

How Alliancing as a Dynamic Capability Influences the Absorptive Capacity of Corporations

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Abstract

This contribution focuses on ‘alliancing capability’ which describes a specific form of dynamic capabilities. ‘Alliancing capability’ is characterized by corporate processes, positions (asset combinations), and paths. The specific interdependence of these three ‘P’, while setting up alliances, defines a specific dynamic capability of a corporation. We will prove alliancing capability in this contribution by performing a case study of Deutsche Börse Group, an international stock exchange corporation which is operating in a high dynamic and competitive environment. A brief description of the exchange industry will be provided.

This contribution starts with a detailed description and definition of ‘alliancing capabilities’. To get a closer and in-depth understanding of dynamic capabilities a theoretical framework and organizational learning constructs will be presented. Derived from past research it could be assumed that a higher alliancing capability is related to an increased absorptive capacity and hence to better performances of the corporation.

Keywords

Dynamic Capabilities, Resource Based View, Capabilities Based View, Strategic Alliances

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1 Introduction

Today corporations are confronted by a fundamental, sustainable, and often rapid change of their economic environment. Amongst others, new opportunities and risks face corporations, the competitive situation changes from local to global markets with a higher degree of competition. One result of these increasing dynamism and complexity is the vast emergence of new forms of collaborations - especially strategic alliances - among corporations. They share risks, get access to new knowledge and markets and add new competencies (Prahalad et al., 1994). These different trends are the main economic forces of an ever increasing number of partnerships.

The ability and capability to collaborate with other corporations in form of joint ventures, virtual organizations, loose contractual agreements, and other forms of alliances could be seen as a corporate core competence. We assume in this contribution, that these core competencies – realized as dynamic capabilities - are results of learning processes and an active management of knowledge, and depend on past experiences.

We assume that alliancing capability is closely related to the concept of absorptive capacity and hence to a better corporate performance. In this context, performance should be understood not only as financial performance rather than the successful behavior of a firm in the market. This contribution analyzes on the basis of these assumptions ‘alliancing capability’ by focusing on corporate processes, positions, and path dependencies. To explore relations between position, paths, and processes in the context of ‘alliancing capability’ a case study of Deutsche Börse Group (DBAG) will be described.

The aim of this paper is to explore and describe the process of alliancing as a dynamic capability and to develop a broader framework of alliancing capability which integrates absorptive capacity and which also can be proved by empirical research.

To provide a general understanding of dynamic capabilities as a theoretical framework and organizational learning constructs such as absorptive capacity, in the beginning of this paper a definition and profound theoretical derivation of ‘alliancing capability’ will be presented. Hypotheses are derived from the theoretical explanations, which will be tested by a case study. After the description of the research methodology the development and evolution of alliance capabilities will be explained at the example of the DBAG. This contribution ends with a description of the shortcomings of the research approach and a summary and outlook.

2 Theory Review

The theoretical background of this contribution derives from the resources based view and the capabilities based view, which are closely related to each other.

2.1 From Resources Based View to Capabilities Based View

One of the current most influential theoretical approaches in management sciences - to analyze the phenomenon of collaboration among corporations - is the resource based view, which is raised by Penrose (1959) who described a corporation as an accumulation of competencies. Wernerfeldt (1984) expanded this concept to an own academic research field next to the traditional competitive based view (Porter, 1985). The analysis of core competencies of a company stands in contrast to the approach of the competitive based view, whereas competitive advantages gain through specific resources² and not through industry structures (Hamel and Prahalad, 1990). The concept of the resource based view (Hamel *et al.*, 1990) emerged in the research field of strategic management since the 1990s. The resource based view is grounded in the perspective that a corporation's internal environment, in terms of its resources and capabilities, affect strategic action to a larger extend than factors of the external environment do. Several studies support this presumption as table 1 shows (Grant, 2005).

	Percentage of Variance in Corporations' Return on Assets Explained by:		
	Industry Effects	Corporation-Specific Effects	Unexplained Variance
Schmalensee (1985)	19,6%	0,5%	80,4%
Rumelt (1991)	4,0%	44,2%	44,8%
McGahan & Porter (1997)	18,7%	31,7%	48,4%
Hawawini et al. (2003)	8,1%	35,8%	52,0%

Table 1: Percentage of Variance in Corporations' Return on Assets (Gant 2005: 103)

Teece et al. (1997: 512) define resources 'as corporation-specific assets that are difficult if not impossible to imitate.' These resources can be classified into three categories: (1) Physical capital, (2) human capital, and (3) organizational capital. According to Barney there are two core assumptions of the resource based view which are contradicting the competitive based view (Barney, 1991a, 1991b):

1. Resources are distributed heterogeneously among corporations.
2. The transfer of resources from one corporation to another causes transaction costs.

Two basic arguments can be derived from these assumptions: First of all resources which are rare and valuable can cause a competitive advantage. Second resources which are additionally not imitable, not replaceable and not transferable can cause a sustainable competitive advantage. But in particular the link between specific resources and performance of a corporation is still unclear and less investigated (Priem *et al.*, 2001: 25). Thus the implications of the resource based view on man-

² According to Teece et al. (1997:516) 'Such assets are difficult to transfer among corporations because of transaction costs and transfer costs, and because the assets may contain tacit knowledge.'

agement in practice are limited. Nevertheless research within the field of the resource based view is closely related to the performance and success of corporations, which are the exogenous variables (Priem *et al.*, 2001). A specific problem of several research related to the resource based view is their static character. Because there is no time series included in many research, in particular path dependencies remained often unconsidered. This problem is not necessarily related to the resource based view and should be solved by future research work (Priem *et al.*, 2001: 31). Another problem is that the research on specific resources pays often less attention to the processes within a corporation. However, especially this seems to be important in gaining competitive advantages. A lot of research projects describe the internal environments and processes of corporations as a 'black box'.

