

# **THE MANAGEMENT OF STRATEGIC ALLIANCES**

## **Performance Impact Factors and Alliance Management Capabilities in the Context of Logistics Alliances**

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# **1. INTRODUCTION**

## **1.1 MOTIVATION**

The proliferation of logistics alliances has continued to grow (Daugherty, 2011; Stank et al., 2011), due to ongoing deregulation (reflected in more than 400 free trade agreements nowadays) (Escaith and Maurer, 2014), globalization (continuous growth of world trade volume) (WTO, 2015) and geographic coverage (Ghemawat and Altman, 2014)), increasingly demanding customers (Hertz, 2001), and the constant pressure for efficiency improvements in logistics operations (Bowersox et al., 2007). Logistics alliances are inter-firm partnerships in which supply chain entities, such as buyers, suppliers, third-party providers and customers, share resources, information and risks in order to accomplish common goals (Min et al., 2005) for mutual competitive advantages (Hofenk et al., 2011; Mentzer et al., 2000). Logistics alliances gained attention due to the outsourcing trend of logistics activities in the 1980s and 1990s (Bowersox, 1990). By letting Logistics Service Providers (LSPs) perform the logistics services on behalf of the shipper, these logistics alliances allow for cost reductions (inventory/storage), increased flexibility towards demand fluctuations, improved quality of customer service (Bowersox, 1990), and reduced capital investment (Daugherty, 2011; Frankel and Whipple, 1996b; Gunasekaran and Ngai, 2003). Every second Logistics Service Provider already engages in a logistics partnership (either vertical or horizontal) (Anonymous, 2015: 9). Empirical studies indicate that vertical logistics alliances allow for logistics cost reduction of 9%, inventory cost reduction of 5% and fixed logistics cost reduction of 15%, as well as improvements in their order fill rate and order accuracy (Long, 2015). Recently, logistics alliances between two or more LSPs gain more and more importance in practice as LSPs need to face increasing competition, lower inventory levels and customer demands for higher service levels (Crujssen et al., 2007b) on a global scale (Schmoltzi and Wallenburg, 2011). Allied LSPs strive for efficiency gains, service improvements and better market



positions through resource, information, and cost sharing among themselves (Cruijssen et al., 2007b). In the German logistics industry every second LSP (almost 60%) is engaged in at least one horizontal partnership (Schmoltzi and Wallenburg, 2011).

While scholars have spent considerable efforts over the last decades studying vertical alliances from various angles (Grimm et al., 2015), i.e., by focusing on (a) their types and governance forms (Golicic et al., 2003; Lambert et al., 1996; Rogers and Daugherty, 1995; Tokman et al., 2007), (b) their performance impact factors (Frankel and Whipple, 1996a; Gibson et al., 2002; Skjoett-Larsen et al., 2003) and (c) their outcomes (Ellram and Krause, 1994; Goh and Uncles, 2003; Sjögren and Söderberg, 2011), the literature on horizontal alliances between LSPs is still in its infancy (Cruijssen et al., 2007b; Schmoltzi and Wallenburg, 2011). Pioneering studies in this area emphasized the identification of (a) potential cost savings based on analytical and simulation approaches (Chen and Chen, 2003; Park, 1997; Yan and Chen, 2007) and (b) performance impact factors based on econometric analyses (Cruijssen et al., 2007b; Schmoltzi and Wallenburg, 2011, 2012). Despite the proliferation of logistics alliances (Daugherty, 2011; Stank et al., 2011), a large percentage of logistics alliances have difficulties in meeting partners' expectations (Midoro and Pitto, 2000; Min et al., 2005) and may even be considered failures (Kampstra et al., 2006; Stank, 2011; Wilding and Humphries, 2006). For example, according to Dittmann et al. (2010), "successful collaborative relationships between a firm and its core suppliers are still rare"; this is reflected in the fact that almost 70 percent of strategic alliances fail (Zineldin and Bredenlow, 2003). This failure rate remains surprisingly high and not entirely explained in literature. Major gaps remain in our understanding and explanation of logistics alliances and their evolution (both success and failure). There are a number of reasons for these gaps, including incomplete alliance models offered by the nascent logistics discipline (Daugherty, 2011), logistics scholars' hesitancy to embrace recent approaches in the general management and strategy

literatures (Cheng and Grimm, 2006; Grimm et al., 2015), a lack of practical knowledge on how to manage logistics alliances successfully (Lambert et al., 1999), and limited interest in cooperation related pitfalls and risks (Crujssen et al., 2007b; Lambert et al., 1999; Zineldin and Bredenlow, 2003). Min et al. (2005) consider logistics alliances to “have great potential, but further investigation is needed to understand its practical value” (Min et al., 2005: 238). Given the wide acknowledgement and increasing importance of logistics alliances (both vertical and horizontal) on the one hand, but their well-established diagnosis of high failure rate on the other hand, this development raises questions as to why some firms are more successful in logistics alliances than others. This thesis addresses the central theme of effective logistics alliance management based on three central research questions:

- (1) What are the performance impact factors of logistics alliances, and how do these factors facilitate effective alliance management?
- (2) How can firms develop logistics alliance management capability to secure an effective and successful management of logistics alliances over time?
- (3) What are reasons of alliance failure? And how can firms prevent alliance failure and improve logistics alliance performance?

