

PATH DEPENDENCE IN B2B RELATIONSHIPS: PARTNER-SPECIFIC ABSORPTIVE CAPACITY AS A SELF-REINFORCING MECHANISM

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Abstract

In this study, the influence of partner-specific absorptive capacity as a self-reinforcing mechanism in the context of the theory of path dependence is examined. For this purpose, business relationships in the business-to-business marketing context are considered. Theoretical foundations of the path dependence and absorptive capacity are reviewed. Following, a path model of partner-specific absorptive capacity for business-to-business relationships is developed and propositions are formulated. Expert interviews aim to better understand and verify the model and its propositions.

Keywords: path dependence, self-reinforcing mechanism, lock-in, partner-specific absorptive capacity, business-to-business relationships, student-teacher relationship

1. Introduction

We live in a world marked by history, a world in which everything we see and do is the product of historical paths (Ackermann 2003: 228). As a result, history affects our day-to-day actions and has a decisive impact on our future. At the same time, there is a constant risk that historical events will take on such a major role that a path once taken is adhered to although more-efficient alternatives are available. Garud/Karnøe (2001) concur, writing: “[...] *not only we are prisons of the past, but we may even have contributed to its creation unknowingly*” (Garud/Karnøe 2001: XI). Bassanini/Dosi (2001) go even further, referring to the “*tyranny of the past*” (Bassanini/Dosi 2001: 62).

A better understanding of the phenomenon of path-dependent processes is in the interests of academia and professional practice. Efforts to concretize the theory of path dependence have

motivated various research approaches since the theory first originated about thirty years ago. In the process, vivid examples have been presented so far, and different attempts have been made to arrive at a general definition.

A promising development is also apparent in the concept of absorptive capacity. The relevant literature on the ability to absorb knowledge repeatedly points to this construct's path-dependent character, but does not examine it in further detail. This reveals an exciting and largely unresearched overlap between the two concepts, an area that requires more in-depth analysis (e.g. Mallach 2012: 196). Although many scholars argue that the concepts of path dependence and absorptive capacity are somehow linked, an integrated model that combines the prominent features of both processes has not been developed so far.

For this purposes, the business-to-business marketing context is an interesting area for our investigation. Frauendorf et al. (2007) define the field of business-to-business as *“one which, in brief, describes transactional relations between business partners, including business enterprises, organizations, and governmental institutions”* (Frauendorf et al. 2007: 9). According to Plinke (1989), a business relationship in a business-to-business market is defined as *“a series of market transactions between a supplier and customer that is not random. ‘Not random’ means either that there are reasons on the supply and/or demand side that cause a planned link between market transactions to appear to be sensible (or necessary) or that lead, de facto, to such a link. A supplier-customer relationship can thus be considered as a series of market transactions between which there is an ‘internal connection’”* (Plinke 1989: 307-308). Therefore, customer relationships are a not-accidental sequence of market transactions between independent market actors and gear itself toward a long-term perspective, with subsequent transactions (Plinke 1997: 32; Kleinaltenkamp/Ehret 2006: 67).

Restricting business relationships between a selling firm (supplier) and a buying firm (customer) solely to the exchange of market transactions does however seem shortsighted. Often, information is also shared between partners as a result of executed market transactions. This includes areas as knowledge of technical details or knowledge about reciprocal net benefits (Brennan et al. 2007: 71). At the same time, in many cases know-how related to problem solving is exchanged as part of transactions taking place within dyadic partnerships (Kleinaltenkamp 1997: 222).

For Van den Bosch et al. (1999), flows of knowledge with regard to products, services, production processes, and markets are important (Van den Bosch et al. 1999: 552). Von Hippel (1988) also found that knowledge transfer between customers and providers is an outstanding source for innovative ideas (Von Hippel 1988; Dyer/Nobeoka 2000: 346). This means that targeted exchange of information between the partners is important; this exchange enables the supplier to create superior products and/or services for its customers (Plinke 2000: 95). Greater material and personal knowledge also help to render the processes in business relationships faster and smoother (Plinke 1997: 35).

In the dyadic business relationship between buyers and sellers, the partners' ability to share knowledge and absorb new knowledge is the main driver in learning processes. Development of a store of knowledge specific to the relationship also plays a supporting role. Partners can also leverage what they have learned to identify ways to improve the quality, reliability, and speed of knowledge transfer in the future (Chen et al. 2009: 153). Furthermore, inter-organizational learning has a positive effect on the performance of those involved (Gulati/Sytch 2007: 43) while also allowing them to remain competitive (Dyer/Nobeoka 2000: 346).

The ability of the businesses involved in absorbing and processing external knowledge from a partner is, therefore, of great importance. We argue that the crucial point here is the partner-specific capacity for absorption of new information. Understanding how mechanisms of absorptive capacity work and how these mechanisms are connected to path dependency is at the heart of this research paper.

The remainder of the paper is structured as follows: In Section 2, we present the theoretical framework by reviewing the literature on path dependence and absorptive capacity. The selected models of absorptive capacity are relevant for the understanding of the concept as well as the development of the path model later in this paper. Then we show the evident connection between path dependency and absorptive capacity. In Sections 3, we develop a path model of partner-specific absorptive capacity in business-to-business relationships and deduce propositions. The last section discusses results and future research directions.

2. Literature review

2.1 Path dependence theory: How history determines our future

The notion of path dependence basically highlights a historical process: initial decisions increasingly restrain present and future choices thereby challenging the a-historical rational choice view. David (1985) initiated the discussion on path dependence from an economic perspective. Within his historical studies he explored the puzzling persistence of the QWERTY keyboard technology and tried to answer the question why an inferior standard was maintained for such a long time although superior technological innovations were available at different points in time. His exploration surfaced underlying self-reinforcing processes which increasingly rigidified the technological standard (David 1985: 335). Arthur (1989) has formalized the theory of path-dependent processes highlighting the crucial role of increasing returns (Arthur 1994: 14-15).

In conclusion path dependence has been described as self-reinforcing processes characterized by non-predictability, nonergodicity, inflexibility, and potential inefficiency (Arthur 1989; Arthur 1990; David 2001; Pierson 2000). More precisely, path dependence is not predictable at the beginning; various alternatives are possible. At a later stage due to self-reinforcing effects the scope of action increasingly narrows and finally leads into a dysfunctional trap, inhibiting the organization to deviate from it. Accordingly, the state of path dependence can be conceptualized as the outcome of a dynamic process that is driven by one or more self-reinforcing mechanisms. It proved useful to differentiate this process into three distinct phases for characterizing the sequence of varying regimes: preformation phase, formation phase, and lock-in phase (Sydow et al. 2009: 891-892). Figure 1 illustrates all three stages.