Both problems - static view and 'black box' - are solved in parts by research in the field of the knowledge based view. This approach is focused on knowledge and experience, and learning processes and stands in the tradition of the resource based view.

According to the knowledge based view the competitive advantage of corporations is caused by the knowledge management (Kogut *et al.*, 1992). Kogut *et al.* define the knowledge base as a 'set of capabilities, that enhance the chances for growth and survival.' (Kogut *et al.*, : 384). Several problems around the resource based view motivated Teece *et al.* (Teece *et al.*, 1997) to invent a new approach as a explanation of competitive advantage: the capabilities based view.

2.2 Capabilities Based View

The capabilities based view stands directly in the tradition of the resource based view. The capabilities based view refers especially to corporations which are confronted with a rapid changing environment (Teece *et al.*, 1997). Teece *et al.* pointed out that outperforming corporations have specific dynamic capabilities, which lead indirectly to competitive advantages. Hence, dynamic capabilities enable corporations to gain competitive advantages, but dynamic capabilities are not competitive advantage themselves (Eisenhardt *et al.*, 2000). Furthermore, several research demonstrate that capabilities are closely related to corporate performance (Kapur *et al.*, 2005).

In the tradition of Teece *et al.* and Eisenhardt *et al.*, Zollo *et al.* propose the following definition of dynamic capabilities: '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.' (Zollo *et al.*, 2002:340). Another definition is given by Eisenhardt and Martin (2000:1107) who define dynamic capabilities as 'the corporation's processes that use resources - specifically the processes to integrate, reconfigure, gain and release resources - to match and even create market change. Dynamic capabilities are thus the organizational and strategic routines by which corporations achieve new resource configurations as markets emerge, collide, split, evolve and die.'

Hence, on the one hand dynamic capabilities depend on the corporation's specific resources and on the other hand they are interdependent from path dependencies of a corporation. Thus dynamic capabilities are not identical to organizational routines which are not necessarily related to the resources. Teece et al. identify three classes of factors which characterize dynamic capabilities (Teece *et al.*, 1997:518). These three factors are processes, positions, and paths.

2.2.1 Processes

'Processes' focus on managerial as well as on other organizational processes. Teece et al. describe three main functions of processes : coordination, learning, and reconfiguration. These different functions structure the activities of a corporation, such as deployment, information flow or coordination of research and development. Cunningham for example evaluated several managerial processes and managerial functions, like planning or maintenance (Cunningham, 1979). Very important processes are the learning related processes including the accumulation of experiences or articulation and codification of knowledge (Zollo *et al.*, 2002). On the one hand learning drives the evolution of operating routines, on the other hand it enables the development of dynamic capabilities.

2.2.2 Positions

Positions describe the status of technological, financial, organizational, and strategic corporate assets (e. g. structure of the corporation) in comparison to competitors. Strategic relations or reputation are assets of a corporation as well. The asset position of a corporation is closely related to its overall strategic position and furthermore influences corporate processes. Hence, 'Corporations invest in those assets that correspond to a combination of current capabilities and expectations regarding future opportunities.' (Kogut *et al.*, 1992: 385).

2.2.3 Path Dependencies

Processes and positions of a corporation are results of previous decisions. This means that history matters and, hence, current decisions have to pay attention to this finding (Kogut *et al.*, 1992). Moreover, corporate experiences and knowledge influence the path of a corporation by learning processes. Because experiences and knowledge are also results of past errors and success they play an important role in the evolution of dynamic capabilities, too (Eisenhardt *et al.*, 2000).

2.3 Dynamic Capabilities and Absorptive Capacity

Helfat and Peteraf (2003) argue that the phenomenon of 'coming and going' of competitive advantage indicates the existence of a capability lifecycle. This lifecycle framework of capabilities supports the dynamic character of the capability based view. According to Helfat and Peteraf this dynamic capability 'framework

is sufficiently general to incorporate the emergence, development and progression of virtually any type of organizational setting, ranging from small start-ups to large diversified corporations' (Helfat *et al.*, 2003: 1000). Following this framework there are three important stages in the process of the creation of new capabilities: the founding stage, the development stage, and the maturity stage.

Zollo *et al.* raised the question about the roots of alliances (Zollo *et al.*, 2002). They argue that dynamic capabilities arise from learning processes. They identified three important learning mechanisms which are involved in the process of building up dynamic capability. The first process is the accumulation of experiences from inside or outside of the corporation, such as experiences of the own employees or experiences of business partners or customers. This process seems to be the baseline for learning processes related to the building of dynamic capabilities. The following learning process covers the articulation of knowledge and contains the creation of knowledge from different individual experiences. This transformation is necessary to enable organizational learning. Finally this knowledge has to be codified in manuals, web based tools or databases. These learning processes which are the grounding of dynamic capabilities cover the whole corporation. Therefore the knowledge and the skills are not stored in one single department but spread over the different departments involved in the specific dynamic capability. In case of the alliancing capability a lot of actors take part, e.g. the top management, the legal department or the marketing department. Of course, the learning processes are interdependent to each other and every step is critical.