To elaborate the current understanding and explanation of both logistics alliance management and failure, this thesis builds on four independent research studies. (1) The first study (Chapter 2) consolidates and synthesizes the current research on logistics alliances. It provides a systematic overview on performance impact factors, and managerial levers for alliance improvements. (2) The second study (Chapter 3) incorporates promising theoretical approaches (namely the dynamic capability construct) (Schilke, 2014; Schilke, 2010; Teece, 2007) from strategic management and organization research fields into the logistics (alliance) scholarship. This study provides a promising approach for gaining new insights into logistics

alliance management and evolution. Based on a case analysis employing the qualitative method of grounded theory (Glaser and Strauss, 1967), (3) the third study (Chapter 4) explores the dynamics of logistics alliance failure and its underlying mechanisms to better understand and explain logistics alliance failures. Referring to the same case study and research design as in the third research work, (4) the fourth study (Chapter 5) elaborates on the exploration of dynamic logistics alliance management capabilities to shed light on their constitutive routines and their impact on the evolution of a firm's logistics alliances.

Each of these four research studies aims to improve our understanding on logistics alliances and to shed light on its management and evolution which help firms to prevent failure and improve logistics alliance performances. Thereby, this thesis adds to the current understanding and explanation of the phenomenon of logistics alliances and thus contributes to the existing logistics alliance scholarship. The introduction proceeds as follows: first, logistics alliances are explained to provide a sound understanding of the phenomenon under study. In the following section, the outline of the thesis is described along the four constitutive papers (research objectives, methods, results) emphasizing their individual contributions, but also their overall common relation to the topic of logistics alliance management and evolution. The concluding remarks in the final section incorporate the key results of the thesis, research limitations and an outlook on future research opportunities.

## **1.2 LOGISTICS ALLIANCES**

The logistics literature approaches the cooperation phenomenon through various theoretical perspectives and terminologies, as chronologically reviewed by Daugherty (2011). Even though a common definition is lacking, there is consensus in describing logistics alliances as long-term (Bagchi and Virum, 1998; Cruijssen et al., 2007a; Gentry, 1996; Nyaga and Whipple, 2011; Park et al., 2003; Schmoltzi and Wallenburg, 2011, 2012) and voluntary (Park

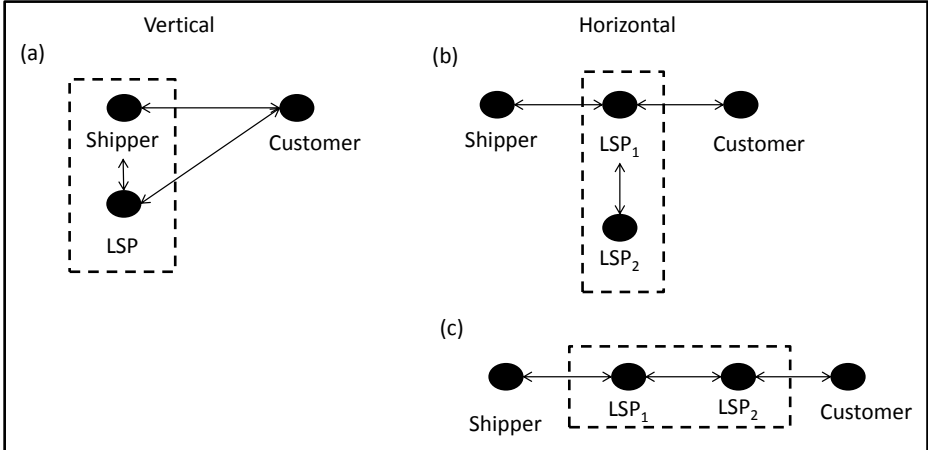
et al., 2003; Schmoltzi and Wallenburg, 2012) relationships between two or more independent actors of a supply chain. Since the 1980s logistics alliances have continuously gained in importance (both in practice and academia) as they are a promising alternative way (besides organic growth and Mergers and Acquisitions) for organizations to grow, meet customer demands (speed, reach, quality) and to increase efficiency of logistics services (Bowersox, 1990; Daugherty, 2011; Ellram and Martha, 1990; Hertz, 2001). Thereby, logistics services involve not only the management of the spatial and temporal transfer of these goods, but also a wide range of related services associated with order processes, inventory management, transportation, handling, facility network management, and information management (Bowersox et al., 2007). Recently, value-added services, supply chain management, and financial services have complemented these traditional logistics functions (Carbone and Stone, 2005; Delfmann et al., 2002). LSPs are “companies which perform logistics activities on behalf of others” (Delfmann et al., 2002: 204) either completely or partly.