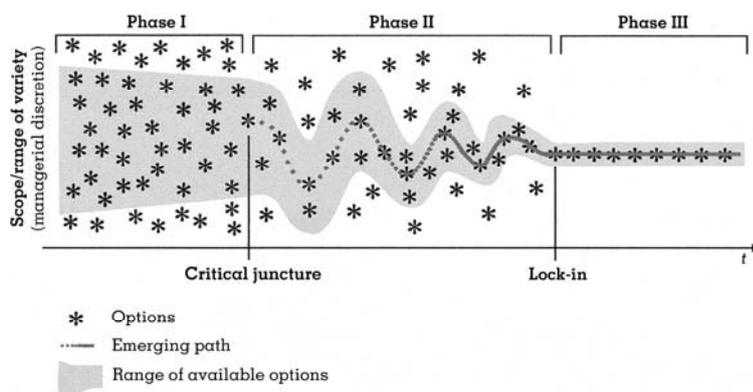


Figure 1: The three stage model of path dependence according to Sydow et al. (2009)
(Based on: Sydow et al. 2009: 692)

As can be clearly seen, a path constitutes a restriction of choice for a decision-making system. While choice is not restricted at the beginning, the situation gets more and more restricted in the process, the emerging solution at the critical juncture amounts to a path which increasingly binds subsequent decision making. Or to put it differently, the emergent solution gets reproduced again and again; when others solutions become unavailable the system state is called lock-in. Different logics characterize the three phases:

Phase I is characterized by contingency, different futures are possible and choice is unrestricted – although foregoing developments may have a slight narrowing impact, illustrating that history always matters (Teece et al. 1997; David 1994). Often a small event favours one of the possible solutions. If this solution enjoys positive feedback, a self-reinforcing dynamic may take place.

In phase II, these self-reinforcing mechanisms increasingly limit the scope of choice and thereby facilitate the evolvement of an organizational path (Sydow et al. 2009; Stieglitz/Heine 2007; North 1990). In this context Arthur (1996) highlights the importance of increasing returns: *“Increasing returns are the tendency for that which is ahead to get further ahead, for that which loses advantage to lose further advantage. They are mechanisms of positive feedback that operate – within markets, businesses, and industries – to reinforce that which gains success or aggravate that which suffers loss”* (Arthur 1996: 100). Agents get (consciously or unconsciously) involved in a logic of repetition; they earn increasing returns through repetition as it is the case for example with economies of scale or network externalities. In a way they enjoy a rave of feedback and by doing so they unintentionally commit to path-building. The diminishing variety and the rising limitations of choices are collateral side effects of this process (Sydow et al. 2009: 694).

With the transition to phase III, the diminishing window of opportunity finally closes, leaving the organization strategically trapped in an unalterable state. The decision makers in the system are locked-in (Sydow et al. 2009: 694). Empirical path dependence research has hallmarked the crucial elements that drive path emerging processes and finally lead to a potentially inefficient lock-in situation in phase III. Sydow et al. (2009) argue: *“If an organization or a significant practice [...] has become locked in, there is inherently the danger of becoming inefficient, either in the face of new, more efficient alternatives or changed internal or external circumstances calling for new solutions”* (Sydow et al 2009: 695). According to Sydow et al. (2009), at least four major types of self-reinforcing

mechanisms can be distinguished: (1) coordination effects, (2) complementary effects, (3) learning effects, and (4) adaptive expectation effects (Sydow et al. 2009: 698).

Since we are interested in path-dependent mechanisms in business-to-business relationships, we will concentrate on learning in and between organizations and connect the often discussed and cited concept of absorptive capacity to path dependence theory.

2.2 Absorptive capacity: Status quo of the seminal conceptualizations

The concept of absorptive capacity describes the capability to incorporate and process valuable information (Cohen/Levinthal 1990: 128). This capability is crucial for many organizations in order to be able to act (Inkpen/Dinur 1998: 454) and maintain a high level of performance in the long run (Lane et al. 2006: 833). Also a purposeful use of knowledge facilitates the achievement of competitive advantages (Inkpen/Dinur 1998: 454). For these reasons Lane et al. (2006) argue that the concept of absorptive capacity is “*one of the most important constructs to emerge in organizational research in recent decades*” (Lane et al. 2006: 833).

Regarding to Van den Bosch et al. (2003) absorptive capacity is a versatile concept, which can be applied to different theoretical and empirical problems and disciplines (Van den Bosch et al. 2003: 287). The concept has been widely applied on different levels of analysis such as the organizational level (Cohen/Levinthal 1990; Boynton et al. 1994; Szulanski 1996; Veugelers 1997; Kim 1998), the inter-organizational level (Lane/Lubatkin 1998; Dyer/Singh 1998) and even the country level (Mowery/Oxley 1995; Keller 1996; Liu/White 1997). As we can see from our literature review only little research has so far focused on the inter-organizational perspective. As one of the few authors in this field Lane/Lubatkin (1998) show that relatively similar knowledge bases and knowledge management systems within a dyadic alliance have a positive impact on the absorptive capacity of the partners. They should therefore be considered as important characteristics in inter-organizational learning (Lane/Lubatkin 1998: 461).

We will proceed with summarizing the classical concept of absorptive capacity brought forward by Cohen/Levinthal (1990). After that we review the most influential re-conceptualizations made more recently by scholars such as Lane/Lubatkin (1998), Dyer/Singh (1998), Zahra/George (2002), Lane et al. (2006), and Todorova/Durisin (2007) with specific emphasis on inter-organizational and partner-specific absorptive capacity.

The Cohen/Levinthal (1990) model of absorptive capacity

A definition of absorptive capacity that has been widely acknowledged in the academic literature was introduced by Cohen/Levinthal (1990). In their study, the authors examine businesses' ability to innovate and define absorptive capacity as “*an ability to recognize the value of new information, assimilate it, and apply it to commercial ends*” (Cohen/Levinthal 1990: 128). Under this definition, absorptive capacity can be thought of as the ability to absorb new knowledge. This ability is characterized by three key elements: (1) recognizing and assessing valuable new information; (2) assimilation of information classified as useful; and (3) use of this information for commercial purposes. The authors also point out that absorptive capacity arguably arises as a byproduct of a firm's R&D investments (Cohen/Levinthal 1989: 569; Cohen/Levinthal 1990: 129; Cohen/Levinthal 1994: 227).

Cohen/Levinthal (1990) also emphasize that the development of absorptive capacity depends on the amount of knowledge absorbed beforehand. In this context, the compatibility of old and new knowledge is important (Cohen/Levinthal 1990: 128). Accordingly, absorptive capacity does not develop without any preconditions; instead, it is informed by earlier decisions. In addition, the formation of expectations and the behavior during future periods are also affected by historical developments (Cohen/Levinthal 1990: 136). Figure 2 summarizes the Cohen/Levinthal (1990) model of absorptive capacity.

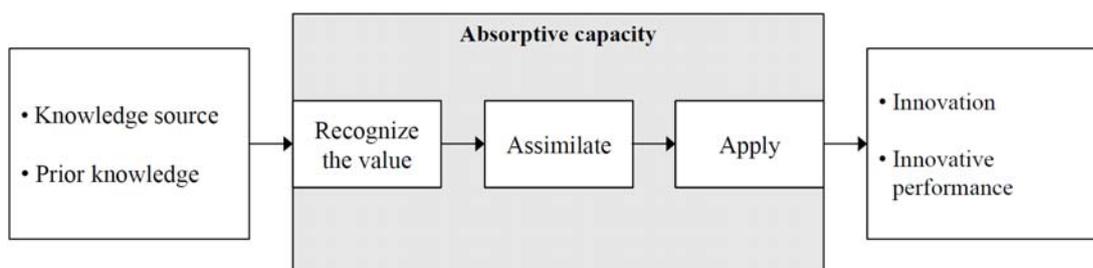


Figure 2: Model of absorptive capacity according to Cohen/Levinthal (1990)
(Based on: Todorova/Durisin 2007: 775)

In their 1994 article ‘*Fortune Favors the Prepared Firm*’, Cohen/Levinthal (1994) concretize their definition of the term, defining absorptive capacity as a cluster of related abilities: “*The capacity to ‘exploit’ outside knowledge is comprised of the set of closely related abilities to evaluate the technological and commercial potential of knowledge in a particular domain, assimilate it, and apply it to commercial ends. These abilities collectively constitute what we have termed a firm’s ‘absorptive capacity’*” (Cohen/Levinthal 1994: 227).