An important concept related to dynamic capabilities is the 'absorptive capacity' of a corporation. Cohen and Levinthal (1990: 128) describe '[...] the ability of a corporation to recognize the value of new, external information, assimilate it, and apply it to commercial ends is critical to its innovative capabilities.' They label this ability a corporation's absorptive capacity and suggest that 'it is largely a function of the corporation's level of prior related knowledge.' Furthermore, March (1991) argues that exploration and exploitation are important processes in organizational learning. These both learning processes seem to be important in case of alliancing while alliances involves exploration of new opportunities together with business partners as well as the exploitation of these opportunities. To set up permanent processes around exploration and exploitation through alliances it could be argued that corporations need a specific alliancing capability.

2.4 Alliancing as a Dynamic Capability

In the tradition of Teece *et al.* (1997), Eisenhardt *et al.* (2000) and Cohen and Levinthal (1990), Kogut (1992) argues that building up alliances describes a specific capability, labelled as 'alliancing capability'.

In this contribution alliances are defined as cooperative agreements of any form aimed the strengthening of the position of the participating firms. Therefore alliances could have several different goals, e.g. access to new knowledge, risk sharing or the exploration of a new market. Especially since the mid 1990s there is a world-wide trend observable towards an increasing number of strategic alliances

among corporations. Several research papers and books already raised the topic of 'strategic alliances' (Osborne *et al.*, 1997). However, most of them focus only either on alliances or on the processes and capabilities of the participating corporations, although a lot of academic and professional (research) papers suppose that alliances should be performance drivers of the participating corporations (Blaeske, 2006; Hamm, 2006).

Set up alliances seems to be a strategic option to get access to specific assets of other corporations. Eisenhardt *et al.* argue that alliancing is a dynamic capability itself because it opens new sources of experience and knowledge (Eisenhardt *et al.*, 2000). Powell *et al.* (1996) argue that in *dynamic environments* corporations try to get access to innovations through learning from partners. They figured out that 'skills in managing collaborations' are one success factor of alliances. Of course, alliancing capability is not the success itself, but it enables corporations to gain advantage from their alliances.

Simonin (1997) researched on the meaning of alliancing capability³ for corporations without referring to the mentioned dynamic capability framework. His research indicates that a higher level in alliancing capability resulting from past alliances. This enables corporations to achieve higher benefits from current or even future alliances. But he also found out that experiences lead not necessarily to benefits. This observation indicates the existence of a dynamic capability where experience and knowledge are just two of many factors. As organizational capabilities are not included in his study, they should be integrated in further research (Simonin 1997).

Hence, research in alliances is closely linked to research in organizational learning. But there is less research using the framework of dynamic capabilities even though alliancing seems to be a dynamic capability.

Alliancing itself could be interpreted as a process which covers mainly the coordination of an alliance during the whole lifecycle of an alliance. This starts with the scanning for new alliances, negotiation until the actively managed ending of an alliance. Of particular importance are the described learning processes in this life cycle. Learning is crucial to gain advantages from a strategic alliance. Positions, as corporate asset combinations, play a key role as well. In alliances especially trust and reputation are necessary in setting up and managing new alliances. Therefore a path dependency seems to exist in the creation of alliancing capability. This path goes along with every new alliance. Of course learning processes, assets, and paths are the factors of alliancing capability.

³ In the sense of collaborative know-how of a corporation

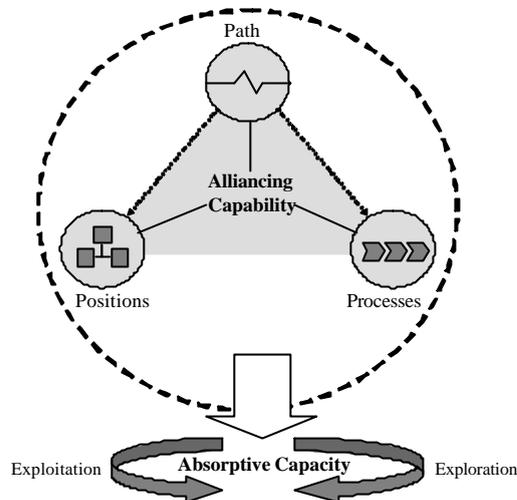


Figure 1: Position, Process, and Path as Part of Alliancing Capabilities

Figure 1 describes the framework of alliancing capability and integrates also the absorptive capacity to this construct. The corporation with a high alliancing capability uses alliances to exploit and explore new knowledge which is necessary to secure its competitive position in the market. A higher alliancing capability enables the corporation to manage current alliances better and improves the chance to increase the absorptive capacity of a firm and gain competitive advantage from its alliances

3 Case Study

To perform research on alliancing capability hypotheses will be derived in a first step and will be validated by a case study in a second step.

3.1 Research Question

After the description of the research framework for the analysis of alliancing capability in the last section (see fig. 1), the remainder of this paper will validate the framework by an explorative case study.

Recent contributions in the field of dynamic capabilities and as well as in the field of strategic alliances raise several research questions which are not yet answered. These questions are about the meaning of dynamic capabilities for the performance of corporations which are active in a highly dynamic and highly competitive environment. What are the meanings of alliancing capabilities? Exists a specific alliancing capability which is directly or indirectly linked to corporate perform-

ance? Do corporations build up the alliancing capabilities by alliancing with other corporations and by developing learning routines and by generating assets linked to alliancing? Do these learning processes generate a specific path dependency in the field of alliancing? Exists a path dependent alliancing capability which has an influence on the absorptive capacity of the corporation?

To answer some of these questions, we formulate the following hypotheses which are derived from the literature review above and which will be validated by analyzing the DBAGcase:

H1: There exists a path dependency in alliancing.

