the routines and in which they are embedded. Concerning the interrelation between routines and capabilities, the important aspect to note is that ordinary capabilities are rooted in routines, or said differently, routines are the microfoundations of capabilities. Routines are able to determine the execution of projects but usually not the selection or prioritization. This becomes clear when realizing that many strategic activities call for non-routine and hard to replicate actions. For example finding the right strategy or recognizing, building/buying, and aligning missing assets are activities that can hardly be routinized. Dynamic capabilities therefore are more than the sum of a firm’s routines (Teece 2012: 1396f.).

In order to address all important issues with definitions, the expression of competences is the last one that needs to be discussed. The term competence is used when a specific type of organizational resource is referred to. Organizational competences are the outcome of repeatedly and regularly performed tasks and are rooted in the processes and routines of the firm (Katakalo et al. 2010: 1177). A basic competence will capacitate the firm to efficiently perform its tasks; nevertheless, it is the dynamic capabilities that “enable the enterprise to profitably orchestrate its resources, competences and other assets” (Katakalo et al. 2010: 1178).

3. Early perspectives and theoretical foundations of dynamic capabilities

The dynamic capabilities theory was introduced by Teece et al. in 1997. Its theoretical basis though is much older and goes back to the 1950s and 1960s Carnegie School where new ideas about the theory of the firm, innovation, and firm strategies were thought up. But it was not until the mid-1980s that researchers started to give attention to the ideas of (post) Carnegie about the strategy of the firm. Scholars like Teece (1983) claim that the evolutionary theory of economic change by Nelson and Winter (1982: 72) is the underpinning of the theory of the distinctive competencies of the firm. In this view, an organization is regarded as an entity with a specific amount of capabilities. The capabilities are limited in their quantity and quality and are based on the firm's routines and (in)tangible assets (Augier/Teece 2009: 412f.). The concept of path dependency is strengthened by the general idea of routines: "A firm's capabilities are defined at least to some degree by where it has been and what it has done (Augier/Teece 2008: 413).

In the following, the influence of (post) Carnegie views on the dynamic capabilities concept is addressed in more detail. The foundation of dynamic capabilities can be backtracked to suppositions and thoughts cited in the behavioral theory of the firm, the transaction cost theory, the evolutionary theory, and, finally, the resource-based theory of the firm. It is based upon the theoretical foundations of Schumpeter (1934), Penrose ([1959] 1995), Williamson (1975, 1985), Cyert and March (1963), Rumelt (1984), Nelson and Winter (1982) and Teece (1982). The goal of the following chapter is to show that dynamic capabilities facilitate a deep understanding of strategic management by integrating interdisciplinary views and ideas and resting upon traditional theories of the firm (Augier/Teece 2009: 413).

3.1 Roots in the behavioral theory of the firm

The behavioral theory of the firm, a product of the 1950s and 1960s Carnegie School, was strongly impacted by the views of Simon (1947) and Cyert and March (1963) on bounded rationality, routines, opportunism, and slack. Like many other scholarly fields, it was not built to update the domain of strategic management. Actually, the modern subject of strategic

management as present in today's fields of research only developed in the 1970s out of the strategic planning field (Teece 2009: 89).

In contrary to the dynamic capabilities concept, the behavioral theory of the firm was not established with solid prescriptive goals. Yet, some perceptions of the behavioral view are applied in other fields of strategic management, like the resource-based view (Barney 1991) and the dynamic capabilities framework (Pierce et al. 2002; Augier/Teece 2009: 413; Augier/Teece 2008: 1191f.). Augier and Teece (2009: 413) go so far as to say that "dynamic capabilities can perhaps be viewed as the 'new' behavioral theory of the firm extended to recognize the importance of intangible assets, outsourcing, offshoring, and rapid change".

The most important keywords in the behavioral theory of the firm are, according to Cyert and March (1963) and Augier and Teece (2009: 413), "a political conception of organizational goals, a bounded rationality conception of expectations, an adaptive conception of rules and aspirations, and a set of ideas about how the interactions among these factors affect decisions in a firm". While in the neoclassical theory where objectives are considered to be set alternatives with according consequences, objectives in the behavioral theory are considered to represent the wants and needs of political coalitions, which are modified whenever the structure of the coalition changes. The coalition which influences the goals of the firm may consist of shareholders, customers, workers, managers, suppliers, and creditors who possibly all set their emphasis on different goals. New decision alternatives are thus permitted by the dynamism of aspirations, and firms need to be active and search in order to generate sustained strategic opportunities (Winter 2000: 994; Augier/Teece 2009: 413; Augier/Teece 2008: 1191f.).

This leads to the characteristics of the behavioral theory of the firm. Firstly, in the behavioral view, firms have to actively look for important information. The previously described costly search activity ideally results in obtaining information. The location within the organization and the definition of the problem which has led to the search activity influence the direction of search. The searching hence supports the creation of new strategies and allows the anticipation of future developments. Secondly, the behavior of agents in the behavioral theory is intentionally rational, and emotions do not influence their behavior. Nevertheless, it is noted the organizations are only boundedly rational. Thirdly, decision making is considered to be the result of standardized operating routines and the search for alternatives in order to

react to a problem or challenge. The choice, which results, is thus impacted by the rules of the organization (again, result of the past learning by the organization), by the definition of the problem, and by the sequence in which alternatives are considered (Augier/Teece 2009: 413). And fourthly, in the behavioral theory, each firm is seen as unique (Cyert/March 1963). The agents and also the organizations themselves vary in their know-how, their ambitions, and their decisions, which causes firm heterogeneity as one of the most central contributions of the behavioral theory of the firm (Pierce et al. 2002; Augier/Teece 2008: 1191f.).

The abovementioned perspectives of the behavioral theory are also relevant for the dynamic capabilities concept: The agents responsible for decision making are intendedly and boundedly rational; entrepreneurs focus on sensing opportunities ahead of the competition and try to involve others to spread their vision; alignment of incentives is expected to be satisfying; and decision-making biases are realized, and mechanisms that allow to suspend biases are recognized (Augier/Teece 2009: 413f. ; Augier/Teece 2008: 1191f.).

3.2 Roots in the transaction cost theory

In addition, the dynamic capabilities theory is also influenced by the transaction cost theory, although not as extensively as by the behavioral theory of the firm.

The transaction cost framework, based on Williamson (1975, 1985), is a well-known concept used to explain economic organization. In its perspective, markets and hierarchies are alternative mechanisms to organize business activity. The focus is on opportunism and bounded rationality. Production is mostly organized internally within the firm in order to save transaction costs. Thus, organization within the firm (vertical integration) is considered to be superior to market transactions especially when the job demands the use of specific assets (Teece 2009: 91; Augier/Teece 2009: 414; Augier/Teece 2008: 1192).

The transaction cost perspective offers substantial “utility and [...] explanatory power” (Teece 2009: 91). Nevertheless, it only considers existent resources and does not explain how resources can be detected, assembled, and how organizations learn. It includes the idea of opportunism, not opportunity. While the transaction cost theory is able to ensure the right governance of how things should be organized, it is not capable of extensively explicating the characteristics, organization, and behavior of the modern firm. And even though governance

is an important factor of successful management, it will not result in sustainable competitive advantage. To achieve the goal of sustained competitive advantage, it is more crucial “to make the right investment choices, select the right assets to ‘govern’, create, and capture complementarities, and establish the correct business model” (Augier/Teece 2009: 412). However, the transaction cost concept is rather static and concentrates on value protection rather than on dynamic value creation through rearrangement and enhancement (Teece 2009: 92; Augier/Teece 2008: 1192f.).

Besides governance costs, Williamson (1975, 1985) acknowledges some relevance (though not strong) to other costs, namely production costs, in his transaction cost framework, too. However, as production costs address both strategic and operational issues, they are indispensable to understand for both practitioners and theorists. Operational issues in the production field could concern, for example, the introduction of flexible procurement, whereas strategic challenges might be related to the investment decision in a new factory or in a new generation of products. Of course, the performance of a firm will not only be influenced by the production decisions, but also by the governance decision (Augier/Teece 2009: 414; Teece 2009: 92; Augier/Teece 2008: 1192f.).

The dynamic capabilities-based theory sees that how the firm functions cannot be fully explained by the transaction cost concept, but also internalization or asset selection choices need to be taken into account. Williamson (1999), Teece (2009), and Winter (2003) note that transaction cost economics and dynamic capabilities are complimentary, and Williamson (1999) even states that the view of the transaction cost and the internal firm “deal with partly overlapping phenomena, often in complementary ways” (Williamson 1999: 1098). Winter (1988) and Teece (1990: 59) furthermore indicate that, for an extensive development of the firm’s capabilities, the transaction cost view has to be combined with a theory about both production and knowledge. In consequence, researchers started to search for other, stronger theories of the firm where the behavioral and the evolutionary theory of the firm were identified as useful concepts. They approach a different boundary of the transaction cost theory, which might be even deeper: It tries to describe organizational behavior as the consequence of opportunistic behavior and contractual gaps. It is important to note that even though these are relevant deliberations, they are not satisfactory to guarantee an excellent performance of the firm (Teece 2009: 93f.; Augier/Teece 2009: 414; Augier/Teece 2008: 1192f.).

3.3 Roots in the evolutionary theory

The evolutionary theory itself is rooted in the concept of an industry equilibrium devised by Marshall (1925). He worked on how a supply-demand equilibrium on industry-level could be generated by a number of organizations in disequilibrium. Marshall (1925: 367) states that “firms rise and fall, but the representative firm remains always of the same size”. This representative firm he refers to is assumed to lead from the dynamic analysis of firm level to the static industry level (Augier/Teece 2009: 414; Augier/Teece 2008: 1194).

Schumpeter (1934), Simon (1955), and March and Simon (1958) are other authors that contribute meaningfully to the emergence of the evolutionary theory by establishing the idea of bounded rationality (Augier/Teece 2009: 414). Schumpeter (1934) identifies the importance and necessity of bounded rationality for a theory of dynamism and innovations:

“The assumption that conduct is prompt and rational is in all cases a fiction. But it proves to be sufficiently near to reality, if things have time to hammer logic into men. Where this has happened, and within the limits in which it has happened, one may rest content with this fiction and build theories... Outside of these limits our fiction loses its closeness to reality.” (Schumpeter 1934: 80)

The profit maximization debate led by Machlup (1946), Friedman (1953), Penrose (1952, 1953), and Alchian (1950; 1953) also gave rise to some evolutionary ideas. It focuses on how economic selection is influenced by intentionality and the utilization of a group of non-homogeneous organizations as a basis for selection, which caused Winter (1964; 1971; 1975) to publish his formal evolutionary concepts. Nevertheless, it was not until some decades later that the evolutionary theory of the firm was born, when Nelson and Winter (1982) aggregated the works of Schumpeter (1934), Hayek (1945), Alchain (1950), and Cyert and March (1963) into what they called *A Neo Schumpeterian Theory of the Firm*. They consider firms to be formations seeking profit and assembling and exploiting valuable assets, each firm featured with routines or competencies. Based on their routines and competencies, the firms build rent-seeking strategies which advance the evolutionary process (Augier/Teece 2009: 415; Augier/Teece 2008: 1194).

Researchers came up with the concept of firms as “knowledge-creating and learning entities” (Teece 2009: 95) as an explanatory element of strategic management and the theory of the firm. In this view, the firm endogenously creates its set of productive chances and opportunities. This is especially supported by Penrose ([1959] 1995) who emphasizes the

relevance of learning to facilitate firm growth and promotes the view of the firm as a reservoir of capabilities and knowledge. She defines a firm as “both an administrative organization and a collection of productive resources, both human and material” (Penrose [1959] 1995: 320). The most important inputs into the production process are the resources of the firm. They are firm-specific, as they are the outcome of the firm’s know-how and its past experience over the years. Resources can be applied more efficiently through organizational learning and may then enable growth. This opportunity exists even for firms who do not increase their capital base because organizational learning may result in new applications for services (Teece 2009: 96; Augier/Teece 2009: 415; Augier/Teece 2008: 1194).

The first application of Penrose’s view to strategic management challenges was by Teece (1980: 982) in his article concerned with the multiproduct firm. In this paper, the center of interest is Penrose’s idea that firms usually dispose of human capital which is not completely specialized so that it can be applied in different manners. This enables firms to diversify into new products and services. Teece (1980) furthermore supports Penrose’s finding that firms have a surplus of resources that can be deployed for diversification. This finding was also highlighted by Wernerfelt (1984) who emphasizes the importance of “the idea of looking at firms as a broader set of resources” (Wernerfelt 1984: 171) and the insight that “the optimal growth of the firm involves a balance between exploitation of existing resources and development of new ones” (Wernerfelt 1984: 178; Penrose [1959] 1995; Teece 2009: 96).

3.4 Roots in the resource-based theory

Teece et al. (1990; 1997) were the first researchers to address the conceptualization of dynamic capabilities. They present the dynamic capabilities framework as an extension of the resource-based view of the firm, as did many other authors afterwards (Eisenhardt/Martin 2000; Ambrosini/Bowman 2009; Wang/Ahmed 2007). The RBV is a leading theoretical conception to explain the achievement and sustainment of competitive advantage developed and has been researched by a large group of authors (Schumpeter 1934; Penrose [1959] 1995; Wernerfelt 1984; Prahalad/Hamel 1990; Barney 1991; Nelson 1991; Peteraf 1993; Teece et al. 1997; Eisenhardt/Martin 2010: 1105). The RBV supposes that firms are bundles of resources and that the resources are unequally distributed across organizations so that disparities in the resource stock of firms persist over a period of time (Wernerfelt 1984; Penrose [1959] 1995;

Amit/Schoemaker 1993; Mahoney/Pandian 1992). When these resources are simultaneously valuable, rare, imperfectly imitable and imperfectly substitutable (the so-called VRIN resources), they can constitute a source of competitive advantage (Barney 1991: 105ff.; Ambrosini/Bowman 2009: 29; Eisenhardt/Martin 2000: 1105). Thus, the VRIN resources of the firm impact the choice of markets the firm could possibly enter and the dimension of profit the firm can realize (Wang/Ahmed 2007: 32; Wernerfelt 1989). Another interesting aspect is that with his definition of VRIN resources, Barney (1991) indirectly calls on the strategy scholars and practitioners to concentrate on intellectual capital as this constitutes the category of assets which is expected to most commonly correspond to the VRIN criteria (Teece 2014: 15; Teece 2000b).

The resource-based theory of the firm, a rather static view, illustrates how firms can earn superior profits in equilibrium. It does not offer an explanation about how the valuable resources can be created in the future or how the existing VRIN resources could be renewed in dynamic environments of rapid and unpredictable change. The latter questions are addressed by the dynamic capabilities framework, which clarifies how dynamic capabilities used by managers to “integrate, build, and reconfigure internal and external competences to address rapidly changing environments” and create sustainable competitive advantage (Ambrosini/Bowman 2009: 29; Eisenhardt/Martin 2000: 1106).

To sum it up, the dynamic capabilities view and the RBV have many assumptions in common: Their perspective of the firm as a bundle of resources which is heterogeneous and path-dependent and their focus on the creation of sustainable competitive advantage are the most important ones. In Hoskisson et al.’s (1999) words, they are located on the same side of the pendulum and their theoretical underpinnings are rooted in Penrose’s ([1959] 1995) theory of the growth of the firm (Ambrosini/Bowman 2009: 32).

3.4.1 Penrose and the RBV

Edith Penrose’s contribution is an especially valuable one, as it is considered as one of the key intellectual foundations of the RBV of the firm which impacts the international business (IB) strategy research and the theories of organizational routines. Interestingly, Penrose’s goal initially was not to make a contribution to the theory of the firm or the field of business strategy, but rather to work on a theory of the growth of the firm. Nevertheless, today she is better known for her view of the firm as a bundle of resources that she presented along the

way in her article about the theory of the growth of the firm (Penrose [1959] 1995; Teece 2009: 113f.).

Penrose ([1959] 1995) came up with a definition of the internal resources of a firm as “the productive services available to a firm from its own resources, particularly the productive services available from management with experience within the firm” (Penrose [1959] 1995: 5). The firm is considered as an “autonomous administrative planning unit, the activities of which are interrelated and are coordinated” (Penrose [1959] 1995: 15). Penrose ([1959] 1995) furthermore stated:

“[A] firm is more than an administrative unit; it is a collection of productive resources the disposal of which between uses and over time is determined by administrative decision-the physical resources of the firm consist of tangible things-there are also human resources available in a firm-strictly speaking, it is never resources themselves that are the ‘inputs’ in the productive process, but only the services that they render.” (Penrose [1959] 1995: 24f.)

To sum it up, Edith Penrose looks upon the firm as a “pool of resources the utilization of which is organized in an administrative framework. In a sense, the final products being produced by a firm at any given time merely represent one of several ways in which the firm could be using its resources.” (Penrose [1959] 1995: 149f.)

Penrose ([1959] 1995) sees that the economic theory was not only of relevance for managers but also for entrepreneurs. She states that a modification in the productive opportunities of firms is observed in the theory of the growth of the firm and that the external environment of a firm can be considered as an image in the mind of the correspondent entrepreneur (Penrose ([1959] 1995: 31f.). An indispensable capability of entrepreneurs is, when observing the market and business models, to sense technological or market opportunities (that others might not recognize) which may result in successful innovations (Penrose [1959] 1995; Teece 2009: 96f.). For Penrose ([1959] 1995: 52ff.) both the entrepreneurs and the managers are crucial for a firm’s success. In her view, the limit of the potential growth of a firm is impacted by the capacities of the management and not by the “exhaustion of technologically based economies of scale” (Teece 2009: 97; Augier/Teece 2008: 1195).

The perspective of Edith Penrose had a great impact on Teece’s view on diversification (Teece 1980; 1982). To Penrose’s ([1959] 1995: 104) statement that “[o]f all outstanding characteristics of business firms, perhaps the most inadequately treated in economic analysis is the diversification of their activities”, Teece (1982) reacted by presenting a theory of the

multiproduct firm (Teece 2009: 116). In general, it can be said that Penrose's illustration of the firm as a bundle of resources has firstly attracted a lot of attention among researchers in the area of business strategy and secondly caused them to further pursue the research in that field (Teece 2009: 116).

Nevertheless, there are some factors in Penrose's work that can be challenged from today's point of view of modern strategic management. For example, Penrose's definition of resources is still not very clear.⁴ Additionally, her perspective that firm growth is underpinned by idle managerial capabilities is often doubted. More common factors of firm growth include market and technological factors, financial rewards received by shareholders and managers, and investments in R&D (Teece 2009: 216). Moreover, Penrose does not address the achievement of competitive advantage. She rather takes a profit-seeking position and only quickly mentions general aspects of competitive strength among small and larger firms. Likewise, intangible assets and their roles are scarcely alluded to. Consequently, she is not considered *modern*. Yet she was advances for her time in different aspects as, for example, by identifying the significance of entrepreneurial management activities and of managerial action in sensing and seizing opportunities and threats. Another factor that she underplays, not surprisingly due to her early postwar environment, is the relevance of knowledge. In Penrose's world characterized by the postwar economy, investments and trade barriers were crucial challenges, and knowledge as a factor of competitive advantage and offshoring and outsourcing decisions were hence of less relevance (Teece 2009: 216f.). Consequently and interesting to note with regard to Chapter 7 about the MNE, Edith Penrose did not undertake efforts to apply her theory to the case of the MNE (Pitelis 2007a: 210; Teece 2014: 15).

Despite the above shortcomings, Penrose's perspective of the firm is still today of high importance and provides a good basis for the development of a theory of the firm and an understanding of the role of managers. Her framework is in line with more recent works that highlight the significance of routines and processes (Teece 2009: 117).

⁴ Resources are, according to Teece et al. (1997), firm-specific assets which are difficult or impossible to imitate. For a more detailed discussion of the term resources see Chapter 2.3.4.

3.4.2 The RBV and the theory of dynamic capabilities

Like previously stated, hindsight allows noting that Penrose might have underestimated the role of entrepreneurial elements of management for firm growth. She understood that knowledge can be employed to use physical assets in different manners. The services rendered by the “productive resources, both human and material” (Penrose [1959] 1995: 320) are the most important inputs into the production process. They are firm-specific because they are considered a function of the past experience of the firm and the knowledge the firm has accumulated in the course of time. This proposition refers to the path-dependency of processes and routines of firms which was recognized by subsequent scholars as well (Nelson/Winter 1982; Cyert/March 1963; Teece 1997; Zollo/Winter 2002; Teece 2009: 117).

Growth of the firm can be achieved by applying unused services to new businesses and hence can lead to diversification. Beyond that, learning helps the firm to employ its resources in a more efficient manner. In Penrose’s view, the consequence is that even financially weak firms are able to grow because of the managerial capacity which is employed in new utilizations. Interestingly, the findings of Penrose seem to be an early, weaker form of today’s dynamic capability framework, whose goal is to explain the development, achievement, and sustainability of competitive advantage of firms (Teece 2009: 117f.).

Penrose’s perspective is largely in accord with the different factors of the dynamic capabilities framework. In her view, the competencies of a firm can be reshaped due to the fungible characteristic of resources. Though, as noted before, Penrose did not pay much attention neither to competitive advantage considerations nor to the aspect of (in)imitability of resources. Furthermore, she did not consider a dynamic environment, in which the renewal and improvement of capabilities is necessary. And finally, although Penrose did acknowledge the relevance of entrepreneurship, she didn’t refine the concept nor did she illustrate the creation of new markets through entrepreneurship (Teece 2009: 119).

Teece et al. (1990: 11) argue that “our view of the firm is somewhat richer than the standard resource-based view [...] it is not only the bundle of resources that matter, but the mechanisms by which firms learn and accumulate new skills and capabilities, and the forces that limit the rate and direction of this process”. In their article from 1994, Teece and Pisano point out that the RBV was not capable of explaining how successful firms showed “timely responsiveness and rapid and flexible product innovation, along with the management

capability to effectively coordinate and redeploy internal and external competences” (Teece/Pisano 1994: 537). In their subsequent research article, Teece et al. (1997) summarize their findings and analyzed how the limitations of the RBV can be overcome by the dynamic capabilities framework (Ambrosini/Bowman 2009: 31).

Teece and Pisano are commonly seen as the initiators of the dynamic capabilities view. It has to be noted, though, that their work is the continuation of Nelson and Winter’s (1982) article, *An Evolutionary Theory of Economic Change*. This research is involved with the influence of routines, the way they form and limit the potential growth of the firm and the way they deal with dynamic environments. Teece et al. (1997) adopt Nelson and Winter’s (1982) “efficiency approach to firm performance rather than a privileged market position approach” (Ambrosini/Bowman 2009: 31). Moreover, they both underline the importance of internal rather than external factors for developing competitive advantage and emphasize the significance of path dependencies and the necessity to reshape the resources of the firm to allow the firm’s change and evolution (Ambrosini/Bowman 2009: 31).