The Zahra/George (2002) model of absorptive capacity

Zahra/George (2002) re-conceptualize the construct of absorptive capacity as a dynamic capability (for a detailed discussion, see also Teece et al. 1997), thereby defining the ability to absorb knowledge as a “*set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organizational capability*” (Zahra/George 2002: 186). The authors consequently assume that the abilities to acquire, assimilate, transform, and exploit knowledge build on one another and have a positive impact on the development of further capabilities (Zahra/George 2002: 188). Table 1 offers an overview of the importance of the critical abilities within the scope of absorptive capacity.

Table 1: Definitions of absorptive capacity abilities
(Author’s depiction)

| | |
|----------------|---|
| Acquisition | <i>“[...] refers to a firm’s capability to identify and acquire externally generated knowledge that is critical to its operations”</i> (Zahra/George 2002: 189) |
| Assimilation | <i>“[...] refers to the firm’s routines and processes that allow it to analyze, process, and understand the information obtained from external sources.”</i> (Zahra/George 2002: 189) |
| Transformation | <i>“[...] denotes a firm’s capability to develop and refine the routines that facilitate combining existing knowledge and the newly acquired and assimilated knowledge”</i> (Zahra/George 2002: 190) |
| Exploitation | <i>“[...] is based on the routines that allow firms to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations”</i> (Zahra/George 2002: 190) |

Jansen et al. (2005) show that a model based on these four separate factors is superior to models with fewer factors, such as the one proposed by Zahra/George (2002) (Jansen et al. 2005: 1005). In line with this conclusion, Todorova/Durisin (2007) recommend that researchers should choose models with four factors in future studies in order to use variables with high construct validity when testing their hypotheses (Todorova/Durisin 2007: 779).

The Todorova/Durisin (2007) model of absorptive capacity

In their paper, Todorova/Durisin (2007) refer directly to the model proposed by Zahra/George (2002). Their criticism calls for a systematic return to the key elements identified in the seminal article by Cohen/Levinthal (1990) (Todorova/Durisin 2007: 774).

First, Todorova/Durisin (2007) emphasize that the element ‘recognize the value’ should be seen as a central element as posited by Cohen/Levinthal (1990). This component seems especially important as businesses often fail simply by not recognizing potentially relevant knowledge. Accordingly, new information is not grasped automatically. Rather, appreciation of new information is shaped in advance by existing structures. Consequently, absorptive capacity can be thought of as a necessary prerequisite for recognition of relevant new information (Todorova/Durisin 2007: 777).

Todorova/Durisin (2007) also do not view the element of transformation as a process step following assimilation. According to the authors, transformation of new information should be understood instead as an alternative process to assimilation. Todorova/Durisin (2007) assume that external knowledge moves back and forth in a two-way process between the elements of assimilation and transformation before it can be successfully adopted and exploited within existing structures (Todorova/Durisin 2007: 779). In making this case, the authors draw on findings from learning theory: If external information is already largely in line with cognitive structures, new knowledge requires only minor changes before it is integrated into the knowledge base (assimilation). If, on the other hand, there is no connection between the cognitive structures, those structures first have to be transformed in order to be able to absorb new knowledge (Todorova/Durisin 2007: 778).

In the model proposed by Todorova/Durisin (2007), the two-way process of assimilation and transformation is formulated in the sense that external information can be absorbed even though it has no connection with the prior cognitive structures. For this to happen, however, the organization must be able to adapt its knowledge structures in the process (Todorova/Durisin 2007: 778). This represents a clear departure in this model from the viewpoint put forward by Cohen/Levinthal (1990), in which absorption of new information depends on the amount or level of knowledge that has previously been absorbed (Cohen/Levinthal 1990: 128).

Finally, Todorova/Durisin (2007) incorporate positive feedback loops into their model, highlighting the dynamic character (Todorova/Durisin 2007: 783). This lends the largely one-dimensional model both strength and mobility. At the same time, the authors point to feedback loops as a way of expanding the knowledge base during future periods. Figure 3 shows the dynamic model of absorptive capacity according to Todorova/Durisin (2007).

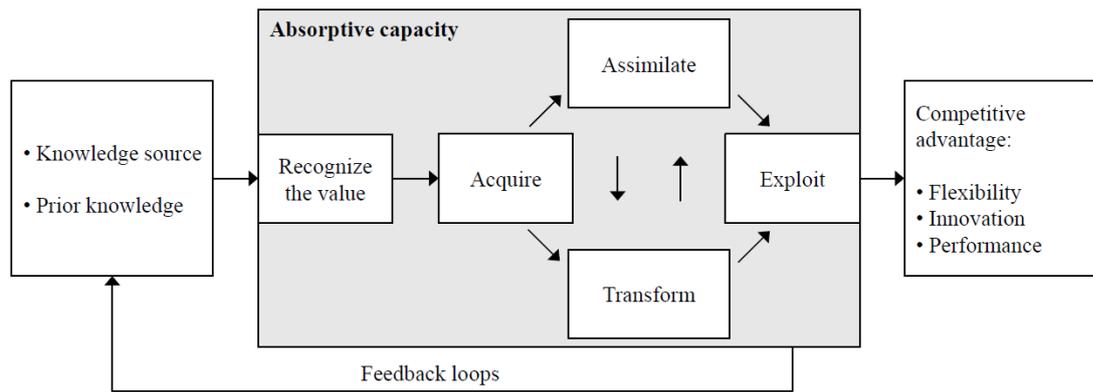


Figure 3: Model of absorptive capacity according to Todorova/Durisin (2007)
(Based on: Todorova/Durisin 2007: 776)

The Lane et al. (2006) model of absorptive capacity

Critical analysis of the literature on absorptive capacity between 1991 and 2002 forms the basis for the model proposed by Lane et al. (2006). The authors view absorptive capacity from a learning process-oriented perspective, defining it as “*a firm’s ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning*” (Lane et al. 2006: 856). A company’s absorptive capacity is thus grouped into several learning processes: exploratory learning, transformative learning, and exploitative learning. The authors’ model of absorptive capacity, which is oriented toward learning processes, is a productive way to depict internal and external process drivers as well as possible process outputs.

The Lane/Lubatkin (1998) concept of absorptive capacity

Lane/Lubatkin (1998) shift the view from the organizational to the inter-organizational level, defining absorptive capacity as “*the ability to value, assimilate, and apply new knowledge from a learning alliance partner*” (Lane/Lubatkin 1998: 462). Accordingly, the authors re-conceptualize the firm-level construct of absorptive capacity as a learning dyad-level construct and interpret a company’s absorptive capacity as the ability to learn from another company, in a dual learning or student-teacher relationship (Lane/Lubatkin 1998: 462).