H2: Corporations are able to acquire experiences and knowledge about alliancing which lead to alliancing capabilities.

H3: Corporations with higher alliancing capabilities are more active in alliancing than corporation with low alliancing capabilities.

If H2 and H3 are true, it could be stated that path dependency in the field of alliancing capabilities influence the corporate absorptive capacity. Next to alliances, mergers and acquisitions (M&A) are important strategic options for the organizational development. Because corporations often analyze these three options in the same context this contribution also analyzes M&A in the case study. But the main focus still remains on alliances. While H1 and H2 are tested in the case study, H3 is difficult to test because a single case study not allows a comparative design. Nevertheless the case study can indicate if H3 is true or false.

3.2 Research Design

A case study can be applied to explore the existence and meaning of corporate alliancing capabilities. This research method follows the approach of Langley and Royer who view 'a case as a bounded system [which] simply requires a researcher to focus on the details of a case and to analyze its context - it does not a priori restrict the methods used to achieve this.' (Langley and Royer 2006: 74). Furthermore Eisenhardt pointed out that 'tying the emergent theory to existing literature enhances the internal validity, generalizability, and theoretical level of theory building from case study research. Hence, the case study in this paper will be linked to the findings of past research.

This contribution describes the case of the 'Deutsche Börse Group' (Deutsche Börse AG - DBAG) which is an international corporation acting in a high dynamic environment which is coined by a fierce competition in the industry of financial exchanges. Therefore this case is appropriate to analyze dynamic capabilities which are important in instable environments with rapid change.

All information used in this case are taken from public available sources such as newsletters from the web-page, newspapers, magazines, and journals articles.

DBAG operates several business units. The core businesses are the operations of the trading facilities for the German stock market, the Xetra System, and for the European derivate market, the Eurex system as well as for the clearing and settle-

ment of these markets (Clearstream). Eurex is a strategic partnership between DBAG and SWX Swiss Exchange. Clearstream is a 100% subsidiary of the DBAG which offers post-trading services and ensures the delivery of cash and securities between trading parties. The DBAG has currently around 3.200 employees world-wide and had an total revenue of 1,854 Billion EUR (as of end 2006).

DBAG is an international corporation with offices in Germany, Luxembourg, Switzerland, Spain, and in the US, as well as representative offices in London, Paris, Chicago, New York, Hong Kong, Dubai, Singapore, Tokyo, and Moscow.

3.3 Case: Deutsche Börse Group

3.3.1 *Competitive Situation in the Financial Exchange Industry*

Today's stock and derivate exchanges are faced by an environment with hyper-competitive characteristics (D'Aveni and Gunther 1994). Off Exchange trading platforms such as Electronic Trading Networks (ECN) and Multilateral Trading Facilities (MTFs) harm the position of traditional stock exchanges. Thus, stock and derivative exchanges have to build up strategic alliances and/or have to invent and implement new market models to attract their trading facilities to investors and to meet new legal standards such as the 'European Markets in Financial Instruments Directive - MiFiD' (Gomber, Gsell and Reininger 2007). As a consequence, recently the exchange industry is coined by a consolidation process. The world-wide biggest exchanges are currently consolidating to global exchanges, such as for example of the five exchanges of the Euronext.

The roots for this development have their origin in large part in the changing technology, and the liberalization and deregulation of the financial markets. The electronic networks, introduced at first at the NASDAQ in the 1980s, made floor-trading redundant and lead regional exchanges to fierce competition. They lose their 'natural monopolies' (Steil, 1996) and thus their local franchises. The liberalization and deregulations in Europe pave the way for cross-border trading and settlement and for the consolidations of European trading platforms.

In our case we analyze collaborations, joint ventures, mergers and acquisitions of DBAG from 1998 until 2007. Therefore we give a brief overview of the industry starting with 1998 when EUREX **has** started as a joint venture of (DBAG) and Swiss Exchanges (SWX). At the same time NOREX a co-operation agreement between Stockholm and Copenhagen Stock Exchange was announced. The DBAG, London Stock Exchange (LSE) and six other European exchanges also were involved in the first step to establish a pan-European alliance.

In 2000 Paris, Brussels and Amsterdam exchanges consolidated to form the pan-European exchange EURONEXT. The Scandinavian stock exchanges Iceland Stock Exchange and Oslo Börs joined NOREX. The DBAG was involved together with LSE and NASDAQ in planning a common marketplace called iX. Meanwhile the Swedish exchange operator OMX tried to take over LSE and LSE drew back from iX project in order to avert OMX take over.

2001 EURONEXT acquired the London International Financial Futures Exchange (LIFFE).

During 2002 the DBAG fully acquired the International Central Securities Depository (ICSD) and Lisbon joined EURONEXT. NASDAQ teamed up with regional exchanges in Bremen and Berlin and started NASDAQ Deutschland which failed due to marginal demand from investors

In 2003 the LSE invites DBAG to re-enter negotiations on Clearing Offering and LSE staked in EUREX.

In 2004 the DBAG made a proposal to LSE board regarding of a possible merger. Both Euronext and DBAG enter talks with LSE board.

In 2005 the Australian bank Macquarie offers 580 pence per LSE share to acquire LSE which was not successful. These developments in the international stock exchange industry display a turbulent environments with fast moving actors and it is therefore an ideal background for research in dynamic capabilities, especially all-ancing capability, as all major stock and derivate exchanges still merge, acquire, or collaborate with partners on the same value chain level or vertically.