4. Dynamic capabilities-based theory of the firm

Chapter 4 is concerned with Teece's dynamic capabilities-based theory of the firm. Firstly, the core building blocks (processes, positions, and paths) and secondly, the three categories of processes and activities of managerial orchestration (sensing, seizing, and transforming) are presented.

4.1 Core building blocks

In their article, Teece et al. (1997: 518) hold the view that "the competitive advantage of firms lies within its managerial and organizational processes, shaped by its (specific) asset position, and the paths available to it". Hence, they divide the core building blocks of dynamic capabilities into the categories of processes, positions, and paths and explain the categories as follows:

"By managerial and organizational processes, we refer to the way things are done, or what might be referred to as its routines, or patterns of current practice and learning. By position we refer to its current specific endowment of technology, intellectual property, complementary assets, customer base, and its external relations with suppliers and complementors. By paths we refer to the strategic alternatives available to the firm, and the presence or absence of increasing returns and attendant path dependencies." (Teece et al. 1997: 518)

The first two blocks, the processes and positions of the firm, bring the firm's capabilities and competences. These capabilities and competences can be found in different activity fields of the firm, for example, in the factory, in the laboratories concerned with R&D, or on the executive level. Distinctive competences, those that are difficult to replicate and imitate, are of strategic interest according to Teece et al. (1997) because there are no ready markets yet. Moreover, these competences and capabilities have to be built as they cannot be bought (Teece et al. 1997: 518).

In the following, the processes, positions and paths are presented in more detail.

4.1.1 Processes (Routines)

Teece et al. (1997: 518) identifies three roles of organizational and managerial processes, namely coordination/integration, learning, and reconfiguration. Organizational and

managerial processes transfer the business strategy into the daily routines of the firm's employees. The more consistent and the stronger the firm values are, the more effective and constructive the routines can be. Dynamic capabilities depend on the entrepreneurial, managerial, and leadership know-how of the top executives and their skills to create, develop, introduce, change, and renew these routines. Firms with strong dynamic capabilities have the ability to adapt to dynamic environments characterized by rapid change and to form and influence the business environment (Teece 2014: 16).

Coordination/integration. The economy is said to be coordinated by the price system, while the activity within the firm is coordinated or integrated by the managers. The effectiveness and efficiency of the internal integration or coordination, as well as external coordination, are very crucial. More and more, external activities and technologies need to be integrated too. In their research in project development in the automobile industry, Clark and Fujimoto (1991) find out that in the routines related to coordination, there are commonly considerable differences among firms. This indicates that coordination routines are rather firm-specific in their nature (Teece et al. 1997: 518f.).

Learning. The learning role of organizational processes might be of even more importance than integration. Learning is considered a process resulting in the improvement of task performance (better, quicker) through experimentation and repetition. Learning additionally allows new production opportunities to be recognized and is dependent on both individual and organizational skills. Finally, it is crucial to see that learning generates organizational knowledge which is tied to "new patterns of activity, in 'routines', or a new logic of organization" (Teece et al. 1997: 520).

Reconfiguration and transformation. The ability to sense the necessity to alter the asset structure of a firm and to undertake internal and external transformation, which constitutes a learned organizational skill, is especially valuable in environments of rapid change (Amit/Shoemaker 1993). In order to do so, nonstop observation and evaluation of markets, technologies and competitors, as well as scanning of the environment, is inevitable. Then, the reconfiguration and the transformation need to be implemented before the competition does so (Teece et al. 1997: 520f.).

4.1.2 Positions (Resources)

The specific assets of a firm directly influence its strategic position. Specific assets that Teece refers to include not only assets on the balance sheet like specialized equipment and plants, but also human capital, knowledge assets which are difficult to trade, relational assets, and reputational assets. These assets are responsible for the generation of competitive advantage (Teece et al. 1997: 521; Teece 2014: 16). In their paper, Teece et al. (1997: 521f.) identify eight explanatory categories: technological assets, complementary assets, financial assets, reputational assets, structural assets, institutional assets, market (structure) assets, and organizational boundaries.

A firm's strategic position, based on its resources, is improved if the resources correspond to the VRIN criteria proposed by Barney (1991). The asset category which is most likely to meet the VRIN criteria is intellectual capital, especially know-how and technology, as it is mostly tacit, idiosyncratic, and has diffused edges. Thus, VRIN criteria are quite unique and more custom-built in contrast to resources which can be bought at competitive prices on the market. It is necessary to note though that VRIN resources are not automatically valuable by themselves, but only when they offer a difficult-to-imitate, unique selling point to the customer that in turn brings value to stakeholders and the firm (Teece 2014: 16f.).

Of course, in rapidly changing environments with a high degree of competition, resources are typically of fleeting value (Teece 2014: 17). Assets are dynamically deployed, and usually astute asset orchestration by management are essential. Teece et al. (1997: 515) refer to this:

“The global competitive battles in high-technology industries [...] have demonstrated the need for an expanded paradigm to understand how competitive advantage is achieved. Well-known companies like IBM, Texas Instruments, Philips, and others appear to have followed a ‘resource-based strategy’ of accumulating valuable technology assets [...]. However, this strategy is often not enough to support a significant competitive advantage.”

The reason accumulating valuable assets is not enough is that the coordination and orchestration of the resources is just as important for a firm to be successful (Teece 2014: 17). So, asset orchestration and market (co-) creation play an important role here (Pitelis/Teece 2010: 1259). In contrast to the capabilities approach, the transaction cost theory and neoclassical economics make the assumption that markets exist no matter what. In the capabilities view, it is thinkable that markets first have to be built involving the introduction of new products or services as well as the corresponding product support and training. An

example of a company who first created a market for their products is Gillette in India. Before being able to sell their safety razors, they promoted the advantages of beard removal in India. Transaction cost perspectives suppress the necessity of these market creation activities and ignore that instead of a contract problem the actual problem could be a lacking or too small market (Pitelis/Teece 2010: 1259f.; Teece 2014: 17).

In a neoclassical world which assumes perfect competition, the firm has extensive, thoroughly information about the needs and wants of consumers and competitors. In reality though, this information is likely to be inaccessible as it may be tacit, diffuse, and proprietary. The investment decision is made on the basis of evaluations, on sensing an opportunity and how competitors might react. In a perfect world of markets, like in the neoclassical perspective, sensing opportunities is not a much needed capability (Teece 2014: 17).

“The focus of the dynamic capabilities framework is on how firms can create, extend, integrate, modify, and deploy their resources and/or specific assets while simultaneously managing competitive threats and effectuating necessary transformations” (Teece 2014: 17). This does not mean that the dynamic capabilities approach makes firms indispensable to limiting negative effects of opportunism and other hazards. In contrary, the capabilities approach emphasizes the necessity to embrace and sense opportunities and to benefit from the exploitation of scope economies (Teece 2014: 32). While other theories focus on the ownership and protection of tangible resources, the dynamic capabilities view focusses on intangible resources and asset orchestration. And this managerial asset orchestration needs to be included into the MNE theory, so that international business and international management can be linked (Teece 2014: 17).

4.1.3 Paths (Strategy)

A strategy chosen by a firm must match its processes and positions (resources). A successful strategy uses the resources and assets of the firm to respond to market needs and possibly have advantages over competitors. It also helps to sense opportunities and limits due to the firm’s historical path dependency (Teece 2014: 17).

In the first reference to paths as one of the core building categories of dynamic capabilities, Teece et al. (1997: 522ff.) distinguish *path dependencies* and *technological opportunities*. The notion of path dependencies indicates that where a firm can go in the future is dependent on its present position, which is mostly influenced by the paths it has gone in the past. Path

dependencies are basically a reminder that history matters. And history, which involves investment decisions in the past and a firm's collection of routines, constitutes a limitation of possible future behavior (Teece et al. 1997: 522f.). The future of the firm is furthermore impacted by its technological opportunities. The extent to which and the speed with which an industrial activity can advance is determined by the technological opportunities that lie ahead (Teece et al. 1997: 523f.).

The paths relate to the available alternatives of strategies of the firm. And the strategy of the firm must lead and inform the managerial orchestration of assets, and vice versa. In order to do so, a strategy has to be consequent, continuous and welcome innovation. Like previously explained, the strategy is not only a product of the past, but it also influences the future paths of the firm, for example by choosing the right product, targeting the right customers, and deploying the necessary resources (Teece 2014: 17). Rumelt (2011: 6) defines a good strategy as "a coherent set of analyses, concepts, policies, arguments, and actions that respond to a high-stake challenge" and allocates three functions as the kernel of strategy: prescient diagnoses, a guiding policy, and coherent action. Even though competitors may be able to see and imitate the actions determined by the strategy, firstly, their imitation will be too late, and secondly, they will not be able to recognize the policy behind those actions (Teece 2014: 17).

In the dynamic capabilities perspective, performance is impacted by both dynamic capabilities and the business strategy of the firm. In dependence on the strength of a firm's capabilities, different strategies should be chosen (Teece 2014: 17f.). Teece (2014:18) states that "[s]trong dynamic capabilities require firms to sense, seize, and transform in conjunction with a sound strategy. A sound strategy must in turn have a strong kernel".

| Core building blocks | Weak ordinary capabilities | Strong ordinary capabilities | Strong dynamic capabilities |
|------------------------------|----------------------------|-------------------------------|---|
| Processes (routines) | Sub-par practices | Best practices | Signature practices and business models |
| Positions (resources) | Few ordinary resources | Munificent ordinary resources | VRIN resources |
| Paths (strategy) | Doing things poorly | Doing things right | Doing the right things (good strategy) |

Table 2: Elements of the capabilities framework (own representation based on Pitelis/Teece 2015: 12)

To sum up the chapter about the core building blocks of dynamic capacities, Table 2 displays different elements of the capabilities framework and contrasts ordinary capabilities with dynamic capabilities.

4.2 Fundamental clusters of dynamic capabilities

Teece (2007; 2014: 18) suggests that dynamic capabilities can be divided into three categories of processes and activities of managerial/entrepreneurial orchestration:

- (1) Sensing: “identification and assessment of opportunities at home and abroad”
- (2) Seizing: “mobilization of resources globally to address opportunities, and to capture value from doing so”
- (3) Transforming: “continued renewal”

Sensing represents the most entrepreneurial capability of the three clusters. It includes investigating technological opportunities, testing markets, interacting with customers, and scanning the internal and external environment. To detect unsatisfied demand, managers have to build and examine market hypotheses. In the case of MNEs, it is crucial that the sensing capabilities are available and deployed in all parts and subsidiaries of the firm. Starbucks, as an example, has implemented an adjusted strategy for the Chinese market, where coffee is a rather unpopular product. In China, they offer specific beverages and sandwiches adapted to the Chinese taste in combination with open spaces that are ideal for casual business meetings (Teece/Ali-Aali 2013: 28; Teece 2007: 1322f.).

Seizing constitutes a managerial task, which becomes necessary after sensing an opportunity. The creation of a strategy is crucial at this point. Strong dynamic capabilities facilitate the implementation of the required activities and the formation of a business model which results in customer satisfaction and access to the required human and capital resources (Teece/Ali-Aali 2013: 28; Teece 2007: 1326f.).

The capability of transforming reveals the importance of leadership. When the conditions or circumstances in the firm change, especially in case of radical opportunities or threats, transformation is usually required. Transformation capabilities involve discarding products, modernizing of old facilities, and the modification of the firm’s methods, business models, and possibly even organizational values and culture (Teece/Ali-Aali 2013: 28; Teece 2007: 1334f.).

In MNEs, the three clusters of activities are usually ongoing processes. In different geographic areas, the MNE might have to focus on a different category of capabilities. Yum brands (the owner of Taco Bell, KFC, and Pizza Hut), for instance, had to focus on seizing in China to secure quick expansion and at the same time had to emphasize transformation in the established market in the United Kingdom to decrease business (Teece/Ali-Aali 2007: 29).

All three activities are indispensable for the firm's management if the firm's goal is to persist in an environment characterized by rapid change of technologies and markets. Although dynamic capabilities and strategy can be analyzed and viewed as two distinct concepts in theory, they are strongly interconnected in practice. For example, sensing is a significant activity to dynamic capabilities but it simultaneously encompasses a solid element of diagnosis that in turn is relevant to strategy (Teece 2014: 18). This interrelation of dynamic capabilities and strategy is shown in Table 3.

| Strategy kernel | Diagnosis | Guiding policy | Coherent action |
|--------------------------------------|-----------------|------------------------|------------------------|
| Related dynamic capabilities cluster | Sensing | Seizing/Transformation | Seizing/Transformation |
| Nature of managerial orchestration | Entrepreneurial | Administrative | Leadership |

Table 3: The interrelation of dynamic capabilities and strategy (own representation based on Teece 2014: 18)

For the sake of completeness, in addition to Teece's (2007) classification of capabilities into sensing, seizing, and transforming, Wang and Ahmed's (2007) typology should be mentioned as well. They divide dynamic capabilities into three main components, namely the adaptive capability, the absorptive capability, and the innovative capability (Wang/Ahmed 2007: 37ff.). The approaches have in common, though, that their categorizations go beyond Teece et al.'s (1997) original definition with an emphasis on the ability to reconfigure resources, and also that, they acknowledge the importance of sensing and seizing opportunities as an integral part of their dynamic capabilities. In Wang and Ahmed's (2007) classification, this is represented by their absorptive capabilities. Other authors in contrast, for example, Ambrosini and Bowman (2009), do not see sensing and seizing as dynamic capabilities but consider them as "enablers and inhibitors" (Ambrosini/Bowman 2009: 36) of dynamic capabilities. This is again evidence that the theoretical foundations of the dynamic capabilities concept are not yet set in stone.

5. Interim conclusion

The previous chapters contain a large amount of information about and theoretical concepts of the dynamic capabilities framework. The major aspects which are important to remember for the chapters to come are summarized below. Based on the crucial finding that the dynamic capabilities framework is not yet considered a theory, this interim conclusion furthermore serves to lead to the two main chapters, which will help to answer the research questions: *Do dynamic capabilities contribute to the firm's competitive advantage and how are they linked to the theory of the MNE?*

After the original definition of dynamic capabilities by Teece et al. (1997), a multiplicity of definitions has swarmed the literature in the corresponding research field. According to Teece (2007), Augier and Teece (2007; 2009), and Katkalo et al. (2010) the dynamic capabilities of the business enterprise are perceived as the particular, non-imitable orchestration activities of firms. In his seminal article, Teece (1997) lists the three concepts of processes, positions, and paths as the core building blocks of dynamic capabilities. In 2007, he extends his prior tripartite rubrics with the microfoundations of dynamic capabilities sensing, seizing, and transforming.

As the framework has always been interested in the theory about the achievement of sustained competitive advantage, the imitability and replicability of processes and positions within business firms are deeply analyzed aspects (Teece et al. 1997; Pitelis/Teece 2015: 11). Of course, capabilities which can easily be replicated by others will not result in excessive financial returns and will not facilitate firm growth. In order to successfully analyze the achievement of competitive advantage, it is hence crucial to distinguish dynamic capabilities (very difficult to imitate; support evolutionary fitness⁵) from ordinary capabilities (commonly easy to replicate by others; support technical fitness⁶). Dynamic capabilities are based on Barney's (1991) VRIN resources (valuable, rare, inimitable, and non-substitutable) and require

⁵ Evolutionary fitness "refers to how well a dynamic capability enables an organization to make a living by creating, extending, or modifying its resource base. Influences on evolutionary fitness include technical fitness, competition, and market demand" (Helfat et al. 2007: 121).

⁶ In contrary, technical fitness denotes "how effectively a capability performs its intended function (its quality) when normalized (divided by) by its cost" (Helfat et al. 2007: 7). For the role of technical fitness in the measurement of performance see chapter 6.1.

intelligent managerial orchestration in combination with a “good strategy” (Rumelt 2011: 1; Pitelis/Teece 2015: 12).

Pitelis and Teece (2015:12) successfully put the characteristics of the dynamic capabilities framework in summary:

“The DC perspective recognizes the most promising opportunities and the managerial orchestration needed to create, accommodate, and fashion resources both inside and outside the firm, at home and abroad, including the external linkages and alliances that are common in the global economy and well documented and analyzed in the international business literature.” (Pitelis/Teece 2015: 12)

Another relevant aspect of the dynamic capabilities concept concerns the path dependency. Firms are deeply rooted in their history. Signature business model und processes, as well as the firm’s values, are built over a long time and are dependent on a firm’s history, culture, experience, creativity, and most importantly, the firm’s past managerial decisions. Consequently, dynamic capabilities cannot be bought at the market, but are rather built within the firm. They are complex, difficult to be understood by outsiders, and generally do not travel well (Pitelis/Teece 2015: 12f.). Pitelis and Teece (2015: 12f.) refer to dynamic capabilities as being “sticky” and they quote the current Apple CEO Tim Cook to illustrate their statements: “Apple has the ability to innovate in all three of these spheres and create magic... This isn’t something you can just write a check for. This is something you build over decades” (Pitelis/Teece 2015: 12f.).

The orchestration skills of the top management decide on the quality respectively existence of the dynamic capabilities. Because of their tacit feature, they are hard to teach others. Dynamic capabilities are about how a firm develops and reinforces strengths, anticipates future developments, and comes up with processes, products, and business models that not only meet but also shape the market and the corresponding business environment. Hence, firms with strong dynamic capabilities will have advantages when it comes to staying relevant to the needs of the market and sensing changes in the environment, technology, or the market in general (Pitelis/Teece 2015: 13; Teece et al. 1997).

Despite the growing body of research that is concerned with the dynamic capabilities view, the perspective suffers from the variety of differing theoretical foundations. A large part of the early researchers stand in for varying, sometimes conflicting, assumptions. Additionally, the key variables and constructs and their relationships are not yet sufficiently defined. This resulted in the lack of a coherent theory and theoretical work that does not continuously

move in the same direction (Arend/Bromiley 2009: 80; Barreto 2010: 274). Consequently, when studying the dynamic capabilities framework, one cannot yet refer to it as a theory. Fry and Smith (1987) state that the “‘congruence’ of a theory is defined by the laws of the relationship among its variables of interest” (Barreto 2010: 274). Hence, a required step for the transformation of the framework into a theory would involve the specification of the relationship of the framework’s key variables (Barreto 2010: 274).

This need will be addressed in the following chapter about the relationship between dynamic capabilities and competitive advantage. While Chapters 2 to 4 are mostly involved with the state of research, the chapters to come deal with the link between dynamic capabilities and competitive advantage and with the theory of the MNE. Hence, the two subsequent chapters will serve as a basis to find answers to the research questions: *Do dynamic capabilities contribute to the firm’s competitive advantage and how are they linked to the theory of the MNE?*

6. The relationship between dynamic capabilities and performance/competitive advantage

Already in 1982, Lippman and Rumelt recognized that in some cases the sources of competitive advantage are so multilayered and complicated that even the firms themselves often are not able to retrace and understand them. A serious challenge for the dynamic capabilities framework is to reach consensus concerning the existence and the nature of the link between dynamic capabilities and (sustained) competitive advantage/performance. A clarification of this relationship would also contribute to the transformation of the framework into a theory.

(Sustained) competitive advantage, as examined in Chapter 2.2, is one of most commonly utilized measurements of performance. And dynamic capabilities, just like operational capabilities, belong to the resource base of the firm. In this view, it is possible to examine dynamic capabilities as a source of competitive advantage by applying the logic of the resource-based view (Helfat et al. 2007: 12f.). According to Peteraf and Barney (2003: 314), the competitive advantage of a firm is determined by how much value (defined as willingness-to-pay minus cost) a resource creates in comparison with similar resources of a competitor. Dynamic capabilities generate value by enabling a firm to perform a set of actions and a certain function, which is linked to a particular objective. The value of a dynamic capability is determined by if and how much value its function generates. And the value of a function depends on the context, for example, the environmental demand and willingness-to-pay for it. The value of a dynamic capability changes subject to time, conditions, and environmental opportunities. Here, a modification of the environment can either result in a rise or reduction of the dynamic capability's value (Helfat et al. 2007: 13). However, it is possible that even though the environmental need and demand for a function is great, a dynamic capability may still only generate medium or low value. And even if a high value is created, the organization may not benefit in case there is no actual advantage because it has not created more value than competing firms. But if organizations dispose of differing levels of technical fitness of a capability, some firms may achieve competitive advantage through their dynamic capabilities (Helfat et al. 2007: 14). This might indicate that dynamic capabilities do not automatically and always result in competitive advantage.

This chapter firstly is concerned with the difficulties regarding an accepted measurement of both dynamic capabilities and of competitive advantage. It then actually examines the nature of the link between dynamic capabilities and performance by comparing the most important contributions in the literature and distinguishing direct and more complex relationships. Subsequently, this chapter presents some of the critiques expressed concerning the coherence of the construct also with regard to the link between the two key constructs. And finally, an assessment of what is expected to be the most promising and probable nature of the link is given, followed by some limitations of the presented content.

6.1 Challenges concerning the empirical measurement of the two key constructs

Concerning the measurement of both dynamic capabilities and competitive advantage/firm performance, scholars have not found a definite answer or approach, and very heterogeneous statements can be found in research literature. An extensive review of how the two key constructs (dynamic capabilities and competitive advantage) have been measured in past literature is outside of the scope of this thesis. This subchapter therefore serves to give a short overview and to briefly present some findings of what literature has to offer.

6.1.1 Measuring dynamic capabilities

Until recently, regarding the study of dynamic capabilities, the focus of researchers was largely put on the theoretical development, while empirical research was rather lacking (Danneels 2015: 10). According to Grant and Verona (2015), this absence of valid empirical metrics is one of the greatest barriers to the advancement of dynamic capabilities research. The topic still is a rather young strategic management research area, and until today, accepted measurement approaches of the key constructs are absent. And scholars still agree that “[m]easuring dynamic capabilities is challenging” (Danneels 2015: 2; Ambrosini/Bowman 2009; Giudici/Reinmoeller 2012).

However, in the last decade, research on dynamic capabilities has become increasingly empirical. More and more studies have contributed to a clearer idea of dynamic capabilities (Stadler et al. 2013; Pavlou/El Sawy 2011; Daneels 2011; Drnevich/Kriauciunas 2011; McKelvie/Davidsson 2009). Nevertheless, the concept was and still is being criticized. Fifteen

years ago, for example, Kraatz and Zajac (2001: 653) stated “while the concept of dynamic capabilities is appealing, it is a rather vague and elusive one which has thus far proven largely resistant to observation and measurement”. And even though the literature has advanced substantially since, empirical investigation is left underdeveloped, and there still is no accepted metric to measure any of the diverse types of dynamic capabilities (Danneels 2015: 10).