The ‘student’ firm’s ability to recognize the value of new knowledge held by the ‘teacher’ firm and to assimilate and subsequently exploit that knowledge is influenced by partner-specific features. The authors therefore point to the relative features of both partners as being responsible for the flow of learning in this dual relationship. Accordingly, they speak of relative absorptive capacity (Lane/Lubatkin 1998: 462).

The Dyer/Singh (1998) concept of absorptive capacity

The work of Dyer/Singh (1998) focuses on the relational view, which places the ability to enter into cross-organizational relationships into the center of attention. The goal is to generate relational benefits and realize potential competitive advantages through routines in knowledge sharing between the partners (Dyer/Singh 1998: 661, 665). The authors point out that this is a partner-specific form of absorptive capacity (Dyer/Singh 1998: 666). Dyer/Singh (1998) define the concept of partner-specific absorptive capacity therefore as *“the ability to recognize and assimilate valuable knowledge from a particular alliance partner. This capacity would entail implementing a set of interorganizational processes that allows collaborating firms to systematically identify valuable know-how and then transfer it across organizational boundaries”* (Dyer/Singh 1998: 665).

In this view, the ability to absorb and process external knowledge refers to the knowledge held by a specific partner firm. Dyer/Singh (1998) cite an overarching knowledge basis on the part of both partners as a crucial success criterion in partner-specific absorptive capacity. Routines of interaction also have a positive effect on the frequency of engagement and the intensity of the parties’ mutual relationship (Dyer/Singh 1998: 665). Unlike the transfer of knowledge in the student-teacher concept posited by Lane/Lubatkin (1998), in which knowledge moves in one direction, Dyer/Singh (1998) propose that both organizations learn from each other (Lane et al. 2006: 845).

The overview in Table 3 shows how the understanding of absorptive capacity has developed over time up to the current inter-organizational partner-specific concept.

Table 2: Forms of absorptive capacity
(Author's depiction)

| Author (year) | Form | Reference level | Definition |
|------------------------|---|---|--|
| Cohen/Levinthal (1990) | <i>Absolute</i> absorptive capacity | Organizational | "[...] ability to recognize the value of new information, assimilate it, and apply it to commercial ends" (p. 128) |
| Lane/Lubatkin (1998) | <i>Relative</i> absorptive capacity | Inter-organizational (dual learning relationship) | "[...] ability to value, assimilate, and apply new knowledge from a learning partner" (p. 462) |
| Dyer/Singh (1998) | <i>Partner-specific</i> absorptive capacity | Inter-organizational (dual learning relationship) | "[...] ability to recognize and assimilate valuable knowledge from a particular alliance partner" (p. 665) |

2.3 The connection between absorptive capacity and path dependence theory

Lane et al. (2006) emphasize that the possibilities of the concept of absorptive capacity have not yet been fully exhausted, so the concept still offers lots of potential for further research projects (Lane et al. 2006: 859). With this in mind, this section aims to show the connection between partner-specific absorptive capacity and the theory of path dependence, with the ultimate goal of arriving at an integrated and unified model.

As early as in their seminal article on absorptive capacity, Cohen/Levinthal (1990) point to the path-dependent character of this concept: "*[...] the development of absorptive capacity, and, in turn, innovative performance are history- or path-dependent*" (Cohen/Levinthal 1990: 128). The authors state that the path-dependent development of absorptive capacity depends on the existing knowledge base, pointing to findings from cognitive research and emphasizing that fully formed cognitive structures facilitate absorption of similar knowledge (Cohen/Levinthal 1990: 129). Consequently, knowledge that has already been absorbed affects absorption of new knowledge while also affecting the formation of expectations in a self-reinforcing way.

Cohen/Levinthal (1990) also argue that the absorptive capacity that has grown historically in a certain area allows for more-efficient accumulation during subsequent periods (Cohen/Levinthal 1990: 136). We can conclude that the following self-reinforcing process takes place: "*absorptive capacity → learning → new absorptive capacity*" (Lane et al. 2006: 845). The corresponding absorptive capacity increases through repeated feedback loops, and

increases the future capacity to absorb new related knowledge (Van den Bosch et al. 1999: 566). Van den Bosch et al. (1999) also speak of “*path dependency of absorptive capacity*” (Van den Bosch et al. 1999: 554) and of a “*path-dependence phenomenon of absorptive capacity*” (Van den Bosch et al. 1999: 558). The self-reinforcing effect of absorptive capacity can thus be seen as a central feature of a path-dependent development (Cohen/Levinthal 1990: 136.; Van den Bosch et al. 1999: 566). This means it is hardly surprising that absorptive capacity and path dependence are frequently associated with each other in the recent literature (Todorova/Durisin 2007: 782-783; Lane et al. 2006: 846-847; Zahra/George 2002: 193; Lavie/Rosenkopf 2006: 803; Lichtenthaler 2009: 825-826).

Continuous investments in absorptive capacity also strengthen the ability to absorb knowledge, while at the same time shaping the path-like process. On the other hand, there is a risk that if investments are not made in other areas, critical fields of knowledge will be sidelined and not updated, creating a lock-out situation (Cohen/Levinthal 1990: 136). Kumar/Nti (1998) concur, writing: “[...] *the process of accumulating absorptive capacity is history- or path-dependent and requires continuous and sustained investment. In addition, a firm that stops investing in absorptive capacity may lose its ability to appropriate knowledge in certain fields, becoming ‘locked out’ of subsequent developments in that field*” (Kumar/Nti 1998: 358).

The scholarly publications on absorptive capacity as mentioned above offer clear references to the path-dependent character of this construct while also highlighting the close connection with the theory of path dependence. This is also in line with recent findings presented by Mallach (2012). It is apparent that consistent development and expansion of absorptive capacity shapes its specific form and has a path-forming effect over time due to self-reinforcing feedback loops. The outcome is a learning path shaped by history (Van den Bosch et al. 1999: 566).

3. Model development: A path model of partner-specific absorptive capacity in business-to-business relationships

This section proposes a path model of partner-specific absorptive capacity within the framework of the theory of path dependence.

Plinke (1997) points out that seller firm in business-to-business markets increasingly focus on a single buyer firm and that specific customer’s perspective with regard to solving problems

(Plinke 1997: 7). This means that a seller firm faces the challenge of recognizing valuable knowledge held by its partner, assimilating that knowledge, and then utilizing it as part of a dyadic business relationship (Lane/Lubatkin 1998: 464). One crucial factor here is partner-specific absorptive capacity, with the student-teacher concept being applied.

Subsequently, the influence of partner-specific absorptive capacity as a self-reinforcing mechanism is considered within the framework of the theory of path dependence. Also the question arises, whether working with a certain buyer firm for a longer period improves the seller firm's partner-specific ability to absorb knowledge in this regard. From the perspective of path theory, it is especially interesting to consider whether, in these circumstances, bonding forces within the business relationship can result in lasting persistence or even a lock-in situation.

3.1 Conceiving of a path model of partner-specific absorptive capacity

For the development of a unifying path model, the three-phase model of path-dependent processes proposed by Sydow et al. (2009) serves as a reference system. The process of working through the three subsequent phases is a particular interest. Guided by theory, propositions are deduced and formulated on this basis.