3.3.2 Strategic Position

DBAG has a broader business basis than most other stock exchanges because of its so called silo structure. DBAG covers the whole value chain in the financial exchange industry. A trading process on financial exchanges can be seen as a sequence of transaction phases. Typically phase models for security and derivative trading subdivide the market process into four phases: the information phase (provision and search), the order routing, the negotiation, and the clearing and settlement (Schmidt and Lindemann 1998). DBAG offers all these securities and derivatives trading functionalities, transaction settlement, market information and the operation of an electronic trading system. The main goal of the corporation is the creation of shareholder value. The DBAG announces in their corporate mission statement that they are 'open for valuable partnerships' in general.

3.3.3 Strategic Alliances of Deutsche Börse Group - 1996 to 2005

The DBAG started strategic alliances and mergers in the stock and derivate exchange industry in the 1990s. The former CEO of the DBAG Werner Seifert, started the transformation process from a mutual organization to a stock corporation in 1993. The Deutsche Termin Börse (DTB) was integrated as a 100% subsidiary into the DBAG in the same year.

The following description of alliances, joint ventures, and mergers of the DBAG is of chronological order, starting in 1996 and ending in 2005.

EUREX – Successful Joint Venture – Start 10/98

One of the predominant strategic alliances from the German Exchange is the joint venture with the Swiss Exchange in 1996 under the lead of the DBAG CEO W. Seifert and the CEO of the DTB J. Franke. The DBAG and the Swiss Exchange

agreed in a Letter of Intent to create a new pan-European platform for derivatives trading. The collaboration was publicly announced in summer 1997. Around one year later, in September 1998, the DTB, which was a 100% subsidiary of the DBAG merged with the SOFFEX (Swiss Options and Financial Futures Exchange), a 100% subsidiary of the SWX Swiss Exchange. This resulting merger called EUREX.

Until the end of 1998 the trading of the BUND Future, one of the most liquid and traded future products world-wide, switched almost totally from the London based LIFFE to the EUREX exchange. Formerly the LIFFE hold almost 100% of the trading volume in the BUND futures. Nowadays, EUREX operates one of the most liquid and successful derivate trading platforms in the world with a trading volume over 1 billion contracts per year.

Helsinki Stock Exchange (HSX) – Start 10/99

In 1999, one year after the start of the EUREX, EUREX allied with the Helsinki Exchange Group Ltd.⁴ with the aim to list new derivate products such as options on Finnish stocks and on the Finnish stock market index. The collaboration lasts successfully until today.

Vienna Stock Exchange (VSE) – Start 11/99

The DBAG and Vienna Stock Exchange agreed in late 1999 to use jointly the German electronic trading System, XETRA. Since than the listed stocks and bonds on the Vienna Stock Exchange traded over the XETRA-System. The Vienna Stock Exchange runs their own technological infrastructure. However, the German Exchange maintains the IT system.

iX – Start 05/00

With the introduction of the EURO in 2000, the discussion started about the creation of a single European exchange - through the merger of the Amsterdam, Brussels, Frankfurt, London, Madrid, Milan, Paris, and Zurich exchanges. The battle to become the European Exchange' quickly came down to a race among the English, French, and German exchanges. Yet the French exchange was quickly outpaced by its German and English rivals in 1998, the London and German exchanges announced their intention to merge and form the pan-european iX exchange.

While Milan and Madrid declined the offer by the German Exchange to join the iX, negotiations began among the Paris, Amsterdam, and Brussels exchanges. By March 2000, the three exchanges in Paris, Amsterdam, and Brussels announced their intention to merge into a new entity, Euronext.

⁴ Since 3 September 2003 Helsinki Exchange Group is part of OMX (through a merger with OM AB) and its official name became OMX Helsinki.

The announcement of Euronext which extended an invitation to the London exchange, as well as began talks over a partnership with the New York Stock Exchange spurred the proposed iX partners to step up the pace of their own negotiations. By summer 2000, however, it became apparent that the London and German partners were not able to agree, and the iX exchange project collapsed.

Irish Stock Exchange (Irish SE) – Start 06/00

Despite the unsuccessful alliance with the London Stock Exchange parallel negotiations started with other exchanges on a lower level. In mid 2000 the DBAG has arranged successfully an alliance with the Irish Stock Exchange (ISE) and introduced the ISE Xetra for the trading of equities and covered warrants. Through this alliance, the ISE Xetra system operates on a specific segment of the Xetra trading platform, which is operated and maintained by the DBAG. However, for a Stock Exchange the access to the trading platform, in this case the XETRA system, is of crucial importance, because this is one of the main resources of a financial exchange. This corporation lasts successfully until today.

European Energy Exchange (EEX) – Start 08/00

Within the process of the European liberalization of the Energy sector in 1999, Eurex started in late 2000 a joint venture with several companies from the energy sector to implement a platform for trading energy spot and futures products. In the beginning EUREX holds a 48% share on the European Energy Exchange AG (EEX). The rest was held by partners from the industry sector. In mid 2002 the competing energy exchanges in Frankfurt, EEX, and the Leipzig Power Exchange (LPX) have merged their business into one entity, which is based in Leipzig but keeps the EEX name.