There are different approaches, each with strengths and weaknesses, about how dynamic capabilities have been measured in the past. One method is to deduce the existence of dynamic capabilities from the performance outcome of the firm. Of course this comes along with the risk of tautological argumentation and with the merging of actual realization and potential or possibility. In order to eliminate the tautological reasoning, dynamic capabilities have to be measured in a manner that differs from the performance outcome of deploying these capabilities (Danneels 2015: 2). This is demonstrated by Stadler et al. (2013), who measures the potential capacity of an organization to gain and develop new resources and employed these measures to forecast the quantity and success of, in their case, the oil exploration and development, or in general, of resource development actions. Stadler et al. (2013), or King and Tucci (2002), to give another example, prevent perceptual biases that are implicated with first-hand reports by deploying archival measures. This kind of data is often easy to access and already available. Nevertheless, one needs to be aware that the archival data was originally gathered for another purpose, so that construct validity might be absent (Danneels 2015: 2; Ketchen et al. 2013). In contrary, the most direct measurement of dynamic capabilities is reached with measurements from surveys (Danneels 2008; Drnevich/Kriauciunas 2011; Sirmon et al. 2010; Capron/Mitchell 2009). However, they depend on the correct reporting by managers of their organization and therefore can have reporting biases. Hence, in order to attain accurate and feasible self-reported measurements, managers have to possess valid resource cognition about the resources and competences of their organization (Danneels 2015: 2; Danneels 2011).

6.1.2 Measuring (sustained) competitive advantage/firm performance

First of all, it is important to acknowledge that, in the context of the examination of the key outcome of dynamic capabilities, the concepts of firm performance and (sustainable) competitive advantage are used interchangeably in many of the relevant papers. The reason

being is that firm performance is seen as an empirical indicator of competitive advantage and therefore facilitates empirical investigations (Schilke 2014: 180). Some authors, like Foss and Knudsen (2002), even argue that competitive advantage is to be defined in terms of performance (Peteraf/Barney 2003: 319). It is indeed not unusual for scholars to share this view. For instance, competitive advantage is defined by Besanko et al. (2000) as an advantage in profits compared to the competitors of the same industry. Other authors have a similar opinion, such as Ghemawat and Rivkin (1999: 49), who argue that a “firm [...] that earns superior financial returns within its industry (or strategic group) over the long run is said to enjoy a competitive advantage over its rivals”. Still, as addressed in Chapter 2.2, a more correct and feasible definition of competitive advantage involves the concept of value creation. This is also extensively covered in an article by Peteraf and Barney (2003: 313ff.). Nevertheless, for the sake of the examination of the link between dynamic capabilities and competitive advantage/firm performance and due to the non-differentiation of the two terms in the majority of papers, this thesis will also use the concepts of competitive advantage and firm performance in an interchangeable way.

Helfat et al. (2007) suggest two conceptual dimensions: technical and evolutionary fitness. Technical fitness indicates “how effectively a capability performs its intended function when normalized (divided) by cost” (Helfat et al. 2007: 7). This measure comes along with some advantages. It constitutes a sliding scale of measurement. This is very important as some firms may possess dynamic capabilities which are less technically fit than those of other firms. So it is misleading of Arend and Bromiley (2009: 82) to state that “dynamic capabilities are features that firms either have or do not have”. Additionally, the concept of technical fitness factors in the cost of the dynamic capability is crucial according to Arend and Bromiley (2009). Moreover, technical fitness makes it possible to differentiate between the performance of the firm and the performance of a task. For the measurement of firm performance, another metric is used, the evolutionary fitness (Helfat et al. 2007: 7ff.; Helfat/Peteraf 2009: 97f.). This denotes “how well a dynamic capability enables an organization to make a living by creating, extending, or modifying its resource base” (Helfat et al. 2007: 7). The application of these two metrics eliminates any eventuality of a tautological relationship between competitive advantage/performance and a dynamic capability. A firm may have a dynamic capability, but not use it; it might have a low technical fitness and even when it has a high technical fitness, it might not increase the performance in terms of evolutionary fitness. Some empirical studies,

like Hess and Rothaermel 2008, have already applied the performance yardsticks of technical and evolutionary fitness (Helfat/Peteraf 2009: 98).

Like stated above and even though performance or competitive advantage is considered one of the most relevant constructs in management literature, there is no consistency in what performance actually is and how it can be measured. Richard et al. (2009) reviewed five renowned journals⁷ over a period of three years from 2005 to 2007 and detected 213 articles that involved firm performance as either a dependent, independent, or control variable. This corresponds to 29 percent of the total amount of published papers in those journals. The used measures are manifold, including among others, financial operating ratios, sales, market share, or the survival of the firm. In the 213 identified papers, 207 differing measures of performances were applied (Richard et al. 2009: 719f.). This indicates a large variety of approaches and makes it, needless to say, that a detailed examination of the measurement of firm performance/competitive advantage goes beyond the scope of this thesis.

6.2 The nature of the link between dynamic capabilities and competitive advantage

The literature has proposed many varying approaches concerning the link between dynamic capabilities and competitive advantage/performance. While Teece et al. (1997) suggest a strong direct relationship, three years later Eisenhardt and Martin (2000) disagree and state that dynamic capabilities do not necessarily lead to competitive advantage. Authors like Helfat et al. (2007) demand a separation of the concept of dynamic capabilities from the achievement of competitive advantage. Teece (2007), though, sticks to a direct nature of the relationship. In the mentioned papers, as well as in other important literature concerning the link of these two concepts, “scholars have portrayed dynamic capabilities as direct drivers of competitive advantage, as preconditions, moderators, mediators, and mediated or moderated drivers of firm performance or firm change, and as combinations thereof” (Arend/Bromiley 2009: 76; Katkalo et al. 2010: 1180).

⁷ Namely the *Strategic Management Journal*, the *Academy of Management Journal*, *Administrative Science Quarterly*, the *Journal of International Business Studies*, and the *Journal of Management*.

To bring some order into the chaos of proposed relationships, literature is examined systematically in the following and classified into the two main approaches: a direct and a more complex link between dynamic capabilities and competitive advantage. Figure 2 gives an overview of the belonging of a selection of the most important papers, which are further presented and evaluated in the following subchapters.

It needs to be mentioned though that the classification of papers (and the author's approaches) into one of these groups is not distinct in all cases. Rather, it depends strongly on the argumentation of the corresponding authors, and sometimes elements of both approaches can be found. Consequently, the classification in Figure 2 is not set in stone but rather presents a proposed framework that helps to allocate the different approaches.

| Direct relationship | More complex relationships (indirect, moderating effects) |
|--|---|
| <ul style="list-style-type: none"> • Teece et al. 1997 • Makadok 2001 • Griffith/Harvey 2001 • Lee et al. 2002 • Zollo/Winter 2002 • Teece 2007 • Pitelis/Teece 2009 • Naldi et al. 2014 | <ul style="list-style-type: none"> • Eisenhardt/Martin 2000 • Rindova/Kotha 2001 • Zott 2003 • Helfat/Peteraf 2003 • Winter 2003 • Bowman/Ambrosini 2003 • Aragón-Correa/Sharma 2003 • Slater et al. 2006 • Zahra et al. 2006 • Augier/Teece 2007 • Wang/Ahmed 2007 • Helfat et al. 2007 • Ambrosini/Bowman 2009 • Barreto 2010 • Schilke 2014 • Teece 2014 • Wang et al. 2015 |

Figure 2: Classification of papers into the two main approaches concerning the relationship between dynamic capabilities and competitive advantage (own representation).

6.2.1 Direct relationship between dynamic capabilities and competitive advantage

A variety of scientific papers in the field of dynamic capabilities, which presume a direct link between dynamic capabilities and the performance of a firm, is presented in the following.

The most famous approach is by Teece et al. (1997) with their seminal article about dynamic capabilities and strategic management, which caused them to become known as the founders

of the dynamic capabilities view. They suggest a direct relationship between the two key concepts of dynamic capabilities and competitive advantage. Their framework intends to explain the success and failure of firms, the sources and techniques of private wealth generation and sustainment, and competitive advantage. For Teece et al. (1997), the most substantial question in strategic management is how firms create and sustain competitive advantage in environments characterized by rapid change. And the objective is twofold: They seek to both create a superior theory of firm performance and to update managerial practices for how to achieve competitive advantage in demanding external environments. Teece et al. (1997: 510) themselves view their dynamic capabilities framework “as an emerging and potentially integrative approach to understanding the newer sources of competitive advantage”. To them, it is obvious that “[w]inners in the global marketplace have been firms that can demonstrate timely responsiveness and rapid and flexible product innovation, coupled with the management capability to effectively coordinate and redeploy internal and external competences” (Teece et al. 1997: 515). This new form of competitive advantage is what Teece et al. (1997) call dynamic capability. After an extensive presentation of their proposed framework, Teece et al. (1997: 528) conclude that competitive advantage stems from dynamic capabilities as high-performance routines from within the firm, which are influenced by path dependencies, technological opportunities, processes, and positions. They furthermore indicate that dynamic capabilities cannot be bought in the market; they have to be built inside the firm (Teece et al. 1997: 528).

Makadok (2001) is another author who thinks of the dynamic capabilities framework as a causal mechanism which enables firms to generate economic rents. The objective of his article is to find out about the nature of the relationship between resource-picking and capability-building and their capability of rent-creation. In his study, he describes that a “capability affects profitability by enhancing the productivity of the other resources that the firm possesses, so it affects profitability only after resources are acquired” (Makadok 2001: 397). So, before applying dynamic capabilities, firms need to have resources on which they can act (Barreto 2010: 263).

In 2002, Zollo and Winter also indicated a direct relationship between dynamic capabilities and firm performance. They state that in external environments characterized by rapid change, for example in competitive and technological conditions, “both superiority and

viability will prove transient for an organization that has no dynamic capabilities” (Zollo/Winter 2002: 341; Barreto 2010: 263).

In 2007, Teece (2007: 1320) emphasized again that “[t]he ambition of the dynamic capabilities framework is nothing less than to explain the sources of enterprise-level competitive advantage over time”. He asserts that difficult-to-imitate and unique dynamic capabilities are required for sustainable advantage and that they “maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets” (Teece 2007: 1319). Teece (2007) assumes a direct and positive link between dynamic capabilities and performance and states that the relevance of dynamic capabilities for achieving competitive advantage has increased in today’s rapidly changing global economy (Teece 2007: 1321). Hence, Teece (2007: 1341), just like Pitelis and Teece (2009: 25), sees dynamic capabilities as the basis for competitive advantage in environments of fast technological changes:

“[D]ynamic capabilities aspire to be a relatively parsimonious framework for explaining an extremely seminal and complicated issue: how a business enterprise and its management can first spot the opportunity to earn economic profits, make the decisions and institute the disciplines to execute on that opportunity, and then stay agile so as to continuously refresh the foundations of its early success, thereby generating economic surpluses over time.” (Teece 2007: 1347)

A very recent concept illustrating a direct relation between dynamic capabilities and performance is by Naldi et al. (2014). They test Teece’s early conception of dynamic capabilities by examining small and medium sized enterprises in the audiovisual production industry in Europe. While Teece (1997; 2007) assumes a linear and positive effect, Naldi et al. (2014) find out that sensing and seizing, as two classes of dynamic capabilities, have a positive, yet curvilinear (J-shaped) effect on the innovative performance of the examined firms. As the development of dynamic capabilities is costly and calls for large investments, innovative performance only results when the benefits surmount the costs. Thus, sensing and seizing do have the potential to bring higher performance, but the implementation of these innovations needs a threshold below which no positive influence on performance can be stated (Naldi et al. 2014: 69). Their findings provide empirical evidence and indicate that dynamic capabilities have the potential to impact (innovative) performance (Naldi et al. 2014: 77).

In literature, there are even some definitions of dynamic capabilities which explicitly define them as sources of superior performance or competitive advantage. In doing so, they implicitly create a direct link between dynamic capabilities and competitive advantage. Griffith and Harvey (2001: 597), for instance, assert that a “global dynamic capability is the creation of difficult-to-imitate combinations of resources, including effective coordination of inter-organizational relationships, on a global basis that can provide a firm competitive advantage”. Another example is the paper by Lee et al. (2002: 734) who claim that “dynamic capabilities are conceived as a source of sustainable advantage in Shumpeterian regimes of rapid change” (Cepeda/Vera 2007: 427). Nevertheless, there is a major problem regarding these definitions: They are tautological. That is to say that they assume that in case the organization possesses a dynamic capability, it performs successfully and in case the organization is successful, it must have a dynamic capability (Cepeda/Vera 2007: 427).

Due to this common shortcoming of the explanation of a direct link between dynamic capabilities and competitive advantage, it is both valuable and useful to examine the nature of the relationship with respect to more complex links between the two concepts.

6.2.2 More complex relationships between dynamic capabilities and competitive advantage

Many authors, aspects, and studies indicate that the link between dynamic capabilities and competitive advantage may be more complex than previously presumed. Scholars which have less confidence in a compulsory direct link between the two concepts can be grouped into two subcategories. The first group of scholars believes in an indirect link where dynamic capabilities do not necessarily lead to competitive advantage but rather indirectly influence the firm performance via a change in the firm’s resource base or via its strategic orientation. The second group introduces moderating effects, most frequently the dynamism of the external environment, on the relationship between dynamic capabilities and competitive advantage. These groups and their supporters are presented in the following. It is necessary to mention though that the scholars and their articles cannot always be exclusively assigned to one of the groups as they often approach aspects that agree with the view of both subcategories.

Indirect link between dynamic capabilities and competitive advantage

The papers and authors considered in this subchapter have in common that they claim that dynamic capabilities and firm performance are indirectly linked, mostly through a change in the firm's resource base.

Three years after Teece et al.'s (1997) seminal article stating a direct relationship between dynamic capabilities and competitive advantage, Eisenhardt and Martin (2000) were the first ones to directly state that "[d]ynamic capabilities are necessary, but not sufficient, conditions for competitive advantage" (Eisenhardt/Martin 2000: 1106). They suggest an indirect link between these two key concepts via a change in the resource base of the firm. With dynamic capabilities being the "organizational and strategic routines by which managers alter their resource base – acquire and shed resources, integrate them together, and recombine them – to generate new value-creating strategies" (Eisenhardt/Martin 2000: 1107), they can be viewed as the drivers of competitive advantage. The value of dynamic capabilities therefore is based in their capacity to modify (generate, integrate, recombine, and release resources) the resource base of the firm (Eisenhardt/Martin 2000: 1116). Hence, the long-term advantage does not rest upon the dynamic capabilities themselves, but rather on the resource changes they caused and "by using dynamic capabilities sooner, more astutely, or more fortuitously than the competition" (Eisenhardt/Martin 2000: 1117; Barreto 2010: 263). This is very much in line with the *propensity to change its resources base* and the *propensity to make timely decisions* as two parts of the definition proposed by Barreto (2010: 271) and presented in Chapter 2.3.3. As intended, Eisenhardt and Martin's (2000) work explains resources, dynamic capabilities, and competitive advantage in the RBV's logic and in a non-tautological way. In their view, their approach represents an important expansion and development of the RBV, of which they consider the dynamic capabilities framework to be a part of. Further, Eisenhardt and Martin (2000: 1110) claim that dynamic capabilities are relevant in markets of both high and moderate velocity. The latter are characterized as markets where change does happen regularly but rather foreseeable and not in extreme dimensions. They also independently assign firms different dynamic capabilities according to the external environment (moderately dynamic vs. high-velocity) of the corresponding firms (Eisenhardt/Martin 2000: 1110f.; Barreto 2010: 262). Another aspect that can be deviated from Eisenhardt and Martin's (2000) perspective is that, as the link between dynamic capabilities and competitive advantage is not direct, dynamic capabilities do not necessarily need to be firm specific. They claim that the

“functionality of dynamic capabilities can be duplicated across firms, their value for competitive advantage lies in the resource configurations that they create, not in the capabilities themselves” (Eisenhardt/Martin 2000: 1106), and “while dynamic capabilities are certainly idiosyncratic in their details, the equally striking observation is that specific dynamic capabilities also exhibit common features” (Eisenhardt/Martin 2000: 1108). In their view, dynamic capabilities are substitutable, equifinal, and fungible, which leads to the conclusion that different firms can still have similar dynamic capabilities (Eisenhardt/Martin 2000: 1111; Ambrosini/Bowman 2009: 42).

Zahra et al. (2006) also suggest that the nature of the relationship is indirect. They state that dynamic capabilities represent the potential for (sustained) competitive advantage. And they do agree with Eisenhardt and Martin (2000) that the creation or possession of dynamic capabilities is not a guarantee for higher firm performance. Hence, also Zahra et al. (2006: 942) assert that dynamic capabilities are necessary, but not sufficient conditions for competitive advantage. They believe that of two firms with the identical substantive capabilities, the firm with the superior dynamic capabilities will in all likelihood address challenges better and more quickly than the firm with the inferior dynamic capabilities. In Zahra et al.’s (2006) view, the actual realization of an advantage due to dynamic capacities is dependent on, firstly, the “need to change”, and, secondly, the “wisdom of the chosen changes” (Zahra et al. 2006: 942). The precondition that both the development and utilization of dynamic capabilities are costly influences the actual value of dynamic capabilities. When a firm does not often have to change substantive capabilities, because of a stable technological and market environment, the expenditure of resources for the development of dynamic capabilities may be too high relative to its benefit. Further, it will be harder to cover the costs for the development of dynamic capabilities. In contrast, for firms in rapidly changing environments calling for a frequent change in substantive capabilities, the value of dynamic capabilities may be considerably high. Thus, the dynamism of the external environment moderates the potential value of dynamic capabilities (Zahra et al. 2006: 942). In this perspective, Zahra et al.’s (2006) approach could also be assigned to the second subcategory introducing moderating effects. Zahra et al. (2006: 950) furthermore partly agree with Eisenhardt and Martin’s (2000) proposition that dynamic capabilities per se do not lead to competitive advantage because different paths and processes can lead firms to similar or the same resource configurations. They indicate equifinality and hence come to the conclusion

that the literature overestimates “idiosyncratic firm effects” (Eisenhardt/Martin 2000: 1110). Zahra et al. (2006: 950) agree that unbounded sustainable competitive advantage is unlikely in competitive, unpredictable environments and that different firms may achieve similar or identical resource configurations via different paths. However, Zahra et al. (2006: 951) claim that the disparities in the ways or means of how firms get to the same resource configuration do matter. That is that if the dynamic capabilities of the two firms are not the same, “where they go next and how quickly they get there will differ” (Zahra et al. 2006: 951). Zahra et al. (2006) consider the link between dynamic capabilities and firm performance to be influenced indirectly by the quality of substantive capabilities, which is modified by dynamic capabilities (Barreto 2010: 264). They present a theoretical model of dynamic capabilities and their correlations:

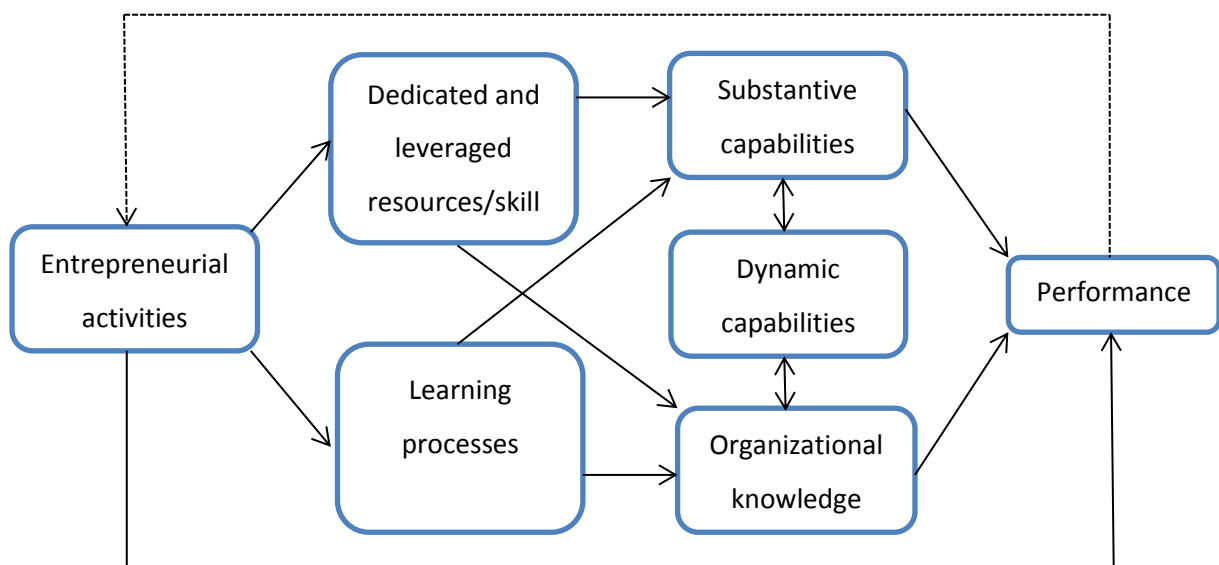


Figure 3: Zahra et al.'s (2006) model of the relationship between dynamic capabilities and performance (own representation based on Zahra et al. 2006: 926).

The entrepreneurial activities are “those activities that centre on the identification and exploitation of opportunities” (Zahra et al. 2006: 925). They directly influence firm performance, which in turn become new entrepreneurial activities. Figure 3 illustrates the complex relationships between resources, learning processes, the development of capabilities, and firm performance. The major point of the model is that “dynamic capabilities mediate the relationships between substantive capabilities and organizational knowledge, resulting in an indirect impact of dynamic capabilities on performance” (Zahra et al. 2006: 946).

Zott (2003) also proposed an indirect link between dynamic capabilities and organizational performance. In his view, dynamic capabilities impact firm performance through changing “a firm’s bundle of resources, operational routines, and competencies which in turn affect economic performance” (Zott 2003: 98). Unlike Eisenhardt and Martin (2000), Zott (2003: 101) claims that firms with concordant dynamic capabilities can actually create differing bundles of resources and therefore manifest different levels of performance. He presents a framework that illustrates the suggested view of the mechanisms around dynamic capabilities and organizational performance. Zott (2003: 100) considers this set of relationships as the emerging consensus concerning the link between dynamic capabilities and firm performance. Dynamic capabilities influence a firm’s resource positions, capabilities, operational routines, and activities (Zott 2003: 100; Eisenhardt/Martin 2000; Galunic/Eisenhardt 2001; Kogut/Zander 1992; Nelson/Winter 1982; Porter 1985). And then in turn, these variables influence the market position of the product and consequently the firm’s performance. Building on that and as illustrated in Figure 4, this chain of causality indicates an indirect link between dynamic capabilities and performance (Zott 2003: 1000).