After a description of the initial situation (phase I) the focus lies on the phase in which paths are formed (phase II). The dyadic buyer-seller relationship is conceptualized as a student-teacher relationship, with the seller-firm in the position of the student and the buyer-firm in that of the teacher. To reduce complexity, one-sided transfer of knowledge from the buyer (the teacher) to the seller (the student) is considered (Lane/Lubatkin 1998: 464; Lane et al. 2006: 845). In the process, the focus turns to the argument put forward by Plinke (1997) that the seller-firm increasingly concentrates on a single business customer's problem-solving perspective (Plinke 1997: 7).

This paper also aims to show that business partners are over time subject to mechanisms that affect partner-specific absorptive capacity while also reinforcing it. It will be argued that established mechanisms of path theory such as coordination effects, complementary effects and adaptive expectation effects (Sydow et al. 2009) further reinforce the spiraling solidification of partner-specific absorptive capacity. The result is that a learning path that focuses on the relationship is formed by the student firm.

After many studies on absorptive capacity have mainly focused on success-oriented effects (e.g. Cohen/Levinthal 1990: 149; Cohen/Levinthal 1994: 230; Lichtenthaler 2009: 835; Todorova/Durisin 2007: 776; Zahra/George 2002: 195), this paper takes a different approach, considering the potential dark side of learning processes. This perspective has so far been underrepresented in the literature.

3.1.1 Phase I: A large number of potential business relationships and learning opportunities

In line with the level of consideration concerning the dyadic buyer-seller relationship, the first phase is characterized by a large number of potential business partners with individual learning opportunities for the student firm. Which companies will engage into a business relationship with each other is still an open question at this time. It is likewise unclear for which partner the student firm will develop specific absorptive capacity abilities, and which knowledge will be absorbed in the future. This means that the various possibilities are still largely unaligned and contingent.

Still, it is conceivable that a formative influence already exists during this early phase. Industry affiliation and standards or relevant market trends determine the field of action, for example, and select possible business partners. In addition, according to the underlying definition of a business relationship, market transactions are not undertaken at random with any company at all; instead, only those that appear to be productive and sensible or necessary in terms of planning are pursued (Plinke 1989: 307).

If a business relationship ultimately forms based on a series of market transactions between a supplier and a customer, specific knowledge is exchanged. We can presume that the student firm has an interest in absorbing important knowledge quickly in order to recognize the teacher firm's needs in the best possible way and perform as desired. Development of partner-specific absorptive capacity is therefore desirable at first.

Following this, partner-oriented capability to absorb and process knowledge is concentrated in the student firm, while at the same time the effect of bonding with the teacher firm is intensified. This consciously or unconsciously solidifies the available space for new knowledge within the student firm, and a partner-related learning path forms. This point in time can be viewed as a critical juncture, and thus as the transition to the second phase (Vergne/Durand 2010: 742).

In reviewing phase I, the discussion suggests the following proposition:

Proposition 1: *Focusing on a specific business partner leads the student firm to build partner-specific absorptive capacity, and a characteristic learning path forms.*

3.1.2 Phase II: Formation of a learning path through partner-specific absorptive capacity

Phase II is the phase during which a path-dependent process is formed. Now that the student firm has begun to focus on the teacher firm's characteristic knowledge and the development of partner-specific absorptive capacity has begun, the development of a learning path featuring positive feedback arises within the student firm.

To illustrate this process, figure 4 shows the reciprocal process of exchange within the dyadic student-teacher relationship: First, new knowledge is transferred from the teacher firm to the student firm. According to the definition of partner-specific absorptive capacity, the student firm is able to process the information from the teacher firm and use it to generate the desired market offering(s). At the same time, the student firm's knowledge base expands, even as its capacity to process important knowledge from the teacher firm in the future increases. If the teacher firm transfers knowledge again, the cycle continues. Presumably, the learning path that has been begun in the student firm is self-reinforcing on an ongoing basis as a result of market transactions taking place within the focal business relationship, even as the effect of creating a bond with the teacher firm increases.

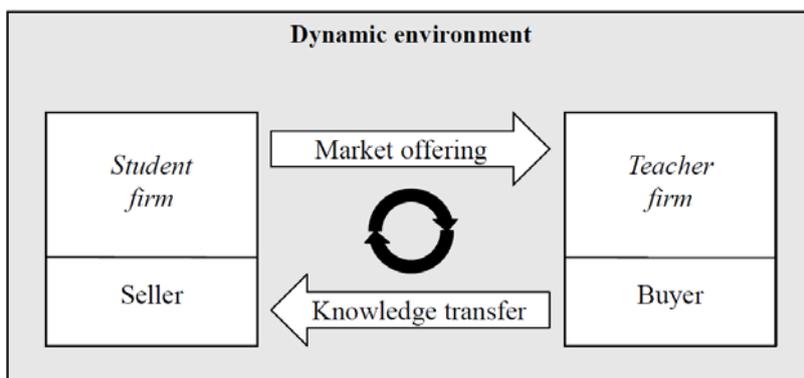


Figure 4: Two-way relationship within the student-teacher concept (Author's depiction)

In line with the theoretical considerations regarding the self-reinforcing mechanism of partner-specific absorptive capacity, we posit the following proposition:

Proposition 2: *The self-reinforcing character of partner-specific absorptive capacity leads to the pronounced development of a characteristic learning path in the student firm, and the bonding effect with the teacher firm increases.*

Since new knowledge can only be absorbed on the basis of existing knowledge, the knowledge that has been previously absorbed determines the development of absorptive capacity. This means that the existing knowledge base serves as the foundation for further knowledge, reinforcing itself step by step. This process makes it clear that absorptive capacity is, at bottom, a learning effect such as those described in path theory (Ackermann 2003: 243-244). In a study conducted by Mallach (2012), the author finds empirical support for the relationship between partner-specific absorptive capacity and learning effects and its path dependent character in business-to-business relationships (Mallach 2012: 197).

Next we turn to interactions between the traditional self-reinforcing mechanisms of path theory and partner-specific absorptive capacity. While absorptive capacity is viewed as a special form of learning effect, its interactions with the other mechanisms involved, such as coordination effects, complementarity effects, and adaptive expectation effects (Sydow et al 2009: 698) are of interest in terms of arriving at an integrated model. Sydow et al. (2009) already point out that several of these mechanisms are often at work at the same time. This paper will argue that coordination effects, complementarity effects, and adaptive expectation effects further enhance the self-reinforcing character of absorptive capacity.

Coordination effects and partner-specific absorptive capacity

Processes of coordination between interaction partners lie at the heart of the matter. The more actors within a system view rules as productive or adapt to accommodate routines or practices, the easier and more effective their interaction processes within the overall system become (David 1994). As a result, a rule's overall attractiveness increases the more that rule is disseminated. Sydow et al. (2009) also emphasize the "*benefits of rule-guided behavior*" (Sydow et al. 2009: 699).

In her study on organizational routines, Knott (2003) points to the importance of routines as a mechanism for coordination. In this view, routines support the disruption-free progress of coordinated behavior (Knott 2003: 930). Dyer/Nobeoka (2000: 364) similarly point out the importance of such coordination principles.