Cedel – Start 07/00

The 100% clearing and settlement organization of the German Stock Exchange, Clearstream, created in January 2000 by the merger of Cedel International and Deutsche Börse Clearing AG. In 2002 DBAG successfully completed the acquisition of Cedel International including Cedel's 50 percent stake in Clearstream International. Until 2002 the Clearstream acquisition was the largest successful corporate transaction in the exchange industry's history.

a/c/e alliance with Chicago – Start 07/00

In 1998 EUREX and the Chicago Board of Trade (CBOT) announced a strategic alliance to explore global opportunities in the international derivative trading market. The goal was to create a global derivative market and eventually the integration of an Asian partner. CBOT Chairman Patrick H. Arbor said, "This alliance, once finalized and approved by our Board of Directors, will result in increased

trading opportunities for our members. It represents an outstanding opportunity for us to partner globally with a leading overseas exchange." Eurex CEO Franke said, "It adds liquidity to our market and allows our members easy and cost-efficient access to a wide range of new products." The alliance has been open for other participants who like to share the technology model. In 1999 Franke said, "The alliance between CBOT and Eurex is a classic win-win situation." The joint venture started its trading platform in August, 2000 and was named: a/c/e - alliance / cbot / eurex. But the alliance had a low trading volume and started a restructuring of the alliance. This restructuring allows the EUREX to act as a competitor to the CBOT from 2004 on (Atzler et al. 2007, Göggelmann/Dengel/Buchter 2007, Mohr 2007b). At the beginning of 2004 EUREX started to build up EUREX US on their own as a direct competitor to the CBOT. The joint venture between EUREX and the CBOT ended.

The Clearing Corporation (CC) – Start 05/03

In 2003 the Chicago based Board of Trade Clearing Corporation and EUREX started an alliance, the Global Clearing Link, to link the clearing and settlement processes for cross border trades between the US and the German market. This alliance has been a competitive alliance to the a/c/e alliance former founded with CBOT. But nevertheless while the a/c/e alliance was unsuccessful, Global Clearing Link is a successful joint venture until today.

Acquisition of London Stock Exchange (LSE) – Start 12/04

The DBAG announced on 13 December 2004 that it was in discussions with the London Stock Exchange (LSE) with a view to making a recommended cash acquisition offer for the LSE. Even if the bid was launched in December 2004, the story of DBAG's attempted merger with the LSE stretches back to July 1998 when the two markets announced the formation of the already mentioned iX alliance. For a number of reasons, which included a lack of sufficient synergies, this failed to progress and the parties continued to operate independently in late March 2005 (Nestor 2005).

Finally in May 2005, the DBAG announced the resignation of the powerful DBAG CEO W. Seifert and the even more powerful DBAG chairman, R. Breuer. Their departure was a clear consequence of loss of shareholder confidence and the unsuccessful LSE take over attempt.

Swiss Exchange (SWX)/ALEX – Start 2004/2006

The Swiss Exchange SWX rejected a merger with the DBAG in August 2004. However, SWX is already cooperating with the DBAG via EUREX. Both, DBAG and Swiss Exchange announced in October 2006 the formation of the SWX -

DBAG cooperation ALEX, a platform for trading structured financial products. It is not possible to evaluate the success of this joint venture until now.

Euronext (EuroN) – Start 12/05 - 01/06

Euronext and DBAG announced in December 2005 that senior executives from each exchange had met for talks that included the subject of a possible merger. But the talks stalled in January 2006 after the companies reportedly disagreed about the location of the combined group's headquarters. The talks never started again.

Acquisition of International Security Exchange ISE – Start 04/07

The latest intended deal was announced by the DBAG in April 2007. DBAG announced to purchase the second largest option exchange in the US, the International Security Exchange (Mohr 2007b). Further information about this merger are not published until now.

4 Discussion - The Alliancing Capability of Deutsche Börse Group

To sum up, DBAG, as well as major competitors such as the exchanges of Paris, London, Brussels and New York, has set up several different forms of alliances from 1996 until today. Hence the industry is faced by a consolidation process. Alliances seem to be more a 'must' in current times than a 'nice to have'. The main reason for these alliances is to strengthen the corporate competitive position in the exchange industry mostly through creating scale or scope effects on its market platform and to have access to core competencies of other, smaller firms.

A closer look on the facts shows that there exists no one single alliance capability. Moreover the results indicate that there are different alliancing capabilities to set up and operate e.g. merger, joint ventures, acquisitions or smaller contractual based collaboration with bigger or smaller corporations (in comparison to the analysed corporation in the case). All contractual based collaborations by the DBAG with smaller corporations are successful until today. However, merger, joint ventures, and acquisitions by the DBAG with bigger or same-sized corporations are not successful. These patterns indicate that there exist capability clusters.

This finding is congruent with former research which indicates that there are two main strategies. Large corporations often cooperate with smaller partners to get access to new knowledge and to gain from their core competencies of the smaller firms. Smaller corporations cooperate with larger partners to gain from better opportunities to enter markets and to gain from reputation (King *et al.* 2003).

Year (Short code)	Organizational unit DBG	External Subject	Type	Successful	CEO in Charge	External subject
1998 EUREX	DTB	SOFFIX	C to M	Yes	FR, SE	S
1999 (HSX)	Eurex	Helsinki Exchange	C	Yes	FR	S
1999 (VSE)	DBAG/ Xetra	Vienna Stock Exchange	C	Yes	SE	S
2000 (iX)	DBAG/ Xetra	London SE, Madrid, Milan	M	No	SE	B
2000 (IrishSE)	DBAG/ Xetra	Irish Stock Exchange	C	Yes	SE	S
2000 (EEX)	DBAG/ Xetra	European Energy Exchange	C – M	Yes	FR	S
2000 (Cedel)	DB Cleaming	Cedel	M	Yes	SE	S
2000 (a/c/e)	Eurex	CBoT, a/c/e	JV	No	FR/FS	Same
2003 (CC)	Eurex Clearing	Clearing Corporation	C	Yes	FS	S
2004 (LSE)	DBG/ Xetra	London Stock Exchange	M	No	SE	B
2004 (SWX)	DBG/ Xetra	SWX	A	No	SE	S
2006 (ALEX)	DBG/ Xetra	SWX /ALEX	JV	?	FR	S
2006 (EuroN)	DBG/ Xetra	Euronext	A	No	FR	B
2007 (ISE)	Eurex	Intern. Security Exchange	A	?	PR	SM