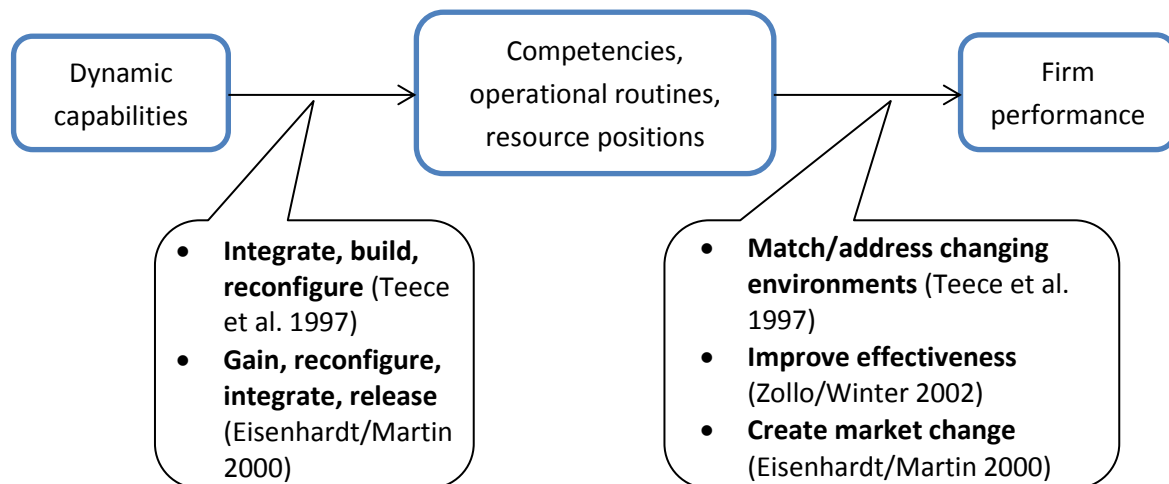


Figure 4: Zott’s (2003) model of the relationship between dynamic capabilities and performance (own representation based on Zott 2003: 100)

This topic is addressed similarly by Helfat and Peteraf (2003). They assert that “[d]ynamic capabilities do not directly affect output for the firm in which they reside, but indirectly contribute to the output of the firm through an impact on operational capabilities” (Helfat/Peteraf 2003: 999). As explained in Chapter 2.3.4, operational capabilities correspond to ordinary capabilities and Zahra et al.’s (2006) substantial capabilities. This indicates that

Helfat and Peteraf (2003) also agree with the perspective that dynamic capabilities indirectly influence performance through their impact on the ordinary resources base of the firm.

Helfat et al. (2007) also emphasize the influence of dynamic capabilities on the generation, expansion, and modification of the firm's resource base (Helfat et al. 2007: 63; Katkalo et al. 2010: 7). Hence, Helfat et al. (2007) can also be classified under the approach stating an indirect link between dynamic capabilities and competitive advantage via a change in the resource base. Additionally, they assert that "dynamic capabilities do not necessarily lead to competitive advantage" (Helfat et al. 2007: 14) and therefore uncouple dynamic capabilities from competitive advantage. They list some required general conditions for the existence of a link between these two variables. First of all, and as suggested above, heterogeneity in the technical fitness is required, especially in the same type of dynamic capabilities (Peteraf 1993; Barney 1991). Secondly, the services have to be demanded because dynamic capabilities have value only in case they are used. Thus, competitive advantage results from the application and use of dynamic capabilities. Thirdly, compared to the market need for their services, dynamic capabilities have to be rare. If not, there would be competition with organizations that possess the same dynamic capabilities, which would level the market. Likewise, when a different dynamic capability can satisfy the demand and generate similar value, the deployment of the first type of dynamic capability, even when it is a rare one, does not result in competitive advantage. The reason being is that the two kinds of capabilities are substitutes with the same outcome (Peteraf/Barney 2003: 318; Helfat et al. 2007: 14; Eisenhardt/Martin 2000).

Wang and Ahmed (2007) also propose an indirect relationship between dynamic capabilities and firm performance. They present the following research model of dynamic capabilities:

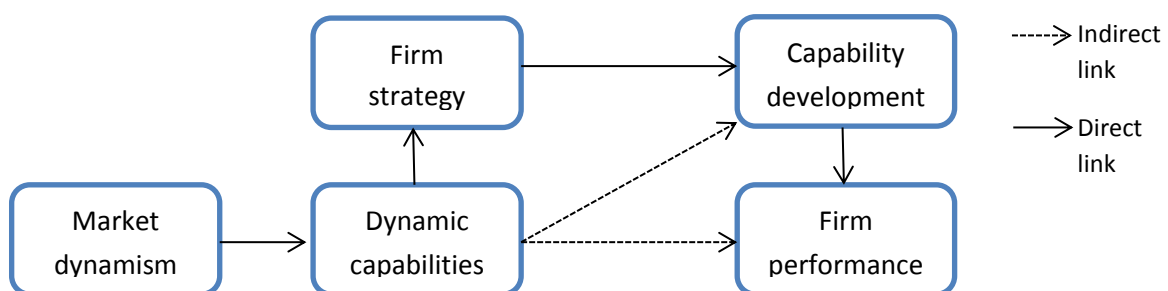


Figure 5: Wang and Ahmed's (2007) model of the relationship between dynamic capabilities and performance (own representation based on Wang/Ahmed (2007: 39)).

In contrary to other scholars like Schilke (2014), Zahra et al. (2006), and Ambrosini and Bowman (2009) who consider the environmental dynamism as a moderator of the relationship between dynamic capabilities and competitive advantage, Wang and Ahmed (2007: 40) see market dynamism as an antecedent to dynamic capabilities. They suggest that in more dynamic market environments, the determination of firms to deploy dynamic capabilities is stronger. Concerning the link between dynamic capabilities and firm performance, they agree with many authors and assume an indirect relationship. Additionally, Wang and Ahmed (2007: 42) assert that this relationship is mediated by capability development and by firm strategy and that it is stronger when capabilities are aligned with the strategic decisions of the firm.

Augier and Teece (2007), with a focus on MNEs, are also scholars which delink dynamic capabilities from sustainable competitive advantage. They view dynamic capabilities as a type of VRIN-capacities which reconfigure and rebuild their resource base in order to react to changing conditions of the market or in the technology (Augier/Teece 2007: 179; Katkalo et al. 2010: 7). So, they constitute representatives of the indirect link between dynamic capabilities and performance. They emphasize that firms without dynamic capabilities can make competitive returns for a short time period, but they will not be able to sustain these advantages in the long run. Thus, those firms can earn Ricardian rents but not Schumpeterian rents (Augier/Teece 2007: 179). Augier and Teece (2007) furthermore stress the importance of dynamic capabilities for MNEs in so-called hypercompetitive environments. In these environments of intense and rapid competition, dynamic capabilities indirectly build the basis of competitive advantage (Augier/Teece 2007: 185).

A very recent approach, which also analyzes the MNE, is by Teece (2014). In contrary to many other scholars who assert an indirect influence of dynamic capabilities on performance via the resource base of the firm, Teece (2014: 22) claims that the firm's strategy indirectly links the two concepts. His approach and logic is illustrated in Figure 6. Teece (2014: 8) emphasizes that dynamic capabilities are able to sustain firm performance only together with good strategy. Hence, long-term competitive advantage is codetermined by the orchestration of assets and strategy (Teece 2014: 16). In other words, strategy needs to be led and informed by managerial orchestration, and vice versa (Teece 2014: 17). "Strategy needs to be consistent, coherent, and embrace innovation" (Teece 2014: 17), "must be combined with strong dynamic capabilities to be effective" (Teece 2014: 32), and "have a strong kernel" (Teece

2014: 18). In reverse, a poor strategy decreases the efficiency of dynamic capabilities. It is also important to note, that only in theory, strategy and dynamic capabilities are distinct, independent concepts, while in practice, they are always interrelated (Teece 2014: 18).

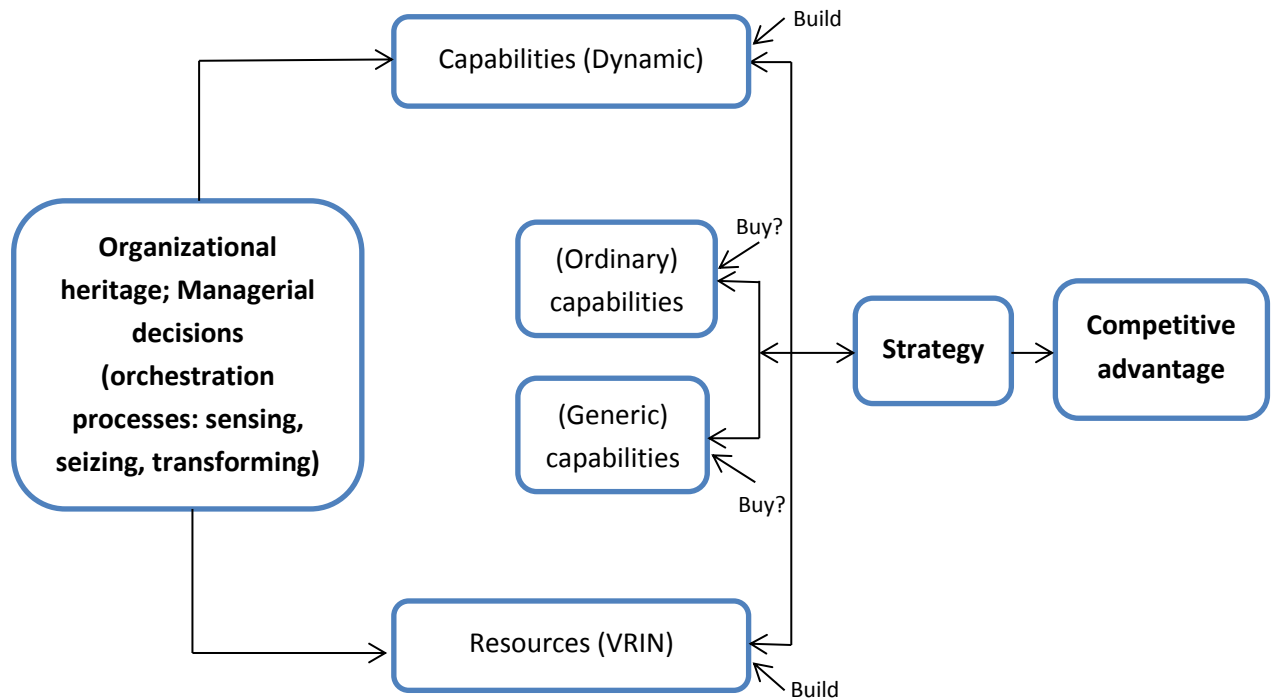


Figure 6: Teece's (2014) model of the relationship between dynamic capabilities and competitive advantage (own representation based on Teece 2014: 22).

Teece (2014) summarizes that “dynamic capabilities undergird the ‘future’ of any MNE, because, along with strategy, they undergird competitive advantage in fast-moving, knowledge-based economies. [...] Good strategy, strong ordinary capabilities, scale (in some circumstances), and strong dynamic capabilities are all needed for long-term growth and survival in the framework advanced here” (Teece 2014: 23).

Ambrosini and Bowman (2009) are representatives of the group who illustrate an indirect link between dynamic capabilities and competitive advantage. They additionally point to internal and external moderating effects. This is why their approach is situated between this and the following subchapter. They review literature, synthesize it, and building on that, present an overview, here shown in Figure 7, illustrating the different elements involved in the process of firm value creation. The dynamic capabilities creation processes are the forerunners of dynamic capabilities and indicate that they are the result of learning processes and experience over years (Ambrosini/Bowman 2009: 47). Dynamic capabilities directly influence the firm's resource base that in turn impacts value creation. From dependence on the dynamism of the

external environment, these influences can lead to sustained or temporary competitive advantage. Possibly, the resource-based advantages can be transitory due to modifications in the behavior of competitors and customers. The RBV provides an explanation why and how firms in equilibrium can make profits. Given the assumption that equilibrium only lasts for a short period of time, an organization may profit from sustained advantage in a dynamic environment. This advantage does not stem from a static resource base, but rather the dynamic capabilities empower the organization to renew its resource stock (Ambrosini/Bowman 2009: 47f.). In this vein, “advantage is sustained through the achievement of a continuous sequence of temporary, short-lived advantages” (Ambrosini/Bowman 2009: 48). However, the implementation of dynamic capabilities does not lead to competitive advantage in every case, as other possible outcomes are competitive parity or failure.

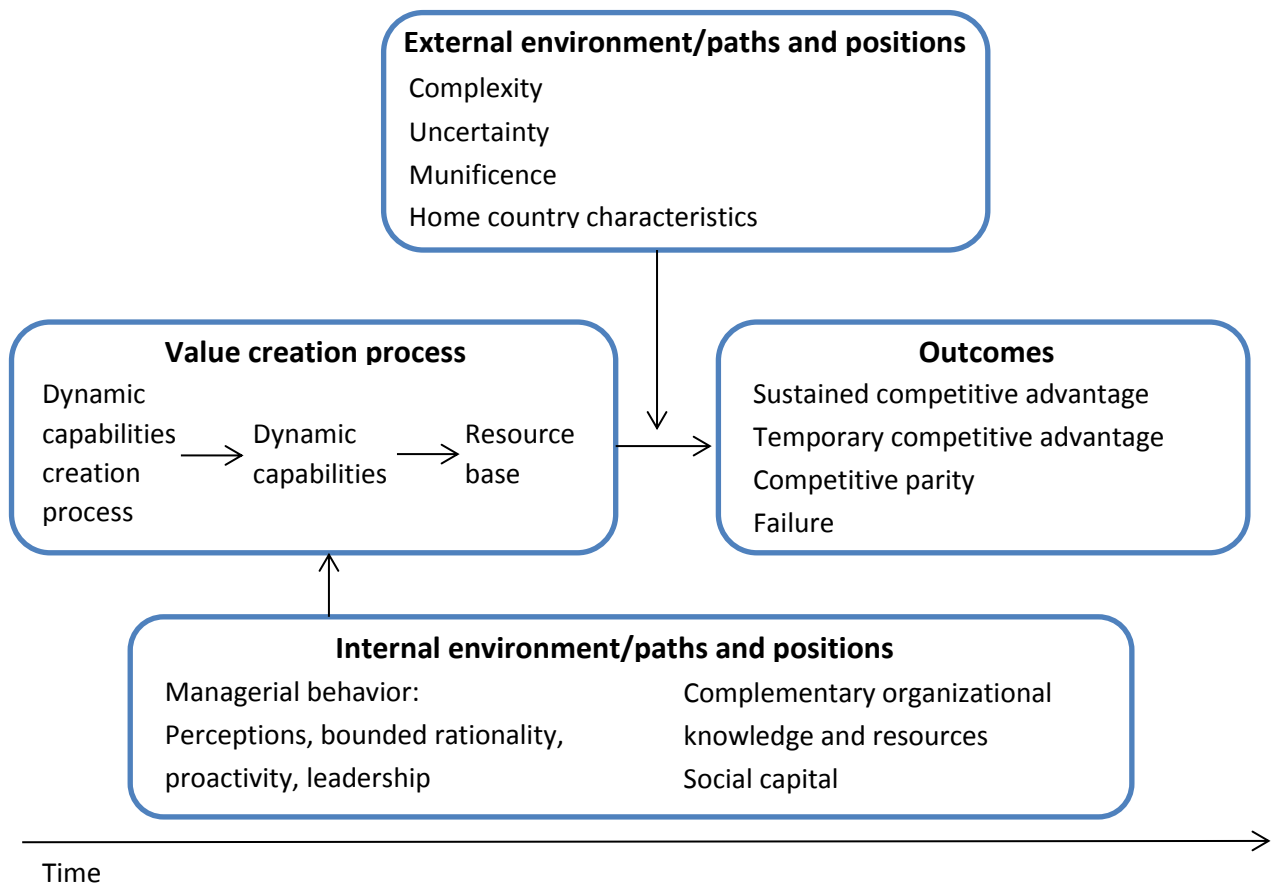


Figure 7: Ambrosini and Bowman’s (2009) model of the relationship between dynamic capabilities and competitive advantage (own representation based on Ambrosini/Bowman 2009: 48).

As illustrated above, Ambrosini and Bowman (2009) also see the link between dynamic capabilities and performance outcomes moderated by a diversity of both internal and external variables. Managerial behavior, leadership, and the presence of complementary resources, as part of the internal environment, exert a moderating effect. The external environment also

has a moderating impact, especially on the influence of dynamic capabilities on the outcome (Ambrosini/Bowman 2009: 49). Time, of course, works from left to right and is included in Figure 7. This indicates that there might be time lags between the deployment and the result of dynamic capabilities, which “clearly introduce causal ambiguity into the managerial decision process” (Ambrosini/Bowman 2009: 49).

Moderating effects on the link between dynamic capabilities and competitive advantage

Among the authors who assume a more complex link between dynamic capabilities and competitive advantage, the second subcategory of scholars suggests moderating effects, in most cases the dynamism of the external environment. But also the strategic orientation of a firm can moderate the link between the two key concepts.

Aragón-Correa and Sharma (2003) were some of the early scholars who included the role of moderators and contingencies in their studies. They present a conceptual research within which specific features of the external environment of the firm, like uncertainty, munificence, and complexity (positively or negatively) moderate the relationship between dynamic capabilities and competitive advantage. They illustrate the links in the following Figure 8 (Aragón-Correa/Sharma 2003: 75).

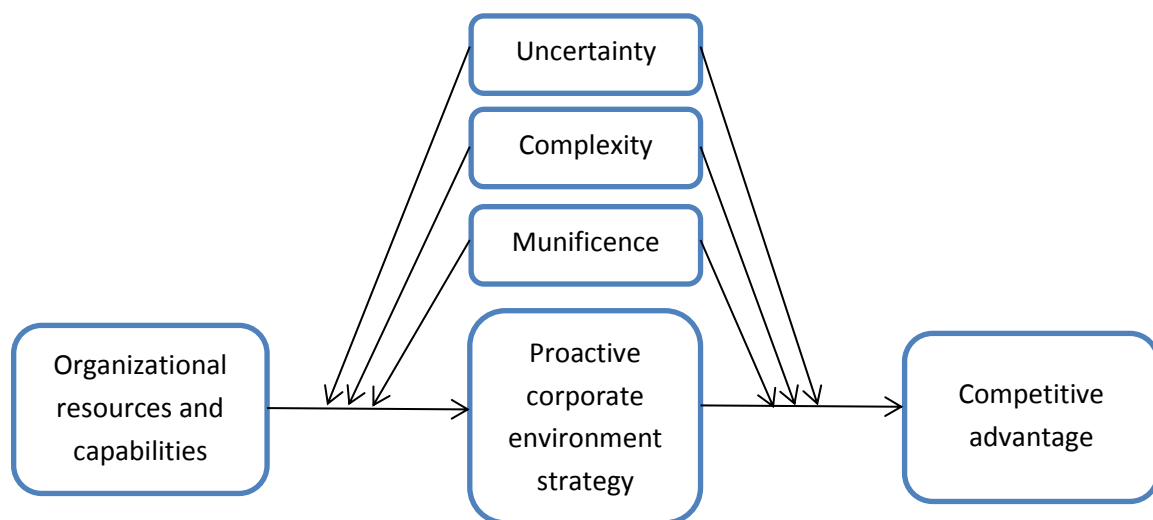


Figure 8: Aragón-Correa and Sharma’s (2003) model of the relationship between dynamic capabilities and competitive advantage (own representation based on Aragón-Correa/Sharma 2003: 76).

Schilke (2014) is another scholar who proposes that dynamic capabilities can increase firm performance. However, he also states that this relationship is dependent on the degree of dynamism in the external environment of the firm. In his paper from 2014, he empirically investigates the relationship between dynamic capabilities and competitive advantage and

examines the impact of varying environmental dynamism (Schilke 2014: 179). In literature, there are two competing perspectives on the role of external dynamism for the potential of dynamic capabilities to influence firm performance. The representatives of the first view suggest that external dynamism positively influences the capacity of dynamic capabilities to induce competitive advantage (Schilke 2014: 180; Drnevich/Kriauciunas 2011; Winter 2003; Zollo/Winter 2002). The second view states that in environments with high dynamism, dynamic capabilities are less effective concerning an increase in firm performance (Schilke 2014: 180; Eisenhardt/Martin 2000; Schreyögg/Kliesch-Eberl 2007). Schilke (2014), in contrary, finds proof for his two hypotheses, suggesting that the link between dynamic capabilities and competitive advantage is the most intense under intermediate levels of external dynamism and is comparatively not as strong with lower or higher levels of dynamism. This finding implies a nonlinear, “inverse U-shaped relationship between dynamic capabilities and competitive advantage across increasing levels of environmental dynamism” (Schilke 2014: 195). Hence, Schilke (2014) verifies an inversed U-shape of the moderating effect of environmental dynamism.

The goal of Wang et al.’s (2015) study is to investigate which dynamic capabilities facilitate external collaboration and influence firm performance. They propose the following conceptual model:

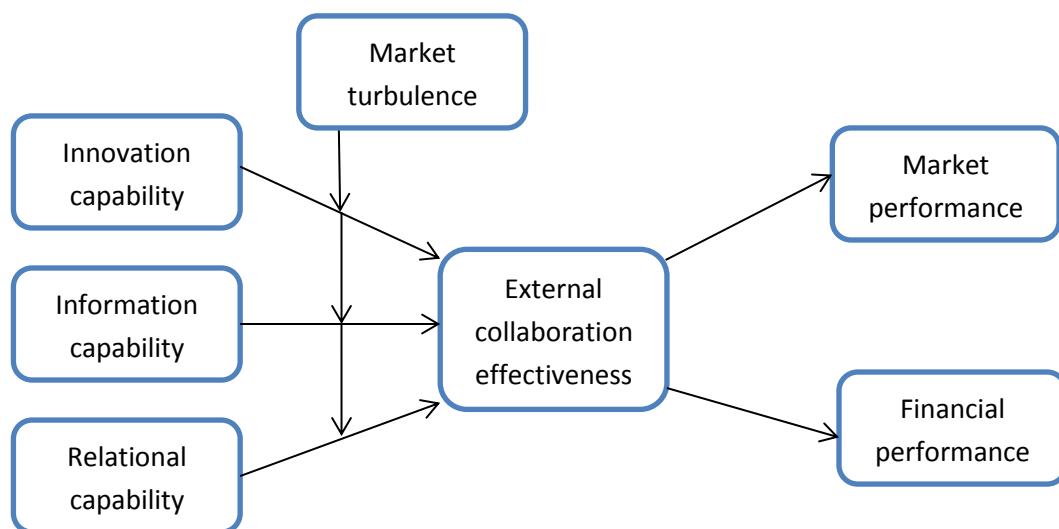


Figure 9: Wang et al.’s (2015) model of the relationship between dynamic capabilities and performance (own representation based on Wang et al. (2015: 1930).