In their study of successful cooperation within strategic alliances, Dyer et al. (2001) propose that what they call a dedicated strategic alliance function is responsible for success in these settings. The central tasks of this kind of function include things like optimized knowledge management, which in turn encompasses processes related to the articulation, documentation, and codification of knowledge, along with joint use of knowledge. In this way, the individual processes exert a direct influence on the expansion of the knowledge base. Tools, instruments, and templates that have been developed are also conducive to the further formation, definition, and solidification of routines of interaction (Dyer et al. 2001: 38-39).

Dyer/Nobeoka (2000) point out that shared knowledge transfer routines between interaction partners have a positive effect on inter-organizational learning. A learning routine is defined as *“a regular pattern of interactions among individuals that permits the transfer, recombination, or creation of specialized knowledge”* (Dyer/Nobeoka 2000: 347). Consequently, interaction practices that are used regularly not only improve the transfer of knowledge between the interested parties, but also the formation of specialized knowledge. Routines relating to knowledge transfer also make it possible to store knowledge systematically and use it during subsequent periods (Dyer/Singh 1998: 665; Dyer/Nobeoka 2000: 347).

Van den Bosch et al. (1999) emphasize, in their analysis of absorptive capacity, that the ability to coordinate between group members has a positive effect on the absorption and processing of new knowledge (Van den Bosch et al. 1999: 557). This includes deliberately constructed or indirectly developed processes of interaction between the interested parties at an organizational or inter-organizational level (Van den Bosch et al. 1999: 556).

According to Dyer/Singh (1998), interaction routines between organizations promote recognition of important knowledge within the relationship. In this view, these routines have a direct influence on partner-specific absorptive capacity, supporting its development (Dyer/Singh 1998: 665). Chang/Gotcher (2010) take a similar view. According to them, the

functioning of partner-specific absorptive capacity can be improved by establishing routines related to interactions within the buyer-seller relationship (Chang/Gotcher 2010: 291).

The discussion on the influence of coordination effects on partner-specific absorptive capacity suggests the following proposition:

Proposition 3: *Coordination principles reinforce the spiraling, self-reinforcing character of partner-specific absorptive capacity within the student firm, thereby promoting the further development and definition of a characteristic learning path.*

Complementary effects and partner-specific absorptive capacity

When we speak of complementarity effects, we mean the realization of synergistic effects. Synergies arise through repeated, mutually supportive interactions between separate but related resources, rules, and/or practices (Petermann 2010: 111). Repeated interaction can give rise to utility that is greater overall than the sum of its parts. Formation of core competencies (for a detailed discussion, see Prahalad/Hamel 1990) is one possible consequence (Sydow et al. 2009: 699).

In the buyer-seller relationship, synergies can arise when student firms and teacher firms make deliberate efforts to share complementary knowledge. When the student firm's knowledge base grows, the company becomes able to recognize and absorb relevant new knowledge faster in subsequent periods. Partner-specific absorptive capacity increases as a result, influencing the future form and development of the characteristic learning path within the student firm.

The discussion on the influence of complementarity effects on partner-specific absorptive capacity suggests the following proposition:

Proposition 4: *Complementarity effects reinforce the spiraling, self-reinforcing character of partner-specific absorptive capacity within the student firm, thereby promoting the further development and definition of a characteristic learning path.*

Adaptive expectation effects and partner-specific absorptive capacity

Adaptive expectations confirm themselves step by step as part of a reciprocal process, thereby having a self-reinforcing effect. Preferences are not set from the start, instead forming as a result of the actors' expectations. The desire to belong socially or to be among the winners is a possible reason for adaptation (Sydow et al. 2009: 700). The more strongly the actors' expectations associated with a certain behavior or an established approach are, the more attractive it is to adapt to accommodate these practices. Moreover, the behavior gains legitimacy as more and more actors align themselves to it. The reproduction and solidification of best practices is a good example (Sydow et al. 2009: 700).

The Dacin et al. (2007) study on strategic alliances from an institutional perspective also refers to the role of legitimacy as a self-reinforcing mechanism. From the authors' standpoint, it is legitimate for individuals within an organization to copy stable structures and processes. The result, however, is that organizations can potentially become inflexible and unable to adapt rapidly enough to changing environmental influences (Dacin et al. 2007: 183).

We can assume that the business partners already expect to share certain areas of their knowledge when they are just starting out in a business relationship. It is also conceivable that after a series of transactions, certain practices of knowledge sharing (best practices) become established, and the interested parties no longer question these practices. Likewise, it is legitimate for the student firm in the buyer-seller relationship to absorb and process knowledge. Accordingly, development of partner-specific absorptive capacity is promoted.

Following Cohen/Levinthal (1990), absorptive capacity in turn influences the formation of expectations during future periods (Cohen/Levinthal 1990: 136).

Plinke (1997) points out that partners in a business relationship amass experience as a result of market transactions, and that new expectations form based on that experience. This process continues step by step, thereby reinforcing itself (Plinke 1997: 35).

The discussion on the influence of adaptive expectation effects on partner-specific absorptive capacity suggests the following proposition:

Proposition 5: *Adaptive expectation effects reinforce the spiraling, self-reinforcing character of partner-specific absorptive capacity within the student firm, thereby promoting the further development and definition of a characteristic learning path.*

3.1.3 Phase III: Manifestation of a potentially inefficient competency trap through one-sided absorption of knowledge

The student firm's partner-specific absorptive capacity has reinforced itself and solidified during phase II as a result of repeated market transactions taking place within the buyer-seller relationship. On the positive side, the student firm is now, in phase III, able to absorb new knowledge faster (Cohen/Levinthal 1990: 128), provide innovative solutions for the teacher firm (e.g. Cohen/Levinthal 1990: 149; Cohen/Levinthal 1994: 230; Lichtenthaler 2009: 835), and possibly even generate a competitive advantage for itself and its partner (for example, Todorova/Durisin 2007: 776; Zahra/George 2002: 195). On the negative side, however, there is a risk of a competency or learning trap arising within the student firm (Zahra/George 2002: 195). This section will focus on considering these negative effects of absorptive capacity, presenting various approaches and once again using propositions to render these approaches.

The phase of path dependence (phase III) can be perceived as a one-sided learning path, which may be manifested in a potentially inefficient lock-in situation. Levinthal/March (1993) point to the shortsightedness of learning processes as being responsible for this potential inefficiency. When a longer-term perspective is neglected during the learning process, there is often the risk that a tendency to overlook failures will develop (Levinthal/March 1993: 101). In this context, Zahra/George (2002) point out that path-dependent development of absorptive capacity determines not only an organization's success, but also its failure; they speak of a potential competency trap within learning paths (Zahra/George 2002: 195). This paper will take up this approach and discuss the possibility of a learning or competency trap.

Abrupt changes in external environmental influences, such as when shifts in socio-cultural, technological, economic, or political and legal factors occur (Müller-Stewens/Lechner 2005: 205), present especially serious challenges for selling firms. Jansen et al. (2006) define dynamic environments as being marked by *"changes in technologies, variations in customer preferences, and fluctuations in product demand or supply of materials. Dynamic environments make current products and services obsolete and require that new ones be developed"* (Jansen et al. 2006: 1664). Matthyssens et al. (2005) refer in this context to the risk of *"escalating levels of environmental turbulence"* (Matthyssens et al. 2005: 547). In such a dynamic environment, a dark side to partner-specific absorptive capacity may emerge, in that necessary adaptation can – if at all possible – only take place gradually, and the risk of an inefficient competency or learning trap increases. In extreme cases, we speak of 'cognitive

lock-ins' or 'learning failures' in this context (Ackermann 2003: 244). A similar phenomenon is described by Miller (1993), who points to the risk of one-sided focusing of the knowledge base and the associated frame of reference, with the result that more-efficient alternatives may be neglected (Sydow et al. 2009: 700; Levinthal/March 1993: 110; Lei et al. 1996: 565). Miller (1993) speaks of "*converting a formula for success into a path toward failure*" (Miller 1993: 116).