Table 2: Overview over Alliances⁵

Furthermore mergers and acquisitions among same sized corporations are often motivated by the hope to increase efficiency and to generate synergies. Additionally there is a strong separation in the field of strategic management when talking about M&A and other forms of collaboration such as joint ventures (King *et al.* 2003). As the explanations above show, the unsuccessful merger and acquisitions often failed because of a lack of sufficient synergies in this specific DBAG case (Nestor 2005).

Furthermore, at a first glance, the results provide no clear evidence about path dependence or learning processes. But by clustering the different alliancing modes and firm sizes, patterns appear in the case study (see figure 2). In figure 2 successful collaborations, joint ventures, mergers and acquisitions are marked white while unsuccessful activities are marked black. Because ALEX and ISE are too new to decide right now if they are successful and remain so in the long-run, they both are marked grey. There is a cluster of successful collaborations as well as mergers

⁵ (C- Collaboration, M-Merger, JV- Joint Venture, , A-Acquisition, SE- Seifert, FR- Francioni, PR- Preuss, FS-Ferschau, FR-Franke ; b- bigger/same size, s-smaller as DBAG)

with smaller companies and a cluster of unsuccessful merger and acquisition with bigger companies.

Learning effects seems to be effective which support the hypothesis number 1 (There exists a path dependency in alliancing) and hypothesis number 2 (Corporations are able to acquire experiences and knowledge about alliancing which lead to alliancing capabilities).

The case study shows for example that the DBAG is successful in contractual collaborations with smaller exchanges and clearing institutions as well as all mergers with smaller firms are successful. They are not successful in the other clusters, in particular in alliancing with bigger or same-sized companies.

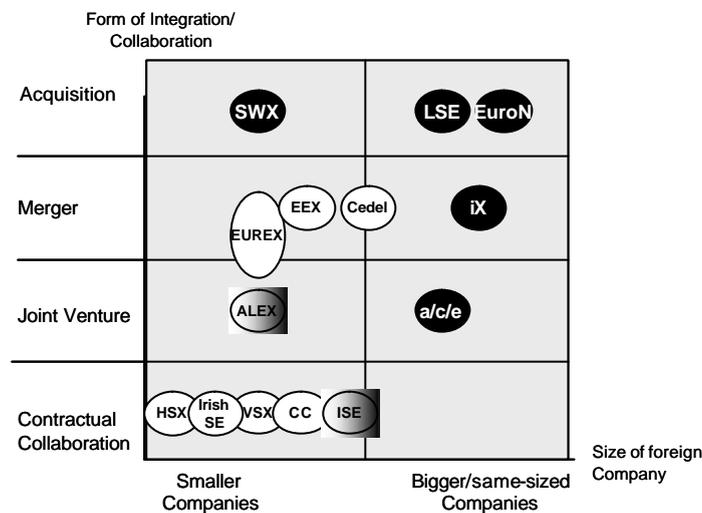


Figure 2: Alliances and Firm Size

The alliancing capabilities seem to be dispersed over the whole corporation and are not located in different business units, such as in this case Eurex, Clearing or Cash Market/Xetra. As table 2 shows, alliancing capabilities are not bundled to single persons (e.g. CEOs) as successful and unsuccessful alliances managed by different involved CEOs.

DBAG started in 1996 to increase its absorptive capacity while integrating more and more business partners into their network. We argue that the successful alliances (esp. Eurex in 1998) help to build reputation which has a positive impact to other partners. Because of the growing reputation of the DBAG over time, one of the major reasons to cooperate with larger corporations, the gain of reputation (King et al 2003), lost relevance for them. Hence, main reasons to cooperate, merge, or acquire bigger partners are to gain from synergies, which was - in the case of DBAG - not always possible (Nestor 2005).

However, hypothesis 3 (Corporations with higher alliancing capabilities will be more active in alliancing than corporation with low alliancing capabilities) can not

be validated by a single case study, because only one corporation was analyzed. But interestingly by analyzing the collaborations and joint ventures, we found a capability lifecycle as proposed by Helfat and Peteraf (2003) at the DBAG. A capability lifecycle typically starts with a founding stage which was the first important and very successful joint venture EUREX in 1998 and an alliancing capability has been seeded. The alliancing capability grew due to two cross-country, inter-exchange collaborations in 1999 in the stock market. After 1999 we argue that DBAG has reached the maturity stage of development of alliancing capability. Helfat and Peteraf (2003) postulate that the maturity phase will be followed by three possible trends: enhancement, decline or stabilization. Between the two stages, a key event or several key events determines the future development of the capabilities.

In the case of DBAG the failure of the pivotal joint venture a/c/e with the CBoT was such an important event as shown in figure 3. This event has refocused the management attention to other options besides of cooperation agreements and joint ventures. As the case shows, DBAG tried to start more acquisitions and mergers than before the failure of the CBoT joint venture. This reorientation towards M&A led a loosing focus on alliancing capabilities for loose cooperations and joint ventures and therefore to a lost of knowledge of alliancing capability of DBAG. During the same time other major stock exchanges shift successfully towards the same direction, as the merger and acquisitions between NASDAQ & INET in 2004, NYSE and ArcaEX in 2005 as well as NOREX exchanges in 2004 show.