Following this LSP perspective, logistics alliances are either formed vertically between buyers – typically original equipment manufacturers or retailers and LSPs – or horizontally between LSPs to perform logistics activities for the shipper (Bagchi and Virum, 1998). Vertical logistics alliances are “long-term formal or informal relationship[s] between shippers and logistics providers to render all or a considerable number of logistics activities for the shipper” (Bagchi and Virum, 1998). Such partnerships are also known under the terms of third-party logistics, or contract logistics (Delfmann et al., 2002a; Razzaque and Sheng, 1998; Sink et al., 1996). Through the integration of the LSP in a shipper’s business and processes, such partnerships reduce operating costs, increase scope and quality of services (Kleinsorge et al., 1991; Slack et al., 2002), and provide more general competitive advantages (Cruijssen et al., 2007a; Mentzer et al., 2000; Zinn and Parasuraman, 1997) through co-specialization, synergies, and share of complementary resources and competencies (Bagchi and Virum,

1998). In comparison, horizontal logistics alliances are “voluntarily initiated, long-term relationships among autonomous LSPs that ... strive for benefits that could not be achieved by the individual companies alone” (Schmoltzi and Wallenburg, 2012: 54). These partnerships may occur either within or across different types of LSPs – such as contract logistics firms, forwarders, and transportation or courier, express and parcel carriers. Through the pooling and leveraging of partners’ resources and competencies (Schmoltzi and Wallenburg, 2011), involved LSPs strive for efficiency gains, service improvements and better market positioning (Cruijssen et al., 2007b). Thereby, logistics alliances gain acceptance as promising growth strategies among LSPs next to mergers and acquisitions (Carbone and Stone, 2005).

The critical point of logistics alliances is that LSPs interact directly in their operations processes with both buyers (here called shippers) and customers (in so called service triads (Wynstra et al., 2015)). LSPs act as the third player in the logistics network of shippers and customers (see Figure 1 form (a)). The partnering LSP needs to secure an effective access and use of both shippers’ and customers’ inputs to deliver logistics services in the expected manner. This requires an alignment of data and information exchange and customization of operational processes depending on the logistics services performed.

**Figure 1 Forms of logistics alliances**



In contrast to these vertical logistics alliances and many other kinds of alliances or service triads, the critical point in horizontal logistics alliances is that the allied LSPs act *together* as the third player in the logistics network of shippers and customers. The point of contact between shipper and customer may either be located at one LSP or shared among the allied LSPs (see Figure 1 form (b) and (c)). In any case, the allied LSPs need to secure access and share of data and information among all involved parties (shipper, customer and LSPs) to deliver reliable and competitive logistics services. This exchange usually requires common or at least aligned information and technology systems among allied LSPs to realize an effective exchange and common use of complex data and information among independent LSPs. In addition, also to other service triads (Wynstra et al., 2015), allied LSPs need to align their specific operations processes, such as i.e.. their handling processes, products and quality standards to secure common, seamless and effective services to their customers.

These critical points play an important role especially in horizontal logistics alliances with shared contact points (see form (c) in Figure 1). In this situation, the partnering LSPs depend mutually on their data/information exchange and their seamless operational processes. LSP<sub>1</sub> need to make sure that its alliance partner LSP<sub>2</sub> receives all necessary data and information from the shipper, and that their operational processes are effectively coordinated. Only then, LSP<sub>2</sub> is able to deliver the expected services to the customer. The higher the complexity of jointly performed logistics services is, the greater the need for significant partner integration (and maybe even for anti-trust immunity). The performance, reputation and success of allied LSPs depend on the effectiveness of their interactions, both in terms of their data/information exchange and their operational process alignment. However, this process-related expertise lies at the heart of LSPs' competitive advantages (Wagner, 2008). Thus, the sharing of this expertise with partnering LSPs (who usually remain competitors on other markets) raises significant concerns and threats. The trade-off between necessary partner integration and

share of expertise to maximize and capitalize logistics alliance opportunities causes significant challenges to the management of logistics alliances, i.e. of horizontal LSP alliances.

Logistics alliances are traditionally conceptualized in a rather reductionist manner, with two distinct components. First, the governance structure that varies between the two extremes of transactional- and partnership-based (cooperative) agreements (Daugherty, 2011; Lambert et al., 1999). These structural differences are reflected, for example, in formal versus informal governance mechanisms (Frankel and Whipple, 1996b) or legal forms (Evangelista and Morvillo, 1999). Second, the relationship intensity (Gardner et al., 1994) mapped along a continuum between operational and strategic partnerships (Lambert et al., 1999). To measure intensity, various scholars have examined the scope of integrated activities (Chen and Chen, 2003; Mortensen and Lemoine, 2008; Stefansson, 2006); the level of trust, interaction frequency, and commitment (Rinehart et al., 2004); and the extent of trust, conflict, investments and adaptations, and personal friendship (Panayides and Gray, 1999). Only recently have scholars more prominently advocated for the systematic exploration of logistics alliances' multidimensional nature, such as in Schmolzi and Wallenburg's (2011) analysis of horizontal alliances. Their empirical analysis, which provided a structural architecture of horizontal LSP alliances including their contractual, organizational, functional, geographical, service, and resource scope, contributed to a more precise and diversified understanding of logistics alliances and thus, development of additional managerial initiatives.

### **1.3 OUTLINE**

This thesis brings together four research studies. While these studies represent individual research essays, they contribute both individually as well as in an integrative manner to the overall topic of logistics alliance management and evolution. The structure of this thesis

evolves as follows: I first provide a brief outlook into the four research studies emphasizing (a) their specific research questions and aims, (b) the applied research design, and (c) the core research results and contributions relevant for both research and practice (an overview over the paper status is provided in Table 1). Afterwards, I provide some concluding remarks regarding the key contributions of this thesis, its limitations and an outlook for future research. The main chapters (2, 3, 4, and 5) consist of the respective independent papers outlined previously, which can be read separately.

**Table 1 Paper overview and status**

Article and Title	Co-Authors	Journal	Status	Ranking
1 Effective Logistics Alliance Design and Management	S. Albers	International Journal of Physical Distribution and Logistics Management (IJPDLM)	Accepted for publication: IJPDLM, Vol:46, Issue 2, 2015	5Year Impact Factor <sup>1</sup> : 2.874 VHB JQ3 <sup>2</sup> : B
2 Logistics alliance management capabilities: where are they?	W. Delfmann; S. Albers	International Journal of Physical Distribution and Logistics Management (IJPDLM)	Published: IJPDLM, Vol:43, Issue 7, p.529-543, 2013	5Year Impact Factor <sup>1</sup> : 2.874 VHB JQ3 <sup>2</sup> : B
3 The dynamics of LSP alliance failures: a grounded theory approach	none	Journal of Operations Management	Resubmission	5Year Impact Factor <sup>1</sup> : 7.692 VHB JQ3 <sup>2</sup> : A
4 Unpacking Dynamic Alliance Management Capability: a grounded theory approach	none	Academy of Management, Annual Meeting 2014	Accepted as Conference paper and presented in Operations Management Division	

<sup>1</sup> Web of Science 5 year impact factor (in Oct., 2015)

<sup>2</sup> Verband der Hochschullehrer für Betriebswirtschaft e.V. (VHB): Journal Ranking VHB-JOURQUAL3 (in Oct., 2015)



## **Paper 1: Effective Logistics Alliance Design and Management**

The first step towards a better understanding and explanation of logistics alliances and their evolution is to systematically consolidate and synthesize the extant scholarship on logistics alliances. Arguing that the extant body of scholarly works on logistics alliances has resulted in a multitude of heterogeneous contributions, the paper consolidates and systematizes the current knowledge on effective design and management of logistics alliances. Based on a systematic literature review we collect, assess and consolidate relevant literature of both horizontal and vertical logistics alliances and their respective (hitherto mainly independent) research streams to provide a comprehensive picture of LSP alliance design and management.

The paper aims to (a) synthesize the existing findings in a meaningful way and guide future research for effective design and management; and (b) improve logistics alliance performance in practice. As a result, this study categorizes the logistics literature on vertical and horizontal alliances into four key areas: (1) alliance composition, (2) alliance structure, (3) operational process design, and (4) relational behavior. This categorization allows for a structured consolidation of key performance impact factors, their sub-constructs and performance effects of logistics alliances. As these results are specified to the context of logistics alliances they allow for a structured identification of implications for both research and practice. The developed research agenda provides concrete research opportunities in four directions: horizontal logistics alliances; vertical logistics alliances; transfer of new research streams into the context of logistics alliances; and the incorporation of impediments and negative effects. Based on the consolidated research results, the paper provides guidance for managers looking to establish or adapt logistics alliance structures and management systems. In addition to practical implications, the consolidation of key performance impact factors on logistics alliances (both vertical and horizontal) provides a platform for further research. The developed agenda offers specific research opportunities to improve our understanding of

logistics alliance performance. The following three papers of this thesis build on these research opportunities identified, systematically addressing major research gaps in current logistics alliance literature.

## **Paper 2: Logistics alliance management capabilities: where are they?**

Given the continued high failure rate of logistics alliances, the second paper proposes to incorporate the so far widely neglected dynamic capabilities approach into the explanation of logistics alliance performance. Based on (a) the dynamic capabilities approach of strategic management on the one hand, and (b) the identification of specific characteristics of logistics alliances on the other hand, a three-dimensional framework of Logistics Alliance Management Capability (LAMC) is argumentatively developed. The three layers of the LAMC model are: (1) operational logistics activities (micro-level) that deal with the execution of joint (alliance) logistics processes; (2) logistics alliance management routines (macro-level), which ensure effective alliance management and, therefore, alliance performance; and (3) learning mechanisms (meta-level) that aim to improve the firm's logistics alliance management routines continuously over time. Through this three-dimensional model, the paper results reflect structurally the idiosyncrasies and management challenges of logistics alliances: (1) the need for partner integration, i.e. to secure effective data/information exchange and joint coordination (macro-level). (2) The alignment of operational processes for efficient, seamless logistics activities (micro-level). In addition, (3) the results indicate the need for continuous learning to improve current and/or future logistics alliances (meta level). While the capabilities on micro and macro-level are very specific to the design and management of logistics alliances, the third capability "learning mechanisms" is applicable to any alliances. However, the content of what to learn varies again according to the specific alliance context, here to logistics alliances.

Overall, the developed LAMC model illustrates how LAMC can explain improved logistics alliance success and contributes to the logistics literature by making a more general yet established construct of dynamic capabilities accessible to logistics scholars and practitioners. Thereby, the framework provides a valuable starting point for a wider range of empirical studies. Further research is encouraged either in the form of qualitative studies by elaborating on, e.g., the specification and understanding of the sub-processes that underlie logistics alliance management capabilities in different alliance settings, or in the form of quantitative investigations in order to reliably assess the differences and performance implications of these capabilities. In addition, the developed conceptualization of LAMC helps managers in their relevant strategic and organizational attempts to enhance logistics alliance success. Overall, this paper adds to the current logistics literature by introducing a more general yet established construct accessible to logistics scholars and practitioners. Building on the concept of dynamic capabilities, this logistics alliance management capability construct provides a new framework that is potentially more comprehensive than the collection of somewhat isolated alliance success factors that have hitherto been proposed in the logistics literature.

### **Paper 3: The dynamics of LSP alliance failures: a grounded theory approach**

Given the high failure rate of strategic alliances, also in the context of logistics, the third paper explores the drivers and their underlying mechanisms of logistics alliance failure. The aim of this paper is to gain insights into these dynamics of LSP alliance failure (Crujssen et al., 2007b; Zineldin and Bredenlow, 2003) in order to prevent future failures and improve alliance performance. To gain new insights into the so far underexplored process of logistics alliance failure, the study builds on a case analysis, employing the qualitative method of grounded theory, which allows for a purposeful investigation of processes and their evolving nature. The research results indicate that alliances between Logistics Service Providers (LSPs) fail due to an iterative self-enforcing process. This evolutionary process is marked by four

specific phases, which finally result in alliance failure: (1) limiting alliance setup, (2) inferior alliance structure, (3) non-satisfactory performance, and (4) alliance stagnation. The underlying mechanisms that drive LSP alliances through these four stages towards failure consist of: (a) low partner dependence, (b) a lack of benefit allocation, (c) non-agreement on adaptations, and (d) a lack of alliance value. These four drivers emerge due to the specificities of horizontal LSPs alliances: (1) need of (commercial) dependence and/or formalized benefit allocation to handle LSPs' independence, competitive relation and secure their alliance commitment over time. The generation of (tangible) alliance benefits increases the likelihood of (2) the required partner integration based on process/system harmonization required for effective, seamless operation processes among allied LSPs. The dynamic of this self-enforcing failure process emerges because limitations in the alliance setup and structure cause non-satisfactory performance. The dissatisfaction reduces the likelihood of LSPs' agreement on significant alliance adaptations. This limited alliance adaptability, however, fails to improve future alliance execution and performance, leading finally to alliance failure. The study develops an initial process-based conceptualization of LSP alliance failure. Thereby, it offers new and valuable insights into the so far black box of alliance failure, which add to the current understanding and management of logistics alliances. The research results, including the failure dynamics and their underlying mechanisms, provide a promising basis for further research. In addition, the identification and explanations of failure drivers help managers to develop concrete managerial implications in order to prevent failure and improve logistics alliance performance.

#### **Paper 4: Unpacking Dynamic Alliance Management Capability: a grounded theory approach**

While existing literature acknowledges the importance of dynamic alliance management capabilities (DAMC) for a firm's alliance success and competitive advantage, existing

scholars have failed so far in explaining how DAMC work and why some firms are more successful with their deployment than others. Applying the qualitative method of grounded theory, this study explores alliance management capabilities understood as specific dynamic capability reflected in the continuous development, reflection and reconfiguration of alliance management processes in response to changes and/or to shape situations. The study proposes a first conceptualization of DAMC in the context of multilateral alliance management based on four constitutive routines: (1) coordination, (2) proactiveness, (3) mobilization and (4) transformation. Applying a dynamic view on the processes and conditions underlying DAMC routines, the research results allow firms to develop and deploy alliance capability in order to generate competitive advantages. The study provides new and valuable insights into the process of DAMC adding to our current understanding of both (dynamic) alliance management capability and logistics alliance management. In addition, the results offer valuable and useful insights into the motivations and practical challenges in such strategic alliances and their evolution towards helping managers in improving alliance performance.

Overall, the thesis incorporates four independent research studies. Each of these research studies addresses major shortcomings in logistics alliance literature. Their individual research results contribute to our existing understanding and explanation of an effective logistics alliance management. By focusing on performance impact factors and/or on alliance management capabilities, the conducted studies help to prevent alliance failure and to improve alliance performance.

## **1.4 CONCLUSION**

This thesis provides a comprehensive account of logistics alliances (both vertical and horizontal). Thereby, this thesis adds to our understanding and explanation of logistics

alliances and their performance. More specifically, it contributions to the logistics alliances scholarship in three ways:

- (1) Explanation of performance impact factors of logistics alliances:** Using evidence from both existing research on logistics alliances (systematic literature review) and from an explorative case study (grounded theory), this thesis adds to our understanding and explanation of performance impacts factors which drive logistics alliance evolution (both success and failure). These findings build a comprehensive platform for further research and provide organizations concrete managerial implications for logistics alliance improvements.
- (2) Introduction of new theoretical constructs:** As the theoretical concept of dynamic alliance management capability has gained importance in both strategic management and organization science over the last decade to explain alliance performance, we see considerable potentials in introducing this concept into the research field of logistics alliances. Based on a conceptual application and empirical investigation, this thesis provides initial and valuable frameworks of logistics alliance management capability, which shed lights on its constitutive routines and impacts on logistics alliance performance. Thereby, this thesis adds to our explanation of logistics alliance performances and provides a valuable platform for further research and managerial implications in this area.
- (3) Providing empirical validation** based on an in-depth case study of a multilateral LSP alliance. Applying the qualitative method of grounded theory, this study is the first to explore the failure process of logistics alliances. This empirical analysis of dynamics and underlying mechanisms provides unique insights into the evolutionary process of alliance failure. The process-based conceptualization of logistics alliance failure

provides valuable insights into the so far black box of logistics alliance failure and presents relevant managerial levers for real-world applications.

**Limitations:** Although this thesis contributes to our understanding and explanation of logistics alliances, it has some limitations. The analysis follows an in-depth case-study research design applying the qualitative method of grounded theory (see Study 3 and 4) (Glaser and Strauss, 1968). I intentionally selected this methodology in order to (a) gain concrete, practical insights into the specific process of logistics alliance failure, and (b) capture the dynamic nature of logistics alliances. I acknowledge the limited reliability and external validity of my findings due to the focus on a single case study within a specific context, however, my findings nonetheless contribute to the existing knowledge by providing new insights that are useful for theory-building (Flyvbjerg, 2006). While in-depth case-study research provides a valuable path to gain and accumulate knowledge (Flyvbjerg, 2006; Yin, 2014), grounded theory is particularly useful for (a) generating deep insights from practical examples and (b) investigating the dynamic nature of processes. Grounded theory gains attention in supply chain research as it allows the investigation of inter-organizational systems (such as alliances) as a whole, in the context of modern supply chain complexity (Randall and Mello, 2012). Thus, the knowledge generated in this thesis provides new insights, which add to our understanding and explanation of alliance evolution in the context of logistics.

**Outlook for further research:** The thesis provides concrete research opportunities in the field of logistics alliances in two ways. First, based on the results of the systematic literature review (Paper 1), concrete research avenues are developed in the field of both horizontal and vertical logistics alliances. Second, the research results act as a promising starting-point for further investigation and elaboration of my findings. Given the in-depth case-study research design focusing on a specific industry context, future research could emphasize more

extensive studies in other industry settings to test the generalizability of my research results. Thereby, future research could examine the variations of these impact factors and their interplay within different alliance contexts. By focusing on the so far under-investigated research field of alliance pitfalls and failure, future research could explore the contingencies under which logistics alliances become an asset or a liability. Overall, the thesis provides a comprehensive foundation for further research to explore factors and processes that impact the logistics alliance evolution and value creation.



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## 2. EFFECTIVE LOGISTICS ALLIANCE DESIGN AND MANAGEMENT

### 2.1 ABSTRACT

**Purpose:** We argue that the productive analyses of logistics alliances in the literature have led to a multitude of heterogeneous contributions. These should be consolidated and systematized in order to (a) synthesize the existing findings in a meaningful way and guide future research for effective design and management; and (b) improve logistics alliance performance in practice.

**Design/methodology/approach:** We use a systematic literature review to screen and consolidate current knowledge on effective design and management of logistics alliances.

**Findings:** This article categorizes the logistics literature on vertical and horizontal alliances into four key areas in order to systematically consolidate key performance factors, their sub-constructs and performance effects to identify implications for both research and practice.

**Research implications:** Within our research agenda, we develop concrete research opportunities in four areas: horizontal logistics alliances; vertical logistics alliances; transfer of new research streams into the context of logistics alliances; and the incorporation of impediments and negative effects.

**Practical implications:** By consolidating existing research results, we provide guidance for managers looking to establish or adapt logistics alliance structures and management systems.

**Originality/value:** The consolidation of key performance impact factors on logistics alliances (both vertical and horizontal) provides a platform for further research. The developed agenda offers specific research opportunities to improve our understanding of logistics alliance performance.

**Keywords:** Strategic alliances, logistics (business), collaboration, cooperation, 3PL, Logistics Service Providers, Literature review

**Type of paper:** Literature review

## 2.2 INTRODUCTION

Despite the proliferation of logistics alliances (Daugherty, 2011; Stank et al., 2011), many do not meet the partners' expectations and may even be considered failures (Kampstra et al., 2006; Stank et al., 2011; Wilding and Juriado, 2004). Logistics scholars have spent considerable efforts to explain why some logistics alliances are successful, while others are not. However, major gaps remain in our understanding of these arrangements. There are a number of reasons for these gaps, including incomplete alliance models offered by the nascent logistics discipline (Daugherty, 2011), a lack of practical knowledge on how to manage logistics alliances successfully (Lambert et al., 1999), and limited interest in cooperation related pitfalls and risks (Cruijssen et al., 2007b; Lambert et al., 1999; Zineldin and Bredenlow, 2003). An additional explanation for these perceived gaps could be the sheer quantity and variety of contributions, which are often based on the heterogeneous usage of terms, constructs, and theories that follow different methodologies and research traditions. Although this variety and heterogeneity can be enriching, it can also hinder progress. One step towards a better understanding of logistics alliances is to systematize and consolidate extant scholarship to offer a platform for more targeted research.

This paper provides a systematic literature review in order to comprehensively identify, assess, and synthesize current knowledge on logistics alliances design and management. We have analyzed scholarly work on both vertical and horizontal logistics alliances. Logistics alliances are understood here as formalized, long-term, cooperative relationships between at least one logistics service provider (LSP) and other legally independent actors in a supply chain for mutual competitive advantage. The specific analysis and consolidation of both horizontal and vertical logistics alliances and their respective (hitherto mainly independent) research streams provides a comprehensive picture of LSP

alliance design and management. In particular, it allows to identify and develop concrete research avenues that draw from the cross-fertilization between vertical and horizontal logistics alliance literatures. Our results are likely to have direct and indirect impacts on practice logistics management. The direct impact is that consolidated research results enable practitioners to gauge research results and derive meaningful managerial implications. The indirect impact is that our review results can spur additional research with particular managerial relevance in logistics alliance management and design.

We acknowledge and complement existing logistics and supply chain literature reviews in various ways. Our review and consolidation systematizes the comprehensive findings on logistics alliances management and design in order to go beyond a chronological review of value creation in buyer-supplier relationships (Mentzer et al., 2008). It extends both Daugherty's (2011) evolutionary overview of research topics and the trends and future directions found in Stank et al. (2011).

The rest of the paper is structured as follows. We start by briefly summarizing the understanding and scholarly treatment of logistics alliances, both vertical and horizontal. We then explain the literature review approach and provide a structured presentation of the review results along four broad research foci. Based on these results, we identify further research avenues with which to address major gaps in logistics alliance research and management.

### **2.3 LOGISTICS ALLIANCES AND LSP**

Despite the lack of a common definition of logistics alliances, there is consensus in terms of describing logistics alliances as long-term (Bagchi and Virum, 1998; Cruijssen et al., 2007b; Gentry, 1996b; Nyaga and Whipple, 2011; Nyaga et al., 2010; Park, 2003; Schmoltzi and Wallenburg, 2011, 2012) and voluntary (Parket al., 2003; Schmoltzi and Wallenburg, 2012)

relationships between two or more independent actors of a supply chain. We understand logistics alliances as formalized long-term, cooperative relationships between at least one logistics service provider (LSP) and other legally independent actors in a supply chain striving for mutual competitive advantage. LSPs are “companies which perform logistics activities on behalf of others” (Delfmann; et al., 2002: 204). From an LSP perspective, such logistics alliances can either be horizontal (LSP with other LSP) or vertical (LSP with client). Both types of alliance have attracted substantial attention in the logistics literature.

Vertical logistics alliances are “long-term formal or informal relationship[s] between shippers and logistics providers to render all or a considerable number of logistics activities for the shipper” (Bagchi and Virum, 1998). Research on these arrangements developed as a response to the increasing outsourcing of logistics functions to LSP in the 1980s. Outsourcing was seen as an adequate response to meet the increasing customer demands for speed, reach, quality, and affordability of logistics services (Daugherty, 2011; Ellram and Cooper, 1990). Since then, vertical alliances among supply chain actors, such as manufacturers, suppliers, retailers and customers and LSPs, have become increasingly important (Bowersox et al., 2000; Cruijssen et al., 2007b; Daugherty, 2011). One rationale underlying this trend is that outsourcing allows clients to focus on their core assets and activities, thereby enhancing their productivity and service levels (Daugherty, 2011; Kleinsorge, 1991; Slack, 2002). These advantages emerge due to specialization and size effects for LSPs in general; specifically, their process-related expertise (Wagner, 2008) and the opportunity for them to consolidate shipments and services.

Many studies have investigated the drivers (Bagchi and Virum, 1998; Lambert et al., 1999), types (Gardner et al., 1994; Rogers and Daugherty, 1995) and success factors (Gibson et al., 2002; Lambert et al., 1999; Tate, 1996) of vertical alliances. This vibrant and fertile research activity has led to a wide yet insular knowledge base with sometimes contradicting



results and implications, which have left future researchers and practitioners puzzled about how to effectively design and manage such alliances.

With regard to horizontal logistics alliances, extant research can be laid out quite differently. Horizontal logistics alliances are “voluntarily initiated, long-term relationships among autonomous LSPs that operate on the same stage of the supply chain ...[and] strive for benefits that could not be achieved by the individual companies alone” (Schmoltzi and Wallenburg, 2012: 54). These benefits are realized through the pooling and leveraging of partner’s resources and competencies (Schmoltzi and Wallenburg, 2011) in order to achieve efficiency gains and to extend their service portfolio. Some logistics alliances put greater emphasis on efficiency gains through cost reductions and increased productivity; for example, through better asset utilization and reduction of empty mileage (Crujssen et al., 2007b), while for others, the broadening of their members’ service portfolios via the combination of complementary assets is the primary *raison d’être*.<sup>3</sup> In any case, horizontal LSP alliances are highly fragile as the independence of, and rivalry among, partnering LSPs increases the threat of opportunistic behavior as well as the alliance management complexity (Crujssen et al., 2007b; Schmoltzi and Wallenburg, 2012).

Research on horizontal alliances between LSP remains in its infancy (Crujssen et al., 2007b; Schmoltzi and Wallenburg, 2011). Pioneering studies in this area have had two main aims: (a) to identify potential cost savings based on analytical and simulation approaches, and (b) to identify performance impact factors based on econometric analyses (Crujssen et al., 2007b; Schmoltzi and Wallenburg, 2011, 2012).

Therefore, for logistics alliances in general, we observe two different research streams that have been developing largely independently from each other.<sup>4</sup> This isolation would not be

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<sup>3</sup> The logistics literature has tended to focus on the former, as our review will illustrate.

<sup>4</sup> This phenomenon is not specific to the logistics field, as Belderbos et al. suggested: “vertical and horizontal alliances have both been the subject of investigation in prior research, but the two streams of literature appear to

problematic if it were justified by substantial and relevant differences in the object of inquiry. We argue that -- while there are major differences between horizontal and vertical logistics alliances -- these differences do not justify the relative isolation of their research streams that has marked the field to date, especially with regard to questions of logistics alliance design and management. The major conceptual differences between vertical and horizontal logistics alliances are delineated below.<sup>5</sup>

Motivation: Vertical and horizontal logistics alliances are seen to differ in terms of the reasons for their foundation and in terms of the primary beneficiary of the alliance's success. Vertical logistics alliances (that is, alliances between LSP and their clients<sup>6</sup>) are formed primarily to enhance productivity and services for the client. This clear client focus as a shared goal helps to align interests among partnering firms. Such a shared goal is less prominent in horizontal alliances which emphasize efficiency increases and/or improved service offerings for each individual LSP<sup>7</sup> through the alliance.

Nature of the relationship: Vertical and horizontal alliances differ in the nature of the relationship between partnering firms. Vertical relations between client and LSP build on a clear differentiation of assets, capabilities and purpose of each partner, as they are active on different stages in the supply chain. The immediate threat that the one party will "take over" the client of the other is minimal. This is different for horizontal LSP alliances, where partners are competitors and each partner could – in principle – also serve its partner's clients. Relationships in horizontal LSP alliances are therefore marked by an increased threat of opportunism.

Interdependence: Vertical alliances are characterized by resource interdependence

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have developed in relative isolation" (Belderbos et al., 2012: 1818).

<sup>5</sup> Analogous to Rindfleisch's (2002) view on buyer-supplier relationships, we identified key differences between vertical and horizontal logistics alliances capturing their respective idiosyncrasies.

<sup>6</sup> The term client is used throughout this paper to describe any partnering supply chain actors, such as buyers, manufacturers, suppliers, retailers, or customers.

<sup>7</sup> The term LSP is used throughout this paper to describe the provider of logistics services, such as carriers, and Third Party Logistics (3PL).

among partners based on the complementary nature of their resources and competences (Gulati, 1995). Partnering LSP, on the other hand, are quite independent of each other's resources to perform in business. As the extent of dependence determines the commitment of involved parties towards the alliance (Lambert et al., 1999; Makukha and Gray, 2004), the low degree of interdependence in horizontal alliances increases the risk that rivalry and opportunistic behavior will impair alliance stability (Schmoltzi and Wallenburg, 2012).

Although these differences are substantial, they are also well-defined. Horizontal and