If rigidity is so ingrained that flexible realignment is no longer possible, the competency trap springs shut, manifesting itself in a potentially inefficient lock-in situation. Consequently, the direction in which the learning path has previously set out may be responsible for the potential failure of the student firm. Leonard-Barton (1992) describes this phenomenon as a capability-rigidity paradox, stating: "*Core rigidities are the flip side of core capabilities*" (Leonard-Barton 1992: 118).

Competency traps form as a result of various developments. In this context, Zahra/George (2002) mention three possible kinds of trap: the familiarity trap, the maturity trap, and the propinquity or nearness trap (Zahra/George 2002: 195).

A familiarity trap results from excessive focus on refining and improving existing knowledge. As experience is amassed, absorptive capacity grows, and turning toward other alternatives seems not to be worthwhile. The argument of positive feedback can be raised again here, as it can be the factor responsible for the solidification of knowledge. Thus not only is exploration of alternative sources of knowledge prevented, but cognitive structures also remain limited. If an actor does not succeed in absorbing different types of knowledge from different sources, the path-like course promotes rigidity and may even prevent a necessary paradigm shift (Ahuja/Lampert 2001: 526; Zahra/George 2002: 195).

In the maturity trap, the focus is on the need for dependable and predictable outcomes. Tapping into different kinds of knowledge from different sources fades into the background. Use of existing knowledge is also legitimate, although superior performance would be possible if outside sources of knowledge were used (Ahuja/Lampert 2001: 527; Zahra/George 2002: 195).

The propinquity or nearness trap describes a company's tendency to accumulate further knowledge in long-familiar areas. The tendency to give preference to the familiar is also once again front and center here, with other relevant areas of knowledge going ignored. This kind

of trap becomes especially critical for suppliers when environmental conditions change, requiring completely new knowledge (Ahuja/Lampert 2001: 528-529; Zahra/George 2002: 195).

Often, competency and learning traps are also discussed in connection with exploitation and exploration of knowledge (e.g. Lavie/Rosenkopf 2006: 797; Levinthal/March 1993: 105; March 1991: 71). According to March (1991), exploitation means the utilization and refinement of existing knowledge, while exploration means tapping into new knowledge and experimenting with unfamiliar, risky alternatives (March 1991: 71). In the process, firms should take care not only to exploit their existing knowledge base and the associated sources of knowledge, but to continue to explore new knowledge with the same engagement as well.

When environmental influences are stable, a strategy of exploitation is generally noncritical. But as positive experiences build on each other, the risk of path-dependent development also increases. While competence related to the existing activity rises, there is also the risk that better alternatives are being neglected or not even perceived (March 1991: 73). Long-term perspectives also fade from view (Levinthal/March 1993: 101). When environmental influences suddenly change, fresh knowledge is generally needed. If absorption of new knowledge does not take place, the benefits of an exploitation strategy can be reversed, suddenly turning into a competency trap (Koza/Lewin 1998: 257; Lichtenthaler 2009: 822).

A consistent alignment to the teacher firm's knowledge base becomes problematic if it means that the student firm ignores innovative developments in the field in which it operates, for example, or if other environmental influences (abruptly) change. If new knowledge is needed, the competency or learning trap may spring shut as the student firm's learning path becomes potentially inefficient. This is where the lock-in situation typical of paths is manifested, and there is a risk that the student firm will fail due to market conditions and forces (Zahra/George 2002: 195). Because of the rather specific nature of the competency trap (the capacity of the student firm to recognize the value of new knowledge, acquire, assimilate, exploit and transform it in a relational context), we introduce the term 'relational absorptive capacity trap'. In summary, the observations suggest to following:

Proposition 6: *One-sided concentration by the student firm on partner-specific absorptive capacity, and simultaneously on the teacher firm's knowledge base, pushes aside exploration of new areas of knowledge lying outside the business*

relationship. This leads to a potentially inefficient relational absorptive capacity trap within the student firm, a trap that may spring shut if environmental conditions change abruptly, manifesting itself in a lock-in situation.

The student firm also surely faces similar difficulties if the teacher firm disappears from the market, for example. There is also the risk that the student firm cannot move off its existing learning path fast enough to realign itself on the market. The internal connection between the student firm and the teacher firm is also solidified by investments in partner-specific absorptive capacity. These relationship-oriented costs are also known as switching costs (Geiger et al. 2012: 83) and lost when the partnership ends. Because of their highly specific character, these investments cannot be reused elsewhere (Plinke 1997: 35).

The bonding forces that arise in these kinds of situations make it seem that the further success of student firms depends on their working with the teacher firm. According to Narasimhan et al. (2009), the lock-in situation in which the student firm finds itself is manifested here in the form of a dependent relationship (Narasimhan et al. 2009: 375). Therefore, we posit the following:

Proposition 7: *One-sided concentration by the student firm on partner-specific absorptive capacity, and simultaneously on the teacher firm's knowledge base, increases the forces binding the two companies and causes the student firm to be dependent on the teacher firm in order to continue to exist on the market.*

3.2 Towards a path model of partner-specific absorptive capacity

We have seen in the foregoing discussion, based on theory, how partner-specific absorptive capacity can be viewed as a self-reinforcing mechanism within the framework of the theory of path dependence, with various propositions advanced for different contexts that require further examination. To this end, the paper has argued based strictly on the reference system of the three-phase model of path-dependent processes put forward by Sydow et al. (2009). The content of the individual phases in this model was applied to the buyer-seller relationship in a business-to-business marketing context. This section will now summarize the insights gleaned through this process in the form of a path model showing the position of the seller respectively the student firm, as the case may be (see figure 5). Particular attention is paid to

ensuring that the perspective of time is taken into account across the entire model. This means, first, that the model accommodates a path-dependent process sequence (Sydow et al. 2009: 698); and second, the definition of a business-to-business relationship that conceives of a buyer-seller relationship as a series of market transactions is followed (Plinke 1989: 307; Plinke 1997: 34).