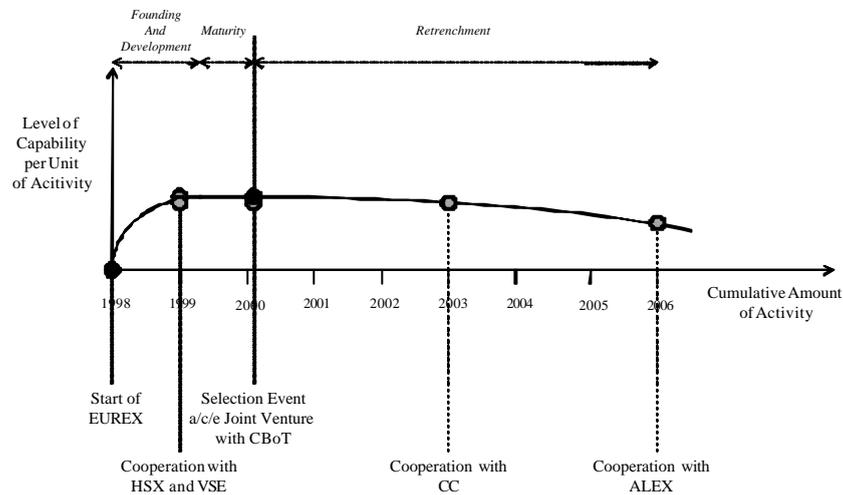


Figure 3: Alliancing Capability Development of DBAG

These results also indicate that a firm has a small set of dynamic capabilities which influence each other. While our research is a first step to investigate the specific dynamic capability alliancing further research is needed.

Hence, cross-industry and comparable research have to be conducted to gather information to validate our findings. But nevertheless we found that the DBAG improved its absorptive capacity while integrating more and more partners in its network and while establishing a long term partnership with most of them. We also described the development of alliancing capability while providing a timeline. But even if we found some insights on dynamic capabilities other case studies are necessary to prove our results.

5 Limitations

While using a case study approach, there are several related risks according to this research method. Case studies are appropriate research techniques to explore basic structures, as the relation between core competencies and dynamic capabilities. However, to receive deeper insights of the relationship, a more comprehensive research method should be applied (Eisenhardt, 1989: 547). Furthermore, it is important to conclude with cautionary remark that this study - as every case study - suffers from the issue of generalizability due to the explorative character. This research relies on one single case study drawn from a multinational corporation in the financial exchange industry. This industry has distinctive characteristics. As a result, the generalizability of the findings presented in this paper to other industries or to small and medium sized corporations should be considered cautiously.

The study is purely a structural and qualitative evaluation of firm's management of capabilities and processes. However, the contribution provides a framework for future quantitative time series analysis. Therefore, this research paper should be understood as an explorative starting point for future research. Future research should consider questions such as if there are industry-specific patterns? Are there major differences within the industry? Are there specific patterns in the development of dynamic capabilities? What is the nature of dynamic capabilities in cross-industry networks?

It is also worthwhile to look in future studies on the effects of firm performance. The results of the study specifically indicate that it might be able to create competitive advantage and hence superior performance based on dynamic capabilities. However, we are still in the dark in terms of what kind management of dynamic capabilities yields superior outcome of a corporation.

6 Summary/Outlook

To sum up, this contribution presented a research framework to describe an integrative view on alliancing capability and absorptive capacity by referring to the capabilities based view. Three hypotheses are derived and tested by a case study of DBAG. The key finding is that there exists no one single alliancing capability

in general but clusters of alliancing capabilities. In the case of the DBAG several alliances are unsuccessful, especially alliances with larger or same sized partners. However, DBAG has an capability in alliancing with smaller partners as these alliances were mostly successful. The case study also supports the assumptions of Helfat et al. (2003) and Zollo et al. (2002) because the data show that the dynamic capability to set up alliances with smaller partners has been build over time. DBAG has started in 1996 with the exploration of new opportunities through alliances and has begun to exploit these opportunities in 1998 while set up Eurex. Alliancing capabilities has been seeted in 1998 (founding stage). The capabilities were further developed and expanded due to the following collaborations until 2003 (development stage). The lag of successful collaborations from 2003 on indicates a loss of alliancing capabilities. With the resignation of CEO Seifert in 2003 almost the whole board and the top management changed. Even with the nomination of the experienced stock exchange expert R. Francioni, the established alliancing capabilities of the DBAG seem to get lost due to the organizational changes. Hence, alliancing capabilities seem to be stored in the organizational structure.

Exploration and exploitation have played an important role in influencing the absorptive capacity of DBAG. These developments are not only closely related to learning but also to the concepts of reputation and trust. Our research describes the development of alliancing capability, its growth as well as its declining. The unsuccessful cooperation with the CBOT is supposed to be the major event which effects the alliancing capability of the DBAG by reducing the reputation of DBAG as a successful cooperation partner in particular, which probably influenced the absorptive capacity of DBAG negatively. To generalize these findings, further in-depth research has to be conducted. Corporations are able to develop quite more than one single dynamic capability. This is in contrast to the currents findings of the capabilities based view. Hence, more quantitative research is necessary to validate our findings and to integrate these findings into the approach of the capabilities based view.

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