The three broad-based dynamic capabilities (innovation, information, and relational capability) are identified as enablers of external collaboration effectiveness and are indirectly

linked to firm performance. Hence, Wang et al.'s (2015) view could alternatively be assigned to the subcategory of scholars who focus on the indirect relationship between dynamic capabilities and firm performance. However, Wang et al. (2015) especially emphasize the importance of "market turbulence as a key environmental condition that moderates the effects of dynamic capabilities, and provides an enhanced understanding of the complexity of the capability-collaboration-performance relationship" (Wang et al. 2015: 1928). Their article is also viewed as a contribution to the RBV as it specifies external collaboration as an effective mechanism through which dynamic capabilities convert the resources of the firm into competitive advantage (Wang et al. 2015: 1928f.).

In the above examples, the relationship between dynamic capabilities and performance is moderated by the dynamism of the external environment. In contrary to that, the empirical research by Slater et al. (2006) introduces the firm's strategy as a moderator of the relationship between properties of a dynamic capability, namely strategy formation capability and performance. On the basis of Miles and Snow's (1978) four archetypes of how firms define their products, market, and processes in order to be successful, they distinguished Prospectors, Analyzers, Low Cost Defenders, and Differentiated Defenders. Prospectors are good at locating and exploiting new opportunities given by the market or their products, whereas Defenders try to keep a part of the total market for their consumers and products and concentrate on that share. Analyzers are somewhere in between and try to pursue the objectives of both the Prospectors and the Defenders (Slater et al. 2006: 1223ff.). Slater et al. (2006: 1228f.) find out that the strategic orientation works as a moderator between the dynamic capability of strategy formation and performance. At this juncture, a clear and explicit strategy positively moderates the above relationship for Prospectors, while it negatively moderates it for Analyzers. However, the performance of Prospectors was negatively impacted by a formal strategy formation process, whereas both types of Defenders profited from it. In summary, Slater et al. (2006: 1229) conclude that managers need to consider their strategic orientation when deploying capabilities in order to reach higher performance.

6.3 (Missing) Coherence in the chain of logic

After the previous subchapter which predented an overview of the prevailing approaches in literature, this subchapter on the one hand serves to illustrate the critiques and reservation that the dynamic capabilities view is still facing. The critiques especially regard a “missing coherence” concerning the link between dynamic capabilities and performance. And on the other hand, the following paragraphs show that at least the critiques of the concept in this example can be considered as rather unjustified. In order to exemplify the above stated, the critical article of Arend and Bromiley (2009) and Helfat and Peteraf’s (2009) reaction to this criticism are discussed.

As a consequence of the increasing popularity of the dynamic capabilities view, Arend and Bromiley’s (2009) objective is to examine the ability of this view to explain change. They come to the conclusion that the insight produced by the dynamic capabilities view is rather limited and list four shortcomings: “(1) unclear value-added relative to existing concepts; (2) lack of a coherent theoretical foundation; (3) weak empirical support; and (4) unclear practical implications” (Arend/Bromiley 2009: 75). This chapter will focus on their criticism regarding the missing theoretical foundation and then (partly) refute their conclusions by countering Helfat and Peteraf’s (2009) view.

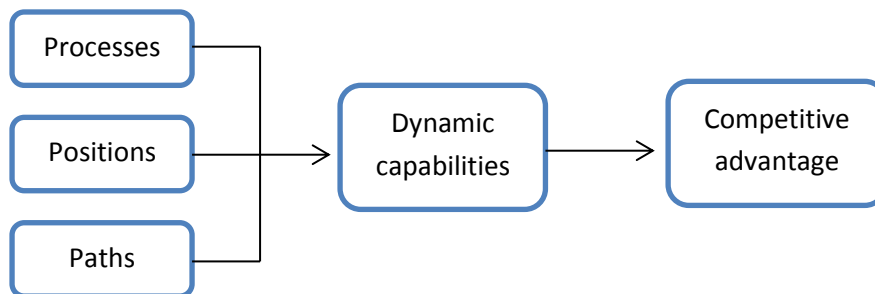
Arend and Bromiley (2009: 78) summarize the main empirical and theoretical critiques and open questions concerning the dynamic capabilities view. Many of these considerations are engaged with how dynamic capabilities work. Arend and Bromiley (2009: 79) illustrate the models of three of the main papers about the relationship between dynamic capabilities and competitive advantage, as represented in Figure 10.

In the three mentioned papers in Figure 10 and in other key papers, authors have presented dynamic capabilities as “direct drivers of competitive advantage, as preconditions, moderators, mediators, and mediated or moderated drivers of firm performance or firm change, and as combinations thereof” (Arend/Bromiley 2009: 76). From this, Arend and Bromiley (2009) conclude that theorists have to decrease the variety of potential relationships and at least roughly agree on the role of dynamic capabilities for competitive advantage. If no accordance is reached, empirical work will be very difficult to implement and the confusion among scholars will increase (Arend/Bromiley 2009: 76f.). They therefore present two central

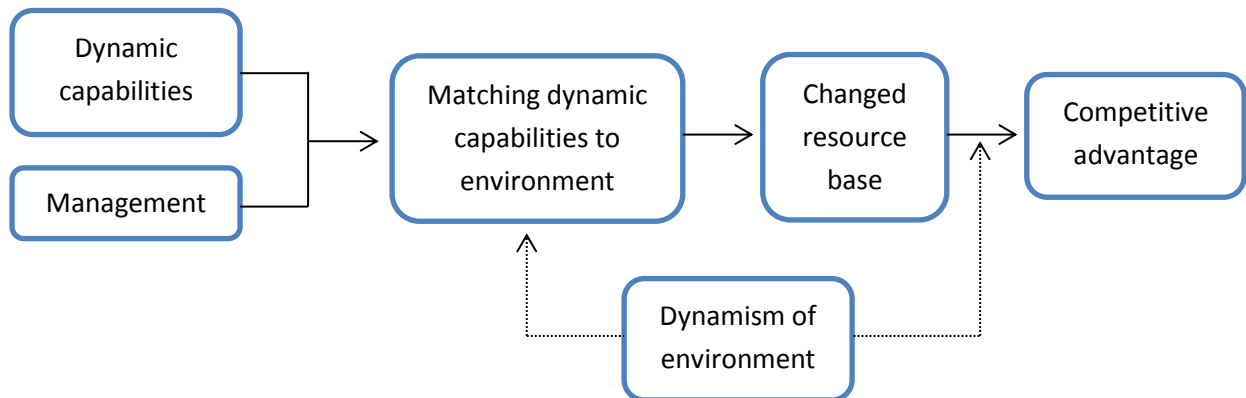
conclusions: First, if the dynamic capabilities view “does not quickly develop a theoretical foundation, the field should move away from the DCV” and second, emphasis should be put on “work on strategic change tied to fuller theories of strategic organization” (Arend/Bromiley 2009: 87).

Helfat and Peteraf (2009) published a paper commenting on Arend and Bromiley’s (2009) perspective and statements. They admit that the dynamic capabilities view is characterized by a high complexity, which is also reflected in its theoretical underpinnings. Without any doubt, this has created some confusion. However, they class Arend and Bromiley’s (2009) key conclusions as untimely, premature and unjustified (Helfat/Peteraf 2009: 91).

Teece et al. (1997)



Eisenhardt and Martin (2000)



Teece (2007)

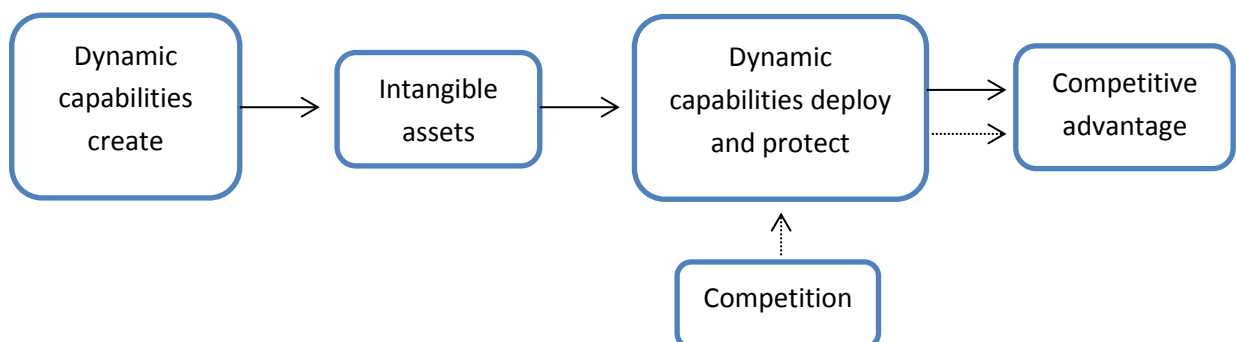


Figure 10: Arend and Bromiley’s (2009) view on the basic chain of logic in core dynamic capabilities articles (own representation based on Arend/Bromiley (2009: 79)).

The critique that Arend and Bromiley (2009) have presented creates some disbelief, in particular, in the relationship between dynamic capabilities and competitive advantage, as illustrated in Figure 10. In Figure 11, Helfat and Peteraf (2009: 96) hence offer a more exact illustration of the chain of logic between the two variables.

As shown in Figure 11 and in accordance with evolutionary economics, Teece et al. (1997) depict the current positions of the firm, including tangible and intangible assets, as the result of prior paths, for example, the history and past investments of the firm. Dynamic capabilities are based on the processes which are capable of changing positions. This influences both competitive advantage and firm performance and results in new positions and paths.

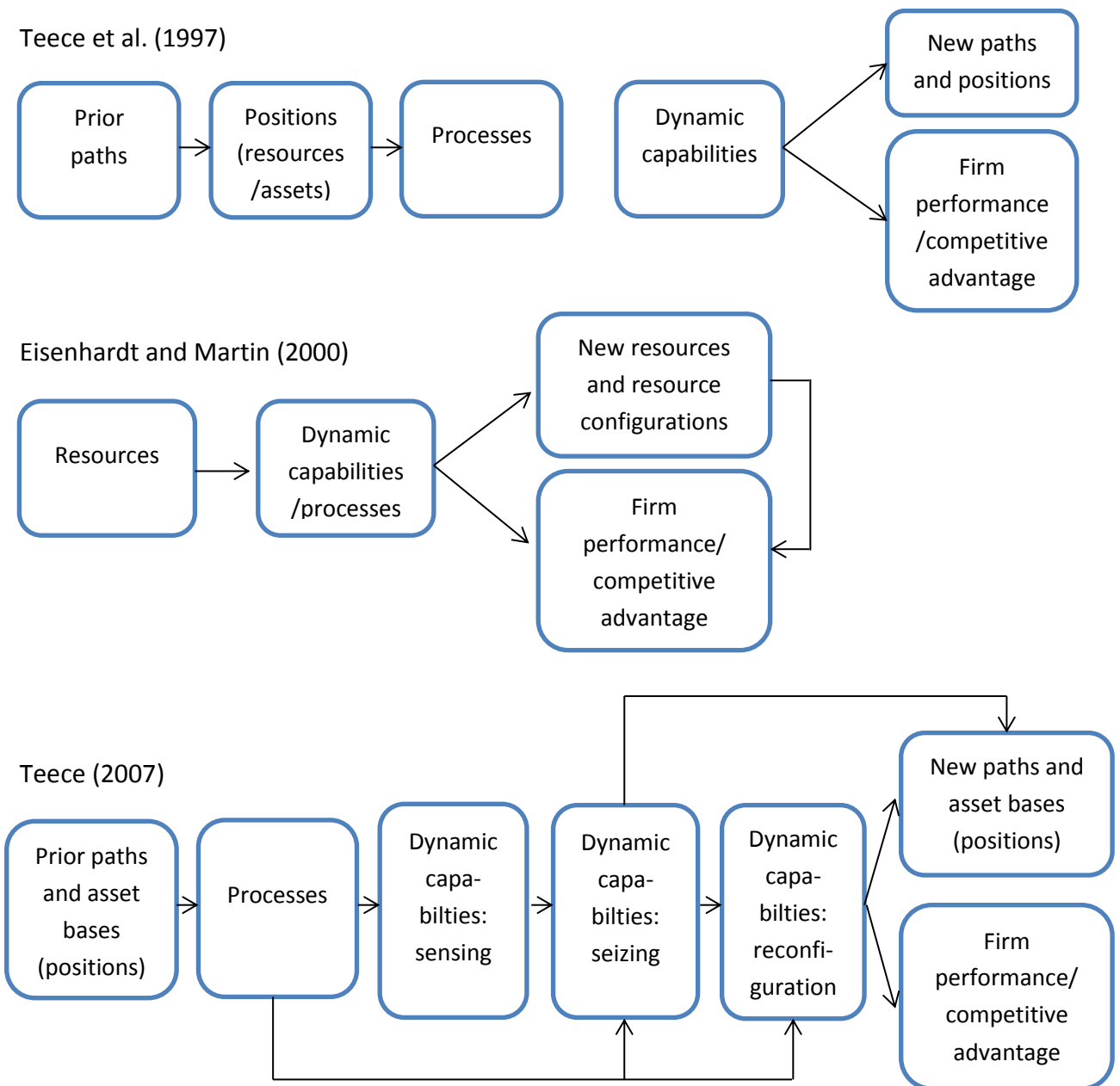


Figure 11: Helfat and Peteraf's (2009) view on the basic chain of logic in core dynamic capabilities articles (own representation based on Helfat/Peteraf (2009: 96))

Teece's (2007) later contribution is an extension of the seminal paper by Teece et al. (1997). Here, new positions and paths are created by the dynamic capabilities of sensing (opportunity identification) and seizing (investment in the opportunities). The new positions and paths then, in turn have an effect on the profit, performance, and competitive advantage of the firm. Furthermore, dynamic capabilities for reconfiguration are able to modify the asset base of the firm and in doing so create new positions and paths and positive effects on the firm performance (Helfat/Peteraf 2009: 97).

In Eisenhardt and Martin's (2000) view, dynamic capabilities are processes that firms deploy in order to create and reconfigure resources, which results in new resources and resource configurations (or using Teece's terminology, in new positions). In their perspective, dynamic capabilities have both a direct and an indirect effect (through resource reconfiguration) on competitive advantage and firm performance.

It is important to note that Eisenhardt and Martin (2000) consider it more difficult to generate competitive advantage through dynamic capabilities than Teece does. Still, their fundamental chain of logic is very similar to Teece's and Helfat et al.'s (2007). All the approaches put a strong emphasis on organizational processes within the firm. That is why Arend and Bromiley (2009) are not correct in stating that the dynamic capabilities view "jumps directly to modeling the change-performance relationship" (Arend/Bromiley 2009: 82) without involving the underlying organizational aspects (Helfat/Peteraf 2009: 97).

All in all and based on the foregoing examples, it can be stated that, in contrary to the declarations of Arend and Bromiley (2009), scholars actually do "roughly agree on the place of dynamic capabilities in their models" (Helfat/Peteraf 2009: 97). Anyhow, it must be admitted that regarding the question of the ability of dynamic capabilities to generate competitive advantage, there is less agreement among researchers. Concerning this aspect, Helfat and Peteraf (2009) agree with Arend and Bromiley (2009) that dynamic capabilities should not be defined by their effects (Helfat/Peteraf 2009: 97).

Hence, even though researchers do not yet completely agree on the exact role of dynamic capabilities, there is a rough consensus, and most reservation and critiques, like in the example above, can be filed as unjustified and hastily made.

6.4 Comments and limitations

There are a couple of important comments to make about the two alternative approaches and the classification proposed in Chapter 6.2.

The approach which finds a more complex link between dynamic capabilities and competitive advantage seems to be the most promising one. Hence, an indirect link via the resource base of the firm appears to be most likely, probably in combination with moderators such as the external dynamism of the environment and the firm's strategy. This can be explained as follows: Dynamic capabilities may effectively influence and modify the resource base of a firm. The new resource base may then impact the market position of new products and then, in consequence, influence performance and competitive advantage (Zott 2003: 100). This view is in line with initial suggestions which consider dynamic capabilities as the basis of strategic decisions concerning entry strategies, timing, and diversification (Teece et al. 1997; Barreto 2010: 275). It is thinkable that this early approach did not receive more attention due to the strong weight that was first put on the direct relationship of dynamic capabilities and performance. In consequence, the indirect link approach may have played second fiddle to the direct relationship approach. Additionally, this indirect relationship may be impacted by the moderators of the internal and external environment, as extensively shown by Ambrosini and Bowman (2009: 48). In their view, managerial behavior, bounded rationality, and the presence of complementary knowledge and resources, as part of the internal environment, exerts a moderating effect. And the external environment also has a moderating impact, especially on the influence of dynamic capabilities on the outcome. For future research, it is highly advisable to empirically examine a framework like the one proposed by Ambrosini and Bowman (2009) or a similar one that includes both an indirect link via the firm's resource base and internal and external moderators of the relationship.

Some limitations concerning the suggested approaches in Chapter 6.2 also need to be discussed. Firstly, the result of the examination of the relationship between dynamic capabilities and competitive advantage is highly dependent on the underlying definition of dynamic capabilities used by the corresponding author(s). In the context of the dynamic capabilities framework, this represents a problem, because, as extensively shown in Chapter 2.3, researchers have not yet found a consensus concerning the definition of dynamic capabilities. For instance, if the definition of the concept includes the achievement of

competitive advantage through dynamic capabilities, there is no need and no sense in examining and proposing the nature of this relationship. In this case, the nature of the relationship is already part of the underlying definition. Another example concerns the case when the definition implies the capacity of dynamic capabilities to change the firm's resource base. Then there is no point in exploring the relationship between dynamic capabilities and the resource change, but rather it is relevant to explore the relationship between dynamic capabilities and competitive advantage, performance, or outcome (Barreto 2010: 274f.).

Secondly, some authors misunderstand that the assumption of similarities and commonalities across firms does not mean that a relationship between dynamic capacities and competitive advantage is impossible. There are definitions, like Barreto's (2010) approach, which recognize the existence of these commonalities without impeding different levels of competitive advantage (Barreto 2010: 275).

Thirdly, another approach proposes that dynamic capabilities may only have positive effects on firm performance if the new resource configuration has specific features, namely if it passes the VRIN criteria (Barney 1991). This means the resources have to be valuable, rare, inimitable, and non-substitutable, just like in the RBV when determining whether resources allow the achievement of sustained competitive advantage. Even though this is an important aspect to be considered, it is not advisable to uniquely base the relationship between dynamic capabilities and performance on this one characteristic. It is moreover relevant for future researchers to examine the conditions under which firms with higher levels of dynamic capabilities actually do manifest better performance. When doing so, both accounting and market-based performance measures should be applied in order to assure a diversity of methods and measures (Barreto 2010: 275).

7. Dynamic capabilities-based theory of the MNE

“(D)ynamic capabilities are essential to explicating the nature and essence of the MNE” (Pitelis/Teece 2015: 3). Although (and as argued in the foregoing chapters) the concept of dynamic capabilities has deeply impacted organization theory and strategic management research, it has not had equal influence on the theory of the MNE and FDI. It was only in the last decade that this major finding was expressed in literature, led by the seminal articles by Pitelis and Teece from 2010 and 2015 and by Teece from 2014. This following chapter therefore transfers the general dynamic capabilities framework into the context of the MNE and introduces a dynamic capabilities-based theory of the MNE.

Stephen Hymer is considered to be the founder of the theory of the MNE and FDI. Since his Ph.D. thesis (1960/1976), more than 55 years have passed. In 2015, it was also 35 years since John Dunning’s (1980) publication about the eclectic paradigm introducing *Ownership, Location and Internalization* (OLI; Pitelis/Teece 2015: 3; Pitelis/Teece 2010: 1247; Teece 1985; Dunning/Rugman 1985; Dunning/Pitelis 2008; Dunning 2001). Even though there are some other contributions to these topics, for example, by Buckley and Casson (1976), Teece (1981), Williamson (1981), and Kogut and Zander (1992), the progress on the theory of the MNE and FDI is somewhat minor. This is partly due to the limited economic lens employed by MNE scholars that was unsuccessful in promoting new developments in strategic management and theory (Pitelis/Teece 2015: 3).

After a historical overview of the theory of the MNE, a subchapter about the entrepreneurial theory of the MNE and its link with the dynamic capabilities view follows.

7.1 Historical overview of the economic theory of the MNE

The modern economic theory of the MNE and FDI can be traced back to the economic theory of the firm and industrial organization (Pitelis/Teece 2010: 1249; Buckley/Casson 1976; Magee 1977) and Stephen Hymer’s (1960/1976) Ph.D. thesis. Hymer examined the reasons why firms choose cross-border integration with FDI rather than less hierarchical approaches like for example, licensing. He found out that the main goal of the MNE is not to leverage capital from geographic regions of low returns to regions of potential high returns, as the MNE is not

mainly a capital market phenomenon. The existence and ability of MNEs to compete with rivals from the foreign country (despite the liability of being foreign) can rather be explained by the benefits of using advantages within the firm and the risk diversification (Pitelis/Teece 2010: 1250; Hymer 1960/1976: 46).

7.1.1 Internalization theory

After Hymer's (1960/1976) findings, an extensive part of the literature about MNEs focused on the theory of internalization of transactions. This perspective has become a prevailing theme in MNE literature of the past 30 years. Within this internalization theory, two branches can be distinguished: First, internalization which leads to a decrease of transaction costs and prevention of hold-up problems; and second, internalization that enables the efficient transfer of resources and learning via firm-internal mechanisms of technology transfer (Al-Aali/Teece 2014: 97f.).

The first approach explains internalization as the consequence of potential market failures and contractual issues and analyzes the advantages of different entry modes like licensing, FDI and exporting (Al-Aali/Teece 2014: 98). This branch of the theory was first supported by Buckley and Casson (1976). Other authors that stress the advantages of FDI by pointing to the lower transaction costs followed, like Teece (1981), Williamson (1981), Dunning (1980) and Kogut and Zander (1992). Williamson (1981), for example, suggests mutual hold-ups and interdependencies caused by asset specificity, and Hennart (1982) describes the MNE as an organization able to coordinate interdependencies across borders more efficiently through hierarchical intra-firm employment rather than through markets (Al-Aali/Teece 2014: 98; Pitelis/Teece 2015: 5; Pitelis/Teece 2010: 1250).

In contrary to the first branch, which is concerned with the reduction of transaction costs, the second branch focusses on effectively addressing of "business opportunities through the development, transfer, and orchestration of differentiated organization and technological capabilities" (Al-Aali/Teece 2014: 98; Teece 1976; Teece 1977a). So, the focus is shifted from control to learning (as e.g. by the creation and transfer of knowledge; Al-Aali/Teece 2014: 98).

Although the first approach has gotten the most attention in literature, both branches of the internalization theory highlight interesting points about the MNE and FDI. The contractual frameworks have to be connected with a theory focused on the development of capabilities, as Cantwell (1989) realized. Nevertheless, international business literature and research about

MNEs has not included capability approaches in their considerations and by doing so have caused a disadvantageous gap in research (Al-Aali/Teece 2014: 99).

7.1.2 The eclectic paradigm

John Dunning's (1981, 1995) eclectic paradigm represents an important extension of the MNE theory and is one of the leading concepts for analyzing and explaining the activities of MNEs (Al-Aali/Teece 2014: 100; Teece/Al-Aali 2014: 20). While Buckley and Casson (1976) focus on industry-specific aspects, the eclectic paradigm stresses "firm level heterogeneity, and the interplay of factors favoring internalization and MNE growth" (Al-Aali/Teece 2014: 100). Dunning's (1981; 1995) eclectic paradigm is often called OLI, making reference to his three factor list of *ownership*, *location*, and *internalization*.

In the OLI model, *ownership* refers to the relevance of the firm's assets. Successful firms possess unique assets that provide an advantage over competitors and which might be of value in other countries too. This is especially the case for intangible assets like, for example, a well-known brand or the ability to quickly produce new products. The acquisition or building of such assets is a long-term process, but if successful, it results in assets that are difficult to imitate (Al-Aali/Teece 2014: 100f.; Teece/Al-Aali 2014: 20).

The *location* in the OLI framework applies to the features of the home and/or host country like, for example, the skill and cost of workers in specific countries. In the past, a lot of researchers mentioned the increasing importance of advantages for MNEs due to the business environment of subsidiaries (Al-Aali/Teece 2015: 100; Cantwell/Mudambi 2005; Rugman/Verbeke 2001). At this point it is important to note though, that many typical advantages of locations like, for example, low cost of labor, can be quite easily accessed by competitors as well. In consequence, location factors can only explain the geographic activity of MNEs but not the sustainment of competitive advantage. Exceptions are possible if the firm has a privileged relationship with the government in the host country (Al-Aali/Teece 2014: 100).

The *internalization* factor in the OLI model refers to the two branches of internalization theory explained above. Both the reduction of transaction costs and efficient resources transfer play important roles here.

The concept of capabilities is not directly mentioned in Dunning's (1981, 1995) eclectic paradigm. In a favorable understanding of OLI, the ownership factor could be interpreted as a (static) representative of capabilities. However, the eclectic paradigm is not capable of explaining or using firm-level capability advantages (Al-Aali/Teece 2014: 101).

7.1.3 Relationship between Teece's perspective and the existing international business theory

The eclectic paradigm (Dunning 1981; 1995) builds and synthesizes differing theoretical views about international business and helps to illustrate the connection of Teece's new approach and the received IB theory. As presented above, the OLI framework analyzes different influences on IB activities. Those can be related to ownership advantages (O; nationality of ownership of organizations active in IB), internalization advantages (I; impact on the MNE's boundaries) and location advantages (L; locations where IB activities take place; Cantwell 2014: 2). Cantwell (2014: 2) deduces that the OLI approach deals with the question of how issues of capabilities, O, transaction costs, I, and the capabilities, institutions and resources of locations abroad, L, can be appropriately connected.

It is important to recognize that from the beginning Dunning's eclectic paradigm sees the "collective character of many capabilities in its O and L components" (Cantwell 2014: 2). Besides the very own capabilities of the MNE, the O advantages also include the capabilities of business network in the MNE's home country. The L advantages, in contrast, are associated with the capabilities of business networks in the host country of the MNE. Those, in combination with different host country factors like, for example, regulatory and tax laws, are responsible for the attraction or rejection of IB activities in the host country. In order to prevent misunderstandings, it needs to be mentioned that the terminology of *ownership* for the O advantages is rather unfortunate as it is ambiguous. Dunning (1981; 1995) draws on the *nationality of ownership* and means the MNE's original home country, the associated strengths and weaknesses of this country, and the firm's very own capabilities. It does not refer to the *ownership of assets* which is often misunderstood, as the MNE is defined on the basis of the international ownership of assets (Cantwell 2014: 3).

A solid general theory of the MNE is supposed to integrate the role of the relationship of the firm capabilities and the host country capabilities. This also includes the orchestration or management of the home and host country knowledge and capabilities interaction. With this

reasoning in mind, a capabilities-based approach to firms with a purely domestic focus can be considered as a special case of the capabilities theory of the MNE. This case is special because the firms depend on the interaction with capability creation in one location only. This view strongly differs from the traditional internalization perspective of the firm's boundaries where location is considered to be rather insignificant to the factors that determine the extent of the firm (Cantwell 2014: 3). Cantwell (2014: 3) concludes, "and so the theory of 'the firm' itself becomes what is believed to be the general category as a more abstract entity, regardless of whether it happens to be an MNE or a domestic firm – so the theory of the MNE becomes a special case of the more general analysis of the firm". That is to say that a separate theory of location, completely independent of the theory of the firm, is needed for the distinction of a MNE and a domestic firm. Rather, Teece states that the MNE represents an organizational platform leaning on national and regional innovation systems to create and use combined capabilities (Cantwell 2014: 3). Thus, the MNE, which is usually characterized by a concentration of activities in its home country, equals more than just a firm with multiple locations because its cross-border structure influences the nature and quality of its relationship with locations (Cantwell 2014: 3; Beugelsdijk/Mudambi 2013: 413).

Consequently, in order to differentiate between the theory of the MNE and a special case of the theory of the firm, a capabilities-based framework is required. The capabilities which are deployed by MNEs and their networks generally stem from three sources: the home and host country institutions, knowledge, and the firm itself. Within the eclectic paradigm perspective, the creation of new capabilities is the result of an interaction and relationship between O and L capabilities. The O capabilities derive from the home country and the firm itself, while the L capabilities stem from the worldwide locations in foreign countries (Cantwell 2014: 3).

The previously mentioned dynamic and constant interaction across borders represents a special feature of MNEs and the reason that MNEs develop combinatorial and connected capacities. This combinatorial capability which links differing capabilities of different locations is characteristic of the MNE and has become even more fundamental with the rising appearance and importance of subsidiaries that create competences. These subsidiaries increasingly seek innovation and know-how creation and influence international locations (Cantwell 2014: 3f.). In Teece's perspective, "we might think of these new centers as entailing the development of dynamic capabilities at a subsidiary level, and in the local network in which a subsidiary is embedded" (Cantwell 2014: 4).

According to Cantwell (2014: 4), Teece indicates how his capabilities-based perspective can not only be considered but also rendered consistent with the IB view of governance structure and, at the same time, how that newer perspective goes beyond the original view's limitations. Some resemblance can be seen with the synthesis that the OLI framework delivered in a broader context in IB. The eclectic paradigm, or OLI framework, is intended to present a framework that helps to identify the connections between clearly differing IB theories, how they can be integrated, or under which conditions they can act as alternative approaches to a common phenomenon (Cantwell 2014: 4). This comparative objective can be achieved with the combination of ideas from differing sources or origins (for example, disciplines) in contrary to the isolation of fields of thoughts which goes along with the risk generating "intellectual silos" (Cantwell 2014: 4).

7.1.4 The theory of the MNE versus theory of the business enterprise

With the exception of the previously mentioned insight by Cantwell (2014), in the economic theory of the MNE and FDI, there are very few findings that are particularly *multi-national* or *foreign*. Many aspects of, for example, Hymer's (1960/1976) approach, the internalization theories, or the eclectic paradigm (OLI) could be applied just as well to diversified enterprises within a nation (Pitelis/Teece 2010: 1251). However, in the case of multinational firms, there are borders to cross and diverse sovereign nations who all are able to regulate and raise taxes on enterprises and individuals. It is therefore important that the theory of the MNE takes into account the costs and benefits of differing sovereign jurisdictions (Pitelis/Teece 2010: 1251; Penrose 1987).

Even though a large variety of scholars have recognized this gap in research, not many have tried to find out about how multinationalism and foreignness influence the theory of the MNE and FDI (Boddewyn/Pitelis 2009). In his research, Teece (1977) examines the resource cost of transferring technology by multinational enterprises. He finds out that multi-nationality does play a role and that further empirical research in this area is strongly needed. Nevertheless, there has not been much progress since (Pitelis/Teece 2010: 1251; Teece 1977a: 260).

While Teece's (1977a) emphasis is on the price of technology transfer across borders, Kogut and Zander (1992) develop an evolutionary theory of the MNE that stresses lower costs within firms. Teece (2014) supports this finding only partially. Pitelis (1991), in his early abilities-based concept, explains the MNE using market failure and arguments that emphasize firm

advantages. Anyhow, the economic theory of the MNE and FDI has not yet included current and more recent frameworks from strategy and entrepreneurship research (Pitelis/Teece 2010: 1251f.).

One major flaw of the theory of the MNE, furthermore, is its incapacity to explain current strategies and common practices among MNEs, for example, trends like offshoring and outsourcing of business entities and subsystems (Pitelis/Teece 2010: 1252). Some firms even move R&D activities offshore (Teece 2006a: 134f.), even though the parts of the R&D activities need to be kept in-house in order to “create the ‘absorptive capacity’” (Pitelis/Teece 2010: 1252) needed for a combination of *open* and *closed* innovation (Chesbrough 2003; Chesbrough et al. 2006; Pitelis/Teece 2010: 1252).

Although much of the literature emphasizes the advantages of FDI (e.g. Hymer 1960/1976), today’s practice among MNEs often adopts a different approach. For example, Starbucks combines Franchising, FDI, and inter-firm cooperation into a portfolio strategy. Another approach is characterized by different stages when firms build an initial joint venture and then later extend their activities with FDI. Large MNEs like Microsoft, Siemens, and McDonald’s support the formation of productive environments with financial support for universities and collaboration with competitors. In order to generate and sustain value, Apple and IBM, on the other hand, follow the strategy of utilizing strong marketing and design capabilities and this way offer attractive new products to consumers (Pitelis/Teece 2010: 1252). Pitelis and Teece (2010: 1252) state that the “MNEs have gradually morphed from ‘system integrators’ [...] within the firm, sector, region or nation, to become ‘orchestrators’ of the wider global value creation process”.

Accordingly, the reason why MNEs exist is not only to realize efficiencies from technology transfers within the firm, but additionally for the creation and co-creation of new markets and the expansion of old markets. Thus, a major reason for the existence of MNEs is their importance for the creation of markets and co-creation of processes (upstream and downstream) because of their entrepreneurial activities, organizational abilities, and cross-border presence (Pitelis/Teece 2015: 9).

In summary, it is debatable that the economic theory of the MNE was not successful in solving the previously mentioned matters and is not capable of explaining the achievement and sustainment of competitive advantage by MNEs. Pitelis and Teece (2010: 1252) argue that the

idea of cross-border market co-creation could help fill the gap and deliver another reason for the existence of MNEs (Pitelis/Teece 2010: 1252).

The goal of the following subchapter is to develop an entrepreneurial theory of the MNE that is based on the dynamic capabilities framework and integrates the ideas of cross-border market creation and co-creation. Moreover, the importance of the concept of dynamic capabilities and co-specialization (at the level of a country and an enterprise) to explain the achievement and exploitation of competitive advantage by MNEs is emphasized (Pitelis/Teece 2010: 1252; Pitelis/Teece 2015: 9; Teece 2006a; Augier/Teece 2007).

7.2 An entrepreneurial theory of the MNE

Even though not stated directly, literature from the past about the economic theory of the MNE and FDI suggests the important role of resources and capabilities. The articles of Edith Penrose and Stephen Hymer, especially Hymer's contribution from 1968, indicate some elements of a resource- or capabilities-based perspective (Dunning/Pitelis 2008; Pitelis/Teece 2015: 10). Teece (1977a: 243f.) directly mentions capabilities and knowledge to be important to MNEs because the possession of capabilities allows the creation of value by scaling the capabilities in a global manner. The modern capabilities framework sees business firms as "bundles of portfolios of difficult-to-trade assets and competencies" (Pitelis/Teece 2015: 11). The role of dynamic capabilities for modern MNEs as proposed by Pitelis and Teece (2015) is presented in the following subchapters.

7.2.1 Dynamic capabilities and the theory of the MNE

In "open", semi-globalized, and knowledge-based economies, which are influenced by international competition, global capital, technology, and labor flows, the dynamic capabilities concept has become exceedingly important. It was in the 1960s when global investment and trade was liberalized. Since then, intellectual capital, intangible assets, entrepreneurship, and flexibility as important factors of the dynamic capabilities framework have evolved to become to more relevant than ever before (Pitelis/Teece 2015: 14; Teece 2000b).

For common MNEs, the differentiation between home and host country has become increasingly blurred. Global orchestration skills are relevant especially when the firm is confronted with a large variety of assets within and outside of the firm and with complicated

regulations and taxation rules (Pitelis/Teece 2015: 14). So when the firm enters the global market, the MNE has to control a wider diversity of assets and hence its orchestrations skills are strengthened and improved (Augier/Teece 2007: 187). This becomes clear as, in order to sustain value creation, change calls for an adaptation to the current business model and a rearrangement of competences and assets. Translated into the world of MNEs, this means that their dynamic capabilities demand the ongoing sensing and seizing of upcoming opportunities in a global environment and immediate implementation. A MNE's capacity to orchestrate its assets in a global setting is denominated managerial orchestration and is an indispensable element of dynamic capabilities (Teece 2007: 187; Katkalo et al. 2010: 5; Teece 2014: 17f.; Pitelis/Teece 2015: 14).

Capabilities and the performance of the MNE

Pitelis and Teece (2015: 14f.) state that, in contrary to ordinary capabilities, dynamic capabilities are more likely to generate and sustain competitive advantage and coincidentally result in superior performance in environments characterized by rapid change and by the important role of intangible assets. Yet, the relevance of a good strategy should not be underestimated.

There are three main reasons why dynamic capabilities are hard to establish and to transfer across borders: First, dynamic capabilities are tacit; Second, they are usually developed within a unique, firm-specific network of relations and histories; and third, there is inevitable uncertain imitability. Dynamic capabilities are therefore a strong base for the future developments of a MNE. And in combination with a sound strategy, they facilitate competitive advantage in knowledge-based environments with rapid change (Pitelis/Teece 2015: 15).

For the performance and growth of MNEs, a good strategy and strong dynamic capabilities become more essential, the more relevant intangible assets are, the bigger the faced uncertainties are, and the more diverse the external environments are. In order to sustain competitiveness, MNEs do not only have to achieve asset alignment within the firm and with partner firms, but they also have to agree with collaborating firms about solutions which are in accord with the needs of customers in different environments (Pitelis/Teece 2015: 15). In order to assure evolutionary fitness, Pitelis and Teece (2015: 15) emphasize that "strong DCs include the processes, business models, and leadership skills needed to effectuate high

performance sensing, seizing, and transforming in unpredictable environments when there are many unknown unknowns”.

Effective use of capabilities through horizontal expansion

The internalization theory based on transaction costs has distinctly influenced the literature about the MNE (Teece 2014: 24; Zahra et al. 2000; Hennart 2009). Yet, this stream of literature does not give advice about which markets to enter or to create. Indirectly, from reading into internalization, one could assume that markets, within which it is possible to create value from the services of firm-specific assets, represent the best ones to for MNEs to enter. Thus, transaction cost-based internalization theory gives insight when it comes to choosing the entry mode, but not about when the optimal timing and direction of expansion need to be specified. Nevertheless, these are important choices that a strong theory of the MNE should have an answer to or at least be able to specify and support their decision making (Teece 2014: 24; Pitelis/Teece 2015: 15).

Of course, choosing the right contractual mode is not the only concern of horizontal market-entry strategies of the MNE. The value of unique firm-internal capabilities and their importance and transferability into other countries have to be assessed. Additionally, some adaptations and changes might be necessary, as well as the analysis of the legal status concerning intellectual property rights. However, the most difficult problems are, rather than contractual ones, likely to deal with transfer costs of technology and capabilities and the evaluation of emerging market opportunity (Teece 2014: 24; Pitelis/Teece 2015: 15f.).

The minimization of the “liability of foreignness” (Hymer 1960/1976: 46) and the maximization of home-country benefits are key objectives of the MNE when making cross-border transfers (Teece 2014: 24; Helfat and Lieberman 2002). The firm-specific capabilities can both be a constraint and an enabler when a firm enters a foreign market. This market entry is likely to be easier when the internal firm capabilities match with the needs of the foreign market. However, as the international business landscape is rather uneven, the entry of the MNE allows it to create opportunities to, on the one hand, transfer and use existent capabilities, and on the other hand, to generate new capabilities (Teece 2014: 24; Pitelis/Teece 2015: 16).

Pitelis and Teece (2015: 16) conclude that “while the boundaries of the MNE may be partially determined by transaction costs, capabilities (or the lack thereof) are likely to loom longer

along with the need for, and difficulty associated with, replication and the associated transfer of technologies and capabilities". They furthermore indicate that this argument implies that MNEs enter foreign markets to increase their stock of capabilities because the new geographically spread networks enable them to collect differing technological assets over the years (Teece 2014: 24; Pitelis/Teece 2015: 16).

Hence, the boundaries of the MNE can be considered as a result of the management activities of creating and accumulating specific assets which are required in each of the chosen foreign locations. The global generation of value from creating and leveraging both capabilities and products happens within the MNE. Thus, not just the minimization of transactions costs contributes to the capture of value, but also and particularly the exploitation of "the implicit bid-ask spreads associated with the 'transfer' of intangible assets and the effective leveraging of capabilities " (Teece 2014: 24; Pitelis/Teece 2015: 16).

Nevertheless, it is important to remember the relevance of the home country of the MNE. The MNE, its experiences, know-how, and capabilities are the product of the prevailing environmental influences of their original home country. When they decide to enter foreign markets, they get in contact with foreign regional and national innovation systems. So with the years, the capabilities of the MNE and their respective origins lie in the different external environments of the countries that they are active in (Pitelis/Teece 2015: 17; Teece 2014: 24).

Interestingly, the country advantages are usually accessible by all firms who enter and invest in the same country. An easy example is the low-cost of labor from which all foreign entrants can benefit. Consequently, host country advantages do not represent an excessively relevant factor when examining the dynamic capabilities approach and sustainable competitive advantage. They can illustrate the reasons for the market entry, but they are, at most, only one aspect of the firm's achievement of competitive advantage (Pitelis/Teece 2015: 17; Teece 2014: 24f.). Teece (2006a) summarizes the essence of the MNE as follows: "(I)t accepts, adapts to, and capitalizes on institutional, cultural, and market heterogeneity while simultaneously trying to capture economies associated with some kind of (scalable) advantage in certain assets or processes it owns or is currently developing" (Teece 2006a: 125).

The relevance of complementary and co-specialized assets

A deep understanding of the importance of complementary investments and complements for firm success represents a highly relevant strategic competence when competing in global

environments. Often, innovations are presented as substitutes rather than as complements (Pitelis/Teece 2015: 17; Teece 1986a). For instance, Schumpeter (1934) emphasizes that, once a firm has successfully introduced an innovation, many competitors immediately try to imitate and offer substitutes.

Complementary innovation, though, is just as, if not more, relevant, especially in industries like digital electronics. Business applications, for example, are likely to be particularly beneficial for users when it is possible to integrate them into a single program. Nowadays, as the sources of technology are available in most countries worldwide, the MNE can be used as the apparatus to integrate globally distributed assets. In this view, cross-border activities of MNEs do not only increase scale and international reach but also spread complementary technologies vertically and horizontally (Pitelis/Teece 2015: 17f.).

In this context, the term of co-specialized assets needs to be clarified. Pitelis and Teece (2015: 18) define co-specialized assets as “complementary assets where the value of an asset is a function of its use in conjunction with other assets [...]. With co-specialization, joint use is value enhancing.”⁸ Additionally, there is no market where co-specialized assets can be bought or sold for their complete value in use (Pitelis/Teece 2015: 18).

R&D and other investments in innovation often result in situations of co-specialization, and in order to orchestrate and capture the value from co-specialization, integrated operations are usually inevitable (Pitelis/Teece 2015: 18). Augier and Teece (2007: 188) realize that the skill of identifying, evolving and leveraging both specialized⁹ and co-specialized assets is effectively a key dynamic capability. This ability is indispensable for long-term firm performance and cannot be outsourced without deteriorating the firm’s competitive advantage (Augier/Teece 2007: 188).

Due to separate ownership and co-specialization, it is likely that other firms can add and appropriate value. And asset owners might not be aware of the value of their assets to other enterprises and even if they are, they might not be in an advantageous bargaining position. Furthermore, the co-specialized-assets markets are inevitably thin and have a global character

⁸ Full co-specialization is a specific case of economies of scope. In this case, complementary assets have no value at all in separate use but a high value in joint use (Pitelis/Teece 2015: 18).

⁹ „A specialized asset is an asset that cannot be put to alternative use without loss in value” (Joskow 1985 cited in Pitelis/Teece 2015: 18).

(as co-specialized assets are unique, other firms usually cannot acquire these assets, and if they could, they would have another value in use because the competing firm is likely to have a different portfolio of complementary assets). When co-specialized assets cannot be obtained externally, firms will have to build them internally. This is how MNEs create value through the generation and combination of co-specialized assets (Teece 1986a; Pitelis/Teece 2015: 18f.).

To exemplify this, a look at the electronics industry is advisable because co-specialization needs and opportunities in a national and international context play a large role here. This is well illustrated by the iPod by Apple. Apple combined three core elements: (1) Technology that had already been known as digital music players that were invented earlier; (2) The iTunes store which is considered a co-specialized asset invented by Apple; And (3) a digital rights management software that Apple provided in order to assure the musicians that their work could not be pirated. Apple compiled these functions in one package, the iPod, and this way eliminated all noteworthy competitors. However, all components that the iPod is made out of are outsourced (Pitelis/Teece 2015: 19).

Dynamic capabilities and sustainable competitive advantage of MNEs

The dynamic capabilities-based view of the MNE deals with the management of both opportunities and uncertainties. Innovation, flexibility, and the ability to adapt to different country-specific jurisdictions is facilitated by strong dynamic capabilities. Dynamic capabilities include, besides the entrepreneurial sculpturing of the MNE's own influence and footprints, also the forming of both the market and the ecological environment. The MNE has to shape the right, non-imitable capabilities in order to create and sustain competitive advantage (Teece 2014: 19). According to Rumelt (1987) and Teece (1986), the non-imitability is achieved best "in the presence of 'isolating mechanisms' and 'tight appropriability regimes'" (Pitelis/Teece 2015: 19) because under these circumstances, it is easier to keep up exceptional performance.

In the perspective of the capabilities approach, the activity of MNEs is prodded by the possibility of leveraging capabilities and generating value from innovation and global supply chain activities. It is important to view managers as more than passive resource allocators who react to the market, as it is their responsibility to sense, seize, form and make use of upcoming opportunities. Theories of the MNE that are oblivious of this train of thought will

not be successful in explaining the basis of sustainable competitive advantage of MNEs. Due to incomplete property rights over discoveries and innovations, the business activity needs to be combined with capital and complementary additional assets in order to shape and make good use out of opportunities on a global scale. To help the MNE appropriate value which is indispensable for ongoing investments, ownership and control over its intellectual property and complementary assets are necessary to some degree (Pitelis/Teece 2015: 19; Teece 1986b). In his early work, Teece (1980; 1982; 1986) already emphasizes the fact that entrepreneurs and managers, not the market, are responsible for accumulating assets and generating new ones and incorporate them into a working system because they are the instruments which enable the markets to function well. The “entrepreneurially managed MNE is a vehicle” to perform the “learning, co-creation, and orchestration functions” (Pitelis/Teece 2015: 20).

Moreover, at a locational level, MNEs make the sustainment of competitive advantage easier. This can be explained by the following: MNEs dispose of capabilities that allow them to combine innovation and know-how aspects from different locations (Cantwell 2014:4); They create and link complementary and “synergistic locational portfolios” (Cantwell 2009: 35) of capabilities. Consequently, and in contrast to domestic firms, MNEs influence the health and vigor of a location through the efficient connection to sources of complementary know-how in distant international locations. Along the way, they create and detect new opportunities for the MNE itself as well as for others. With the increasing complexity and global diffusion of innovation and know-how sources, the MNE’s role to create and enable international capabilities grows. Without MNEs, locations are predispositioned to become disconnected from the required sources. Thus, it is through the provision of pipelines that MNEs enable and lighten the sustainment of competitive advantage at a locational level (Cantwell 2014: 4; Lorenzen/Mudambi 2013). Concerning the creation of competitive advantage for the firm, the capabilities of the MNE sum up to be more than the individual locational parts. The competitiveness of the MNE is determined by the constant interaction between different elements from different parts of the global network. This way, new applications are created that would have been unlikely if all involved elements stayed in their domestic context. Unlike in the traditional approach to global technology transfer, an existing capability does not have to be moved from one location to another. Instead, international innovation recognizes the opportunity to use parts of the know-how, which was deployed in a specific context to solve a

specific problem, in a very different setting to address a very different problem and this way detect a new, beneficial application (Cantwell 2014: 4).

The way and timing of the MNE's entry into new geographic markets

As shown above, the transaction cost theory by itself is not able to fully explain foreign market entry. This theory is strong when it comes to choosing the mode of market entry. However, this is not enough, as a minimum of two other aspects need to be considered (Teece 2014: 25).

Firstly, the availability of pre-entry capabilities like slack resources is exceedingly important. MNEs are unlikely to decide a foreign (or proximate domestic) market entry in cases in which it does not dispose of at least strong ordinary capabilities and sufficient slack to reproduce them without bumping against their own resource restrictions (Pitelis/Teece 2015: 20). The slack resources could concern intellectual property rights, complementary assets or they could be of financial nature (Pitelis 2007b). Concerning the latter one, Teece (1986; Teece 2014: 25) even emphasizes the relevance of cash as an aspect that highly impacts the choice of market entry mode.

Secondly, joint ventures are likely to be the preferential market entry mode when timing plays an important role and when the firm does not dispose of the required capabilities. However, a firm that wants to go global will have to reproduce and reapply skills, processes, and other capabilities that it has deployed in its home market. This replication of capabilities most commonly comes along with adjustments, as they might not be of the same utility and usefulness in a different geographic environment. This is the point where the MNE urgently needs to employ dynamic capabilities in order to get this fit right (Pitelis/Teece 2015: 20).

Teece (1977b; 1980; 1986b) empirically examines time-cost tradeoffs with respect to technology transfer processes. In case the tradeoff is too steep, it is advisable for entrepreneurs and managers to cooperate with joint ventures that are able to flatten them. This has two advantages as it helps decrease expenditures and facilitates the accessibility of local capabilities for the MNE. Accordingly, the decision concerning the market entry mode is impacted not only by contractual factors, but also by the facts of who owns the necessary capabilities and the required transfer time of the capabilities (Teece 2014: 25).

The phenomenon of born global firms, who decide to enter foreign countries very early in their life time, and their reasons and ways of doing so, has been analyzed by a number of authors (Oviatt/McDougall 1994; Moen 2002; Sharma/Blomsterno 2003; Coviello 2015). This concept is in line with the dynamic capabilities framework. Small and young firms with strong dynamic capabilities may have the ability to access the ordinary capabilities abroad that are required to successfully implement their strategies for their foreign market entry. Hence, small companies are able to rapidly create and co-create, together with their foreign partners, new markets outside of their home country (Pitelis/Teece 2015: 21).

Arregle et al. (2013) present their results that the decision to invest in a region is influenced by prior investments in the particular group of countries. The reason being is that it is easier to reuse capabilities within one region than between regions. This result is in line with the fact that transferring capabilities is easier the closer the countries are geographically and the more similarities both the language and institutions have. Even though this finding is in accord with the transaction cost theory since contracting is easier in similar institutions, it is more consistent with the capabilities theories (Teece 2014: 25).

Dynamic capabilities “themselves (involving as they do sensing, seizing, and, ultimately, transforming) can in most cases be sequenced over time and across different geographic markets” (Teece 2014: 25). It would be even more difficult to execute all three in all markets and businesses at the same time. Nevertheless, in practice, this challenge is sometimes mastered, for instance by Yum! Brands, which encompasses fast-food restaurant like Pizza Hut, Taco Bell, and KFC. They decided to rapidly expand in China, while at the same time, they transformed one of its developed markets (United Kingdom; Pitelis/Teece 2015: 21).

The relevance of headquarters and subsidiaries

Concerning the role of headquarters and subsidiaries, the internalization theory based on transaction costs provides little to no information compared to the capabilities framework (Pitelis/Teece 2015: 22).

The relevant dynamic capabilities reside in the headquarters function. They are able to increase the capabilities of the enterprise through the facilitation of technology transfers from one division to another and the support and approval of exploitation of complementarities. In the dynamic capabilities perspective, the strategic and international asset orchestration function is fulfilled by the top management in the headquarters. It is they who provide and

distribute the financial resources that are deployed by the MNE to create markets in the host countries. Operational tasks are, on the contrary, performed by lower hierarchical levels (Teece 2014: 25f.).

Of course, all firms have the possibility to learn and develop new signature processes, as well as new business models, for when of the MNE deploys them in differing geographies. The MNE is considered to have an advantage here over firms with a purely domestic focus because it is easier to conduct various market experiments at the same time. Additionally, the MNE can more readily adopt and adapt new processes within itself (Pitelis/Teece 2015: 22).

The role of subsidiaries in the context of dynamic capabilities of the firm is quite easy to retrace. The know-how and capabilities that they have developed from their own experience are transferred to the headquarter or to other foreign subsidiaries (Michailova/Zhan 2014: 577). The transaction cost theory usually overlooks this aspect (Teece 2014: 26). However, it is common, that the assets and capabilities generated by the subsidiary of the MNE, which has become independent and builds its own networks, are applied in a different country or context (Michailova/Zhan 2014: 577f.; Berry 2014: 870f.; Li/Lee 2014). Past literature (Phene/Almeida 2008: 901f.; Birkinshaw 1997: 208) moreover shows that a reverse technology transfer from a subsidiary to the headquarters can result in the creation of new opportunities. Rugman and Verbeke furthermore state in several of their works (2003: 135; 2001; 1992) that firm-specific assets can be developed anywhere within the MNE, which is also in line with the capabilities perspective (Teece 2014: 26).

The MNE in fact does work a lot like a network. On the one hand, subsidiaries are largely independent, and on the other hand, they are part of the global operations of the MNE. This allows for new products or processes to be created both by the subsidiary and by the parent and then to be shared across borders. This approach is especially supported by the decentralized M-form of the MNE which supports local knowledge and opportunity development, followed by transfer of technology and the corresponding orchestration activities performed by the top management. These findings are not addressed by the transaction cost theory (Pitelis/Teece 2015: 23; Teece 2014; 25f.; Bartlett/Ghoshal 1989).

To sum it up, the capabilities framework emphasizes that subsidiaries of MNEs develop capabilities and contribute to the competitive advantage of the MNE. VRIN resources and signature processes can therefore be subsidiary-specific. Teece (2014: 26) concludes that “this

distribution of activity provides the opportunity to recognize what Bartlett and Ghoshal (1989) called ‘the transnational solution’, combining astute (country-specific) blends of adaptation, rationalization, and centralization.”

International distribution of R&D and innovative business ecosystem

Additional assets, for instance accumulated through the generation of firm-specific assets, their exploitation, their enlargement, and their renewal, are aspects which have to be explained by a strong entrepreneurial/managerial theory. Within the dynamic capabilities perspective, R&D and both internal and external learning processes are said to lead to asset augmentation. Teece (1986a; 2006b) furthermore emphasizes the fact that capturing value stems from the application of the “profiting from technological innovation” paradigm. And the internal capabilities of the firm can be increased through external sourcing and collaboration (Capron/Mitchell 2009: 294; Chesbrough 2003). On the contrary, however, partners can also have a negative effect on the creation of capabilities if they work sluggishly and do not deliver what was agreed upon, by example of the case of Boeing’s partner in the 787 Dreamliner development (Teece 2014: 26; Pitelis/Teece 2015: 24).

The role of R&D is in no way ignored by the transaction cost-based internalization theory. It is of great relevance in Buckley and Casson (1976), for example. Nevertheless, the transaction cost approach has not stressed the possibility of creating firm-specific technological assets through dynamic capabilities. Concerning the innovation capability, both the amount spent on R&D and the way how the money is spent (in house versus outsourced) have an influence. The decision to spend on the right things and on the orchestration function is to be made by professional, experienced management (Pitelis/Teece 2015: 24).

In the 1970s, research revealed that foreign subsidiaries of American MNEs deployed R&D to access talent in other countries and especially to make adaptation of products that fit the local markets (Mansfield et al. 1979). Nowadays, the importance of the development of new products in subsidiaries has increased, and R&D activities are intensified in those countries where technology creation is likely. Hence, decisions with respect to host country locations are made in view of market access and talent search rather than with the view of a decrease in transaction costs (Cantwell/Kosmopoulou 2002; Teece 2014: 27; Pitelis/Teece 2015: 24).

Besides technology creation, subsidiaries are also valuable when it comes to generating value from innovation that was created someplace in the MNE. As Teece (2014: 27) asserts, “(t)he

foreign subsidiary can invest in co-specialized manufacturing assets, co-specialized distribution/marketing assets, and/or co-specialized technologies. Ownership of such assets can play an important role in the MNE's ability to profit from innovation". Even though Teece (2014) indicates that these are relatively general results stemming from literature on innovation, they are particularly suitable for the theory of the MNE. The principal point is that the distribution of R&D across countries results in the development of different capabilities in different countries. Here again, the finding of strategy and capabilities perspectives are more helpful than those of the transaction cost theory (Pitelis/Teece 2015: 24f.; Teece 2014: 27).

Location/country factors and the theory of the MNE

In the dynamic capabilities view, location factors do influence investment location decisions, but they do not contribute to the understanding of achievement and the anchoring of competitive advantage of MNEs. The reason being is that country factors and specific benefits are easily taken advantage of not only by MNEs but also by domestic, local firms. The only exception concerns the case when a MNE has a special relationship with the host country, for example, due to its common and unique history (Teece 2014: 27; Pitelis/Teece 2015: 25).

Consequently, country factors are able to clarify the reasons for why MNEs choose a particular foreign location for their economic activity. The decision whether to perform activities by FDI or outsourcing can be facilitated by the internalization theory. The country and regional factors, though, are not capable of explaining competitive advantage; they, rather, help to understand the history of single MNE units. At this point, the theory of competitive advantage and the traditional MNE theory go separate ways (Pitelis/Teece 2015: 25; Teece 2014: 27).

To sum it up, MNE sustainable competitive advantage can only be achieved through country and regional location factors, if the MNE is capable of exploiting local advantages and get around local disadvantages better than others. For instance, the accumulation of know-how in a specific foreign host-country can serve as the foundation for signature processes and VRIN resources, which might result in competitive advantage of the MNE since competitors are not able to replicate them (Teece 2014: 27; Pitelis/Teece 2015: 25).

In Teece's (2014) framework the sustainable competitive advantage of MNEs stems from MNE-specific factors, like the innovation, management, and culture of the firm and its history and resources that shape its global footprint. National systems of innovation advanced by Nelson (1993) are important here. And as sources of innovation are scattered all over the

world, MNE competitive advantage is within the bounds of possibility if a host country offers favored access to the national system (Pitelis/Teece 2015: 25; Teece 2014: 27).

7.2.2 Cross-border market creation and co-creation

Coase's (1937; 1960; 1991) economic theory of the firm distinguishes between the firm's objectives (commonly the achievement of profit), the firm's nature (contract of employment between labor and capital), and the firm's essence (the way of operating a business in order to achieve competitive advantage). The theory of the MNE widely uses the same distinction (Pitelis/Teece 2015: 26; Pitelis/Teece 2010: 1257).

While the previous chapter focuses on the essence of the MNE and shows that the combination of dynamic capabilities and the theory of the MNE support the explanation of cross-country strategic advantage, this chapter reveals that the separation of objective, nature, and essence is relatively irrelevant for research concerning organization, entrepreneurship, and strategy. One reason is that this distinction does not adequately stress the role of economic agency, especially entrepreneurial management, which the dynamic capabilities framework in turn emphasizes (Pitelis/Teece 2010: 1257f.; Pitelis/Teece 2015: 26).

One of the most important questions to be answered by scholars in the field of strategy is if and how the objective of capturing value motivates economic players to start firms and establish competitive strategies that result in the realization of profit. Pitelis (2009) and Pitelis and Teece (2010: 1258) assert that "organizational value capture, value creation and CA are co-determined and co-evolving, in that the objective (value capture) informs the nature and the essence, which are in turn intrinsically interrelated". Hence, the dynamic capabilities framework and the concept of co-specialization together aid the interpretation of the nature of the MNE and the generation of firm-specific advantages (Pitelis/Teece 2015: 26; Pitelis/Teece 2010: 1258).

Cross-border co-specialization

Co-specialization can help understand the reasons why it is advantageous to unite firm-level and country-level benefits in the establishment of a firm cross-border, as it corresponds to the nature of the MNE. For instance, co-specialization challenges and chances are commonly detected during activities where two countries are involved. This is found to be particularly true for co-specialized intangible assets. If internalization is expected to be the best way to

capture value from such chances and opportunities, cross-border integration is considered preferable over market-based transactions (Pitelis/Teece 2010: 1258; Pitelis/Teece 2015: 26f.). Pitelis and Teece (2015: 27f.) reason: “Thus the nature (designing and setting-up of organization) and the essence (employing strategy to capture value) are co-determined and are linked to asset co-specialization and the DCs required for orchestrating such assets”.

Two ventures are presented to exemplify the view previously presented. The CEO of mPortal, a young firm for wireless content provision, views mPortal as “a naturally born global firm ‘from day zero’, and because he himself ‘knew no other way’” (Pitelis/Teece 2010: 1258). In addition to the personal multicultural background of the CEO, one important reason lies in cross-border asset co-specialization. The best programmer for prototypes for mPortal lived in the Netherlands which resulted in a good collaboration and teamwork, even though the two partners never met personally. This illustrates why cross-border asset co-specialization helps understand and explain internationalization (Pitelis/Teece 2015: 27; Pitelis/Teece 2010: 1258).

Another example is the firm OriGene Technologies which maps the human genome. Cross-border asset co-specialization (China and USA) ensures its survival. As the CEO of OriGene Technologies explains, the required technology is only accessible in the USA, while the fabrication of protein, which is costly in terms of labor, can only be executed in China. At present, no other country is able to satisfy OriGene’s goal, which makes this an extreme cross-border co-specialization. FDI or integration is required to guard the technology and guarantee the quality. An additional reason given by the CEO for FDI is his/her local presence as a leader, which is, in its theoretical dimension, described in the following (Pitelis/Teece 2010: 1258f.; Pitelis/Teece 2015: 27).

Market creation and co-creation

The current economic theory of the MNE supposes a situation where the existing markets fail due to certain circumstances. New firms are created in order to deal with this collapse. But in reality, shaped by uncertainty and limited rationality, the first objective of entrepreneurs is to create a market for their new products or services. This is required as these markets are frequently very small, thin, and imperfect or might not exist at all yet (Pitelis/Teece 2015: 27). Dunning and Lundan (2010: 1225) confirm that it is rather the companies that form the markets than the markets who form the companies. In the past history of business strategy new path-breaking, innovative ideas like the PC or CT scanners had to face opportunism and

skepticism. Additionally, their potential market size was estimated cautiously and was over-pessimistic (Teece 1986a: 285f.). So the initiators or inventors of these ideas had to become active and had to be convincing. An accumulation of the required co-specialized and complementary assets is then often necessary to establish a firm and implement the right structures and strategies in order to generate both supply and demand (Pitelis/Teece 2010: 1259; Pitelis/Teece 2015: 27f.).

It is important to recognize that cross-border market creation and co-creation is commonly necessary in the knowledge-based economy because the market for knowledge which is or was created in one country does not imperatively exist in another location. An exchange commences with the co-creation of markets. Social value creation is increased by co-creation and cross-border markets, as local firms participate in the market deploying their country-specific benefits (Pitelis/Teece 2015: 28). Thus, co-specialization is not the only reason for the existence of the MNE. “Importantly, the MNE exists because cross-border presence can well be part and parcel of the market co-creation process” (Pitelis/Teece 2010: 1259). And the MNE is not only operating to rectify, avoid, or address market failure. It furthermore helps with the generation, protection, transfer, and orchestration of a set of assets in such way that the generation of markets is facilitated. In these markets, MNEs and other firms are active, and the demand of customers is created. The result of this process is impacted by the firm’s and other market participants’ (for example, consumers, suppliers, market rivals, or firms considering market entrance) activities concerning the process of market co-creation. And these markets co-creators are very commonly unknown and unpredictable to the firm (Pitelis/Teece 2010: 1259f.; Pitelis/Teece 2015: 28). In conclusion, the current economics-based approach to the MNE and FDI assumes the existence and knowledge of O, L, and I advantages, which Pitelis (2007: 208f.) and Pitelis and Teece (2015: 28) evaluate as unlikely.

Entrepreneurial management co-creates markets and therefore forms the ecosystem. The ecosystem, rather than the industry, is considered as the unit of analysis in the dynamic capabilities literature. The co-creation of the ecosystem and the markets facilitates within organizations the co-creation of social value with the aim of private appropriation. Hence, this value creation and co-creation of private entrepreneurs is motivated by the gain of potential profit as the benefit for their efforts. So unlike other value creating individuals, for example, philanthropists, they essentially seek financial advantages and profit and appropriability. The latter is even considered to be an indispensable requirement of organizational

entrepreneurship and strategy. And in turn, value creation and co-creation is a required premise for appropriation (Pitelis/Teece 2010: 1260).

The described concept of the business ecosystem is linked to Porter's (1989; 1985) work on clusters. Porter's research and the recent literature illustrate the way locational decisions generate ecosystems and foster market development. MNEs are commonly considered catalysts for cluster creation. The nature and essence of the MNE can be explained by market failure, and even more important, by cross-border market, cluster, and ecosystem co-creation. Firm level dynamic capabilities are required for a successful orchestration of this process of social value creation (Pitelis/Teece 2015: 29; Pitelis/Teece 2010: 1260).

7.2.3 The MNE and appropriability

Jones and Pitelis (2015: 309) state that research about the nature of the MNE has, in large part, not considered Penrose's early findings ([1959] 1995). This indicates the necessity to integrate entrepreneurship in the theory of the MNE and FDI (Doz 2004).

The economics-based approach to the MNE is a rather rational one and does not include imagination. The MNE theory presumes bounded rationality and learning as important factors (Simon 1947; Cyert/March 1963; Nelson/Winter 1982), and Loasby (2001: 7) recognizes that "the creation of new patterns rests on imagination, not logic, typically stimulated by a perceived inadequacy in established patterns".

Witt (2007: 1125f.) associates entrepreneurship with "the incessant (re)structuring of production and trade — be it via markets or via firms. For entrepreneurial ventures to be undertaken business opportunities must be imagined and conceptions for realizing them must be figured out in the first place. Visions like these are a crucial, though often overlooked, cognitive input to the entrepreneurial service of (re)organizing production and trade". Pitelis and Teece (2015: 29) observe that entrepreneurs have to be creative and imaginative in order to sense opportunities to create and co-create cross-border markets and ecosystems (Jones/Pitelis 2015: 314; Pitelis/Teece 2015: 29).

Imagination is based on past experiences and learning. Therefore, entrepreneurs with much experience are readily capable of transferring their experience to a new context, for example, a new country. They can imagine a situation in which similar and adequately adapted circumstances can be created and co-created in another context, for instance, in a host

country. Jones and Pitelis (2015: 315) express the aforementioned as follows: “In such cases entrepreneurs can perceive desired realities drawing on their experiences, knowledge, learning, intentionality and appropriability-informed imagination that motivate decisions and actions that help create and co-create a desired context for their planned operations at home and cross-border”.

There are different manners for how legacy-informed imagination can support firms in building cross-border activity (Jones/Pitelis 2015). One way is to shape cross-border context according to the image of the home country. This is in line with the Hymerian (1960/1976; 1968) perspective of MNEs, forming the world to their image (Pitelis/Teece 2015: 30; Dunning/Pitelis 2008). In another way, managers “imagine organizational, industrial and institutional structures cross-border” (Pitelis/Teece 2015: 30), which are not (anymore) obtainable in the home country but could have been thinkable. Possibilities may be the influence on market structures, institutions and trade or regulation policies (Pitelis/Teece 2015: 30).

Sometimes, new opportunities may be based on past experiences in the home country and on the generated know-how from trial and error. Within the home country and because of path dependencies and irreversibility, it is usually not possible to correct errors. So in this case, a host country, as a new terrain for cross-border expansion, represents a new setting where previous mistakes are not repeated. Cross-border constitutes the second opportunity where past errors can be rectified. Hence, the perception of cross-border differences as locational advantages and the opportunity to correct mistakes broadens Hymer’s view in which the future is assumed to be equal to not yet realized history (Pitelis/Teece 2015: 30).

These arguments are supported by the actual cross-border activities of MNEs not only active in high-tech but also in low-tech industries that employ outsourcing. A good example is McDonald’s expansion to Russia. They built a meat plant as a Greenfield FDI and a connected network of suppliers which was not available due to the historically centrally planned economy. Gradually, a part of the suppliers grew rapidly and turned into large firms themselves, which resulted in the co-creation of a market and an ecosystem (Pitelis/Teece 2010: 1260f.), which, as asserted by McDonald’s management, was planned to serve to franchise. Thus, McDonald’s introduced and enabled the creation of small businesses with the eventual objective of turning them into franchisees. It facilitated the co-creation of new

markets, an ecosystem, and organizations and procured the necessary conditions for the capture of co-created value (Pitelis/Teece 2015: 31).

Another example is Jardine Matheson & Company (JMC), a Hong Kongnese trading enterprise with a history of 200 years which is owned by a British family. This firm formed and developed the legal circumstances for business in China so that they were suitable to their concerns and could thereby evolve into a successful MNE (Connell 2006: 193f.). This even included lobbying the British government in the Opium War. This example illustrates the development of institutions (as depositories of firm-specific capabilities and advantages) due to entrepreneurial management activities (Pitelis/Teece 2015: 31).

The CEO of OriGene Technologies stated that the being present on the ground as a leader is necessary for success in the host country. This supports Pitelis and Teece's (2010; 2015) view that it is required to proactively form and co-create markets by demonstrating presence. Other supportive examples are GE, who declares to be both defining and creating its ecosystem, and Apple who "opens up and dominates new markets" (Pitelis/Teece 2010: 1261). These statements strengthen the argued perspective about the co-creation of markets and ecosystems and indicate the requirement of indispensable dynamic capabilities (Pitelis/Teece 2010: 1261).

It is important to note that market and ecosystem co-creation and the strategies of value appropriation are not the consequence of a fictitious market failure. Rather, the goal of value appropriation motivates the firm and hence results in cross-border market co-creation. Dynamic capabilities are stimulated at the same time with the objective of capturing the co-created value which originated from the host country activities of the MNEs (Pitelis/Teece 2010: 1261).

In a large number of cases, firm-specific advantages do not exist and the entrepreneur provides the advantage. This is exemplified by the mobile banking revolution that happened in Kenya. One single entrepreneur created a business opportunity after he realized that the circumstances in Kenya made conventional banking problematic to impossible. With his business model that involved the utilization of mobile phones for banking, he not only created a new market but also new demand. Additionally, his innovation brought value for the single user and the society as a whole. Hence, the vision of the entrepreneur and the know-how developed from it was based on organizational disadvantages rather than firm-specific

advantages. The newly founded firm called Safaricom cooperated with Vodafone and realized cross-border expansion. This example shows that challenges faced by a country may result in innovative approaches. The harnessing of legacy-based know-how and leaning thus led to the desired result (Pitelis/Teece 2015: 32).

Another kind of entrepreneurial imagination and perception is linked to resources, circumstances, and advantages that are solely present abroad. These are particularly co-specialized and complementary assets and locational advantages which are only existent in foreign countries. An opportunity-driven activity is especially appropriate for born global firms and rather than path dependency, it emphasizes the importance of intentionality and convincibility of managers (Pitelis/Teece 2015: 32).

Pitelis and Teece (2015: 32) conclude that “[t]he legacy-informed and shaped creation of cross-border markets, demand and business ecosystems, hence appropriable value, can be a reason for cross-border expansion, and the existence of the MNE, hence cross-border business organization”. The decision for the entry mode of FDI in contrary to licensing is based on the corresponding power and influence on the environment that is associated with the entry mode and which is higher with direct presence in the host country. It is not about market power; instead, it is about the power to form, create, and co-create new supply and demand, which may then help generate competition (Pitelis/Teece 2015: 32).

7.2.4 Comments

An appropriate, sturdy theory of the MNE has to be capable of answering not only the question concerning the location which minimizes transaction and production costs. It should also give insight into where best to locate with regard to the building and application of signature processes, the securing of market access, and the successful transferal of the firm’s existent VRIN resources into new market environments. Consequently, the dynamic capabilities of MNEs have to be more leveraged and extended compared to the dynamic capabilities of firms with an entirely domestic focus. The biggest dynamic capability is the ability to both orchestrate and effectively apply co-specialized and complementary assets across different countries in order to co-create cross-border markets (Pitelis/Teece 2015: 34). This capability is “an important reason behind the spectacular advances of business globalization “(Pitelis/Teece 2015: 34). The foregoing chapter summarizes the state of research on the dynamic capabilities-based theory of the MNE. However, this field of research

is still underdeveloped, and there is a lot more to learn about the nature and influence of MNEs. This needs to be addressed by future researchers.

8. Future research opportunities

Research on dynamic capabilities has come a long way since the publication of Teece et al.'s (1997) seminal article. Nevertheless, before concluding this thesis and summarizing the outcomes, some directions for future research need to be discussed. At the end of Chapters 6 and 7, the need for further research relating to the research questions has already been described¹⁰.

One of the biggest shortcomings of dynamic capabilities literature concerns the limited empirical support. Even though this area of research has attracted a high degree of attention in the last decades, until very recently, the examination of the theoretical development highly dominated empirical research. According to Grant and Verona (2013, cited in Danneels 2015: 10), "empirical enquiry remains underdeveloped".

There are different factors that can explain the insufficient empirical research. Firstly, and as addressed by Ambrosini and Bowman (2009) and Newbert (2007), the missing empirical work is due to the fact that the theoretical concept elaboration only started in 1997 with Teece et al.'s research paper. As usual, the development of the theory is the first step of research, followed by hypotheses and propositions. And only after that, the focus is on empirical testing and managerial implications (Ambrosini/Bowman 2009: 40). Secondly, scholars might have had trouble defining exactly what phenomenon they are looking at because the capabilities have not been satisfactorily specified. And thirdly, another reason for rather little empirical research is the presence of difficulties regarding the observation and measurement of dynamic capabilities (Ambrosini/Bowman 2009: 40). The third reason is also treated as a separate aspect for further research.

According to Arend and Bromiley (2009: 83), the empirical research is not yet measuring up and faces many challenges. They claim that more than two thirds of the studies use survey and case-based data, which might go along with undesired subjectivity of the assessments.

¹⁰ This concerns first, further research on an approach that states an indirect link between the dynamic capabilities and competitive advantage in combination with moderating effects on the relationship, and second, more research on the role of dynamic capabilities in the theory of the MNE.

Furthermore, one third of the studies, with less than ten observations, are less reliable and less trustworthy due to their small sample size. And finally, only 20 percent of the studies use longitudinal data (Arend/Bromiley 2009: 84). Wang and Ahmed (2007: 43) also express criticism concerning the strong weight of qualitative studies that are based on case studies. These studies have detected capabilities and processes that are specific to the examined industries or even firms. In their qualitative endeavors, future research should therefore try to focus on links between the specific processes and on the mutuality of dynamic capabilities across different firms and industries (Wang/Ahmed 2007: 43).

Even though research on dynamic capabilities has started to become more and more empirical (for example D'Este 2002; Mota/de Castro 2004; Athreye 2005; Danneels 2011, 2012 and 2015; Stadler et al. 2013; Drnevich/Kriauciunas 2011; Naldi et al. (2014)), it has not yet reached maturity (Wang/Ahmed 2007: 43). Like Giudici and Reinmoeller (2012: 445) state, “[d]espite the construct’s progress, we need much more empirical research on dynamic capabilities [...] We maintain that an increase in carefully crafted empirical work would enhance the chances of challenges to the construct’s validity being overcome by both strengthening the recognition of dynamic capabilities in academia and supporting its relevance for external practitioners”. In general, further research on the dynamic capabilities framework is not only desirable in terms of quantity, but future research should also be balanced with respect to the shares of qualitative and quantitative studies. The resulting empirical evidence would support the framework, help it to become more empirically validated, and would help form a coherent body of knowledge.

Another area for future research concerns the measurement of dynamic capabilities like those mentioned in Chapter 6.1.1. As the field is a rather young strategic management research area, it is still missing widely accepted approaches of how to measure its key variables. According to Grant and Verona (2013, cited in Danneels 2015: 2), research “so far has focused on the definitional issues more than on the technical problems related to the measurement of capabilities”. However recently there are researchers who provide a strongly needed suggestion for the measurement of dynamic capabilities. Danneels (2015: 2), for example, suggests survey measurements in terms of scales of first- and second order competences which other scholars could use, adapt, and enlarge in their applications. Pavlou and El Sawy (2011) also offer a measurable model of dynamic capabilities, which they consider to be a helpful basis for future empirical research. Nevertheless, consensus has not yet been reached

on how dynamic capabilities are to be measured. Therefore, this constitutes one of the most important objectives for scholars to pursue in the future.

Besides the two above mentioned fields that require further research, there are of course some more aspects which still need to be examined thoroughly. One concerns the managerial implications of the dynamic capabilities research in practice with the concrete question of how managers and firms benefit from the theoretical knowledge about dynamic capabilities in terms of profit. And vice versa, the role of managers in the firm's capability to develop dynamic capabilities is another research area that still needs to be addressed more extensively. In summary, before having a complete understanding of what dynamic capabilities are exactly, how they act and exert influence, and whether they are similar across firms differing in size, age, and industry, much more research is needed.

9. Conclusion

Both scholars and practitioners are interested in the way firms, especially MNEs, change, generate value, and develop and sustain competitive advantage. Only the dynamic capabilities framework analyzes the way firms modify their resources over time and considers the role of the dynamism of the external environment. This is one of the reasons that in the last decades this view has attracted increasing attention and many models, concepts, and journal articles focusing on it have appeared.

This thesis is also devoted to dynamic capabilities. It takes stock of the literature, reviews it, and in its first chapters summarizes the current state of research by comparing definitions and differing conceptions, by examining the theoretical basis of the framework, and by presenting the most important elements of the dynamic capabilities view. Then, the thesis proceeds to address two of the most relevant open questions in the dynamic capabilities framework: first, the question concerning the nature of the relationship between dynamic capabilities and competitive advantage and second, the issue of the application of the dynamic capabilities view to the theory of the MNE.

The question whether dynamic capabilities contribute to the firm's competitive advantage is one of the largest challenges and concerns of the framework. Chapter 6 addressed this issue in all its particular parts. The underlying reason for the scholars' uncertainty is based in the widespread difficulties concerning the measurement of both dynamic capabilities and performance and competitive advantage. There is not yet a commonly accepted measurement of the two key constructs, which renders empirical research very difficult and prevents the existent research from being successfully compared. Nevertheless, scholars have suggested a huge variety of models and conceptualizations that propose a certain relationship between dynamic capabilities and firm performance. While a smaller share of scholars, among also the founders of the framework, Teece et al. (1997), identify a direct link between the two concepts, a much larger share of researchers (see Figure 2) supports a more complex nature of this relationship. Among the latter, an indirect link and a link influenced by moderators can be differentiated. Of all the presented approaches, an indirect relationship that is additionally influenced by moderating effects, similar to the framework proposed by Ambrosini and Bowman (2009: 49), seems to be the most promising one for different reasons. An indirect

influence of dynamic capabilities on firm performance via a change in the resource base of the firm can be exerted in the following way: Dynamic capabilities of the firm may effectively impact and change the resource base of the firm. The new resource base may then influence the position of the firm and the products on the market and through this modification prompt an increase in competitive advantage and firm performance. Additionally, it seems very probable that this indirect relationship is influenced by internal and external moderators, especially by the dynamism of the external environment. The external environment is decisive, as it determines the value of resources over time and therefore indicates a necessity for the firm to adapt its resource base. For future research it is highly recommended to empirically test a model that incorporates both the indirect relationship via a change in the firm's resource base and the crucial role of internal and especially external moderators. In summary, the research question whether dynamic capabilities contribute to the firm's competitive advantage can be answered with an affirmative answer. Past research has shown that there is definitely some kind of link between the two key concepts. However, there still is no widely accepted consensus on the exact mechanisms for how this contribution and influence is exerted. Hence, further research is desirable and required.

The second research question is about how dynamic capabilities are linked to the theory of the MNE. Although the dynamic capabilities framework has strongly influenced strategic management and organization theory, it has not had comparable impact on the theory of the MNE. Chapter 7 is therefore concerned with the development of a dynamic capabilities-based theory of the MNE, mostly based on Teece (2014) and Pitelis and Teece (2015). To illustrate the foundations of the development, a historical overview of the theory of the MNE and FDI is given before an extensive analysis of the entrepreneurial theory of the MNE is presented. Based on the developments of international business theory in the past 55 years, the nature, essence, and objectives of the MNE are presented. It is argued that MNEs exist due to the management's objective to generate and sustain value by founding and developing firms which are able to establish cross-border markets, form the economic ecosystems and leverage capabilities (Pitelis/Teece 2015: 3). The link between dynamic capabilities and MNEs has become apparent, supported by Pitelis and Teece (2015: 3) who state that "the concept of co-specialization, market and business ecosystem creation and co-creation, and dynamic capabilities (DCs) are essential to explicating the nature and essence of the MNE". In the proposed dynamic capabilities-based theory of the MNE, dynamic capabilities together with a

good strategy are considered indispensable for firm performance, particularly in rapidly changing environments. Moreover, the framework explains how sustained competitive advantage is determined by dynamic capabilities in combination with strategy (Teece 2014: 8; Pitelis/Teece 2015: 3). Summing up, dynamic capabilities are tied to the theory of the MNE. Together with co-specialization and market creation and co-creation, they are valuable when explaining the basics and the nature of the MNE. However, as only a limited number of researchers have addressed this topic in the last decade, further research is necessary to obtain more diversity in the approaches and different opinions about the previously stated finding and its implications.

In conclusion, it can be stated that the body of dynamic capabilities research that has developed since the publication of Teece et al.'s seminal article in 1997 and whose purpose is to promote the approach, is very impressive. In 2016, almost two decades later, one may ask the question of if there is yet a "theory" of dynamic capabilities. While the early scholars concentrated on diverse aspects of the framework and pointed to different directions (see Chapter 2.3.1), today it seems that there is more and more consensus on the most fundamental questions related to the concept, and the body of research is increasingly growing into a more coherent and consolidated framework. Nevertheless, even though there are definitely identifiable foundations of a theory (Helfat/Peteraf 2009: 92), the dynamic capabilities approach, as it does not yet fulfill all requirements of being a theory (e.g. see Fry/Smith 1987), cannot yet be referred to as the dynamic capabilities theory. Hence, a transformation of the dynamic capabilities framework into a theory is left to future researchers.

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Appendix

I. Abstract (English)

Since the publication of Teece et al.'s (1997) seminal research article on dynamic capabilities, the field has evolved into one of the most important and active research areas in strategic management literature. The continuing interest in the field can be explained by the benefit received from knowledge about the creation of competitive advantage, which is often associated with dynamic capabilities, both for researchers and practitioners. In today's global economic setting characterized by high uncertainty, national and global competition, and above all, external dynamism, knowledge about the generation and sustainment of competitive advantage is an obvious advantage for business firms when it comes to winning customers and defeating and outperforming competition. This is why the question about the creation of sustainable competitive advantage is one of the major concerns both of the strategic research field and of this master's thesis. The dynamic capabilities-based theory of the firm hence builds the center of the thesis. It furthermore addresses the research questions of if dynamic capabilities contribute to the firm's competitive advantage and of how they are linked to the theory of the MNE. The first half of the thesis is mostly concerned with the theoretical concepts of the dynamic capabilities perspective, including relevant definitions, early perspectives, and theoretical foundations of dynamic capabilities and the core building blocks and clusters of the dynamic capabilities-based theory of the firm. The second half of the thesis concentrates on answering the research questions. This is based on a thorough, well-rounded review of the literature. Even though there are challenges concerning the measurement of dynamic capabilities and competitive advantage which have resulted in an insufficient empirical examination of the topic, many authors have addressed the nature of the link between dynamic capabilities and competitive advantage. This thesis compares the most important contributions to this topic, classifies the papers, and distinguishes two approaches: those authors that state a direct relationship between dynamic capabilities and competitive advantage, and those authors who, rather, believe in a more complex nature of the relationship. In the latter approach, it is furthermore differentiated between an indirect link between dynamic capabilities and competitive advantage (mainly through a change in the firm's resource base) and moderating effects (mainly the dynamism of the external

environment) that influence the relationship. Building on this thorough analysis of the literature, it is proposed that an approach stating an indirect link between the two constructs in combination with moderating effects on the relationship seems to be the most promising one. At this point, further empirical research is needed to examine this conclusion. In a next step, this thesis addresses the question concerning the role of dynamic capabilities in the theory of the MNE. The finding that dynamic capabilities are crucial when the nature and essence of the MNE is to be examined is a rather young one. After a historical overview of the economic theory of the MNE, this thesis compares and summarizes the literature concerning dynamic capabilities in MNEs and introduces a dynamic capabilities-based theory of the MNE. In order to provide a larger plurality of opinions and variety of approaches to this topic, future research is requested. Overall, despite the elevated publication rate in this research field in the past two decades, further (empirical) research is strongly required to minimize ambiguities and confusion still associated with the dynamic capabilities-based theory of the firm.

II. Abstract (German)

Seit der Veröffentlichung des Forschungsartikels zu dynamischen Fähigkeiten von Teece et al. (1997) hat sich Thema zu einem der wichtigsten und aktivsten Forschungsfelder der strategischen Managementliteratur entwickelt. Das ungebrochene Interesse an dem Thema kann durch den Nutzen von Wissen über die Schaffung von Wettbewerbsvorteilen, die mit dynamischen Fähigkeiten in Verbindung gebracht werden, sowohl für Theoretiker als auch für Praktiker erklärt werden. In der heutigen globalen Wirtschaftswelt, die geprägt ist von hoher Unsicherheit, nationalem und globalem Wettbewerb und vor allem externer Dynamik, ist das Wissen über die Bildung und Erhaltung von Wettbewerbsvorteilen besonders wichtig, um Kunden zu gewinnen und Konkurrenten zu übertreffen. Aus diesem Grund ist die Frage wie Wettbewerbsvorteile geschaffen werden können eine der wichtigsten Belange sowohl der strategischen Forschung als auch dieser Masterarbeit. Die Firmentheorie der dynamischen Fähigkeiten bildet das Zentrum dieser Arbeit. Sie beschäftigt sich des Weiteren mit den Forschungsfragen, ob dynamische Fähigkeiten zum Wettbewerbsvorteil von Firmen beitragen und wie sie an die Theorie der multinationalen Unternehmen gekoppelt sind. Der erste Teil der Arbeit befasst sich mit den theoretischen Konzepten des Ansatzes der dynamischen Fähigkeiten, einschließlich wichtigen Definitionen, frühen Ansichten und theoretischen Grundlagen von dynamischen Fähigkeiten und zentralen Bausteine der Firmentheorie der dynamischen Fähigkeiten. Der zweite Teil konzentriert sich auf die Beantwortung der Forschungsfragen. Die Beantwortung basiert auf einer tiefgehenden, fundierten Literaturanalyse. Obwohl es bezüglich der empirischen Messbarkeit von dynamischen Fähigkeiten und Wettbewerbsvorteilen noch einige Herausforderungen gibt, die zu einer unzureichenden empirischen Untersuchung des Themas geführt haben, haben sich viele Autoren mit der Wesensart der Beziehung zwischen dynamischen Fähigkeiten und Wettbewerbsvorteilen befasst. Diese Arbeit vergleicht die wichtigsten Beiträge zu diesem Thema, klassifiziert die Artikel und unterscheidet zwei Ansätze: diejenigen Autoren, die eine direkt Beziehung zwischen dynamischen Fähigkeiten und Wettbewerbsvorteilen annehmen, und die, die vielmehr an einen komplexeren Charakter dieser Beziehung glauben. In letzterem Ansatz wird zusätzlich zwischen einer indirekten Verbindung zwischen dynamischen Fähigkeiten und Wettbewerbsvorteilen (vor allem durch eine Veränderung in der Ressourcenbasis der Firma) und moderierenden Effekten (vor allem die Dynamik der externen Umgebung), die die Beziehung beeinflussen, unterschieden. Auf Basis dieser gründlichen

Literaturanalyse wird vorgeschlagen, dass ein Ansatz, der eine indirekte Beziehung der beiden Konstrukte konstatiert und gleichzeitig moderierende Effekte berücksichtigt, der meistversprechende zu sein scheint. An dieser Stelle ist weitere Forschung in der Zukunft nötig, um die Schlussfolgerungen zu untersuchen. Im nächsten Schritt befasst sich die Arbeit mit der Frage nach der Rolle von dynamischen Fähigkeiten in der Theorie der multinationalen Unternehmen. Die Erkenntnis, dass dynamischen Fähigkeiten entscheidend bei der Untersuchung der Wesenheit des multinationalen Unternehmens sind, ist relativ jung. Nach einer historischen Übersicht über die Entwicklung der multinationalen Firmentheorie, vergleicht und fasst diese Arbeit die Literatur bezüglich dynamischer Fähigkeiten in multinationalen Unternehmen zusammen und führt eine multinationale Firmentheorie der dynamischen Fähigkeiten ein. Um eine größere Vielfalt an Meinungen und Auswahl an Ansätzen zu diesem Thema zu erhalten, ist zukünftige Forschung von Nöten. Trotz der hohen Veröffentlichungsrate in diesem Forschungsfeld in den letzten zwei Jahrzehnten, ist insgesamt weitere empirische Forschung dringend notwendig, um bestehende Unklarheiten und Verwirrung in Verbindung mit dem Konzept der dynamischen Fähigkeiten zu verringern.

III. C.V.

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| 10/2008–04/2009 | Reise durch Neuseeland, Australien, Singapur, Malaysia und Thailand |

Qualifikationen

| | | |
|-------------------------|---|--|
| Sprachkenntnisse | Englisch: | fließend in Wort und Schrift (TOEFL iBT 118) |
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