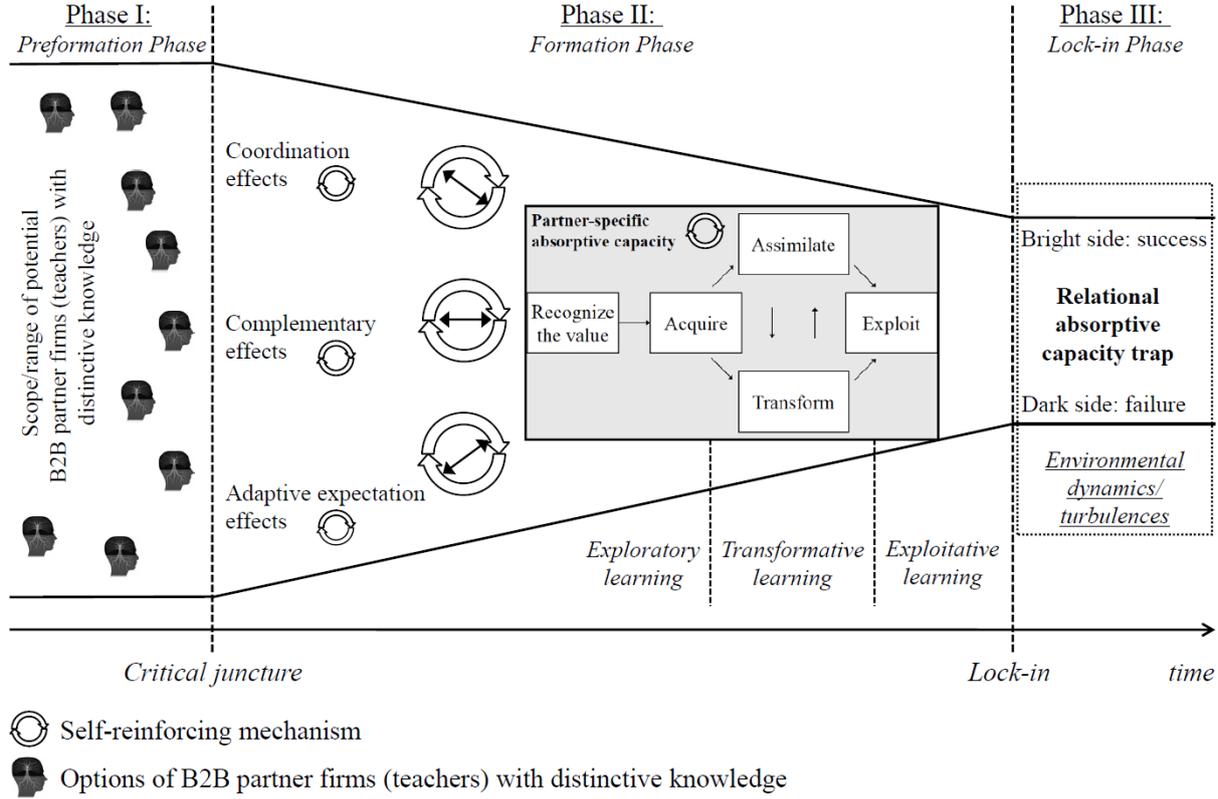


Figure 5: Path model of partner-specific absorptive capacity in B2B relationships (Author's depiction)

Phase I shows a large number of potential business partners for the student firm, with individual learning opportunities. In general, the various possibilities are still unaligned and contingent at this point. After a series of market transactions, a business-to-business relationship ultimately forms, and specific knowledge is transferred from the teacher firm to the student firm. To absorb and process this knowledge, the student firm develops partner-specific absorptive capacity, and a characteristic learning path forms.

Phase II shows the development of the partner-oriented learning path in the student firm, featuring positive feedback and is further enhanced by a series of loops. The crucial point here is the self-reinforcing effect of partner-specific absorptive capacity. The relationship-oriented

competency of knowledge absorption is concentrated within the student firm, and the effect of being bound to the teacher firm increases. This process is promoted by coordination effects, complementarity effects, and adaptive expectation effects.

The concept of partner-specific absorptive capacity as treated herein is oriented toward the dynamic model proposed by Todorova/Durisin (2007). This model was chosen because it has been empirically tested that a model with four separate factors (acquisition, assimilation, transformation, and exploitation) is preferable to one with only two factors (Jansen et al. 2005: 1005). Beyond that, this approach is interesting in that new knowledge moves back and forth within a two-way process of assimilation and transformation before it can be successfully used for commercial purposes (Todorova/Durisin 2007: 779). The integration of the learning process-oriented perspective on absorptive capacity put forward by Lane et al. (2006) – with the learning steps of exploratory learning, transformative learning, and exploitative learning (Lane et al. 2006: 856) – represents a valuable addition. In the path model that has been developed, exploratory learning is applied to the student-teacher concept and understood as absorption of new knowledge within the dyadic business-to-business partnership.

Phase III points to possible competency or learning traps in one-sided learning paths. Due to the rather specific nature of these traps, we introduced the term relational absorptive capacity trap. It should be assumed that in the case of changed environmental influences, for example, the relational absorptive capacity trap will spring shut, solidifying into a potentially inefficient learning path within the student firm. This marks the ambivalent nature of partner-specific absorptive capacity.

To better understand and verify the model, a qualitative approach was opted. For this purpose, two in depth interviews with sales experts from industrial business firms were conducted. The interviews were designed as semi-structured and open-ended (e.g. Flick 2007: 214-215; Kuß 2007: 35-36; Gläser/Laudel 2004: 38-39). The purpose of the interviews was not to generalize, but to gain arguments, reasons and detailed descriptions about the research phenomenon of interest (Strauss/Corbin 1990: 19). On the basis of the interpretation of the empirical data, the path model of partner-specific absorptive capacity was critically revised to the final model presented above in figure 5.

4. Discussions and future research directions

This paper deals with the theory of path dependency and the concept of absorptive capacity. The considerations concern business relationships in business-to-business marketing. Accordingly, the paper takes an interdisciplinary approach, considering areas of strategic management and business-to-business marketing.

The goal of this paper is to examine the influence of partner-specific absorptive capacity as a self-reinforcing mechanism within the framework of the theory of path dependence. The question of whether working with a certain customer for a longer period of time improves the seller firm's partner-specific ability to absorb and process external knowledge, and whether bonding effects arise from that, also arose. The discussion framed the buyer-seller partnership as a student-teacher relationship, developing a path model of partner-specific absorptive capacity in the business-to-business marketing realm and formulating propositions based on theory. The three-phase model of path-dependent processes proposed by Sydow et al. (2009) was used as a reference system in devising the path model.

Initial qualitative results show that partner-specific absorptive capacity lends itself to being thought of as a self-reinforcing mechanism within the framework of the theory of path dependence. It is also apparent that coordination effects, complementarity effects, and adaptive expectation effects reinforce the spiraling, self-reinforcing character of partner-specific absorptive capacity, and thus may contribute to the further development and definition of a characteristic learning path. This increases the effect of binding the student firm to the teacher firm, and there is a risk of a potentially inefficient competency or learning trap that could spring shut under certain conditions. To specify the competency or learning trap, we introduced the term relational absorptive capacity trap. Accordingly, the path model developed here considers the often-disregarded dark side of learning processes.

Overall, it would be interesting to take the expert interviews conducted to date as the basis for further discussion with sales experts from different industries in order to concretize the overall model that has been developed and enhance the quality of the results of investigation in this area. In this way a qualitative empirical research design could strengthen the theoretical arguments and deductions brought forward in this research paper. The model's utility for practical applications, such as training sales staff, could also be developed further.

The theoretical model offers additional potential for future research. A computer simulation study could be conducted, for example, to further explore the model, understand the interdependencies and mechanisms at hand and identify the critical factors involved in the formation of a learning path (Vergne/Durand 2010: 752). This kind of research could contribute to shedding more light on the nature of path dependent partner-specific absorptive capacity as an interesting phenomenon in the development of business-to-business relationships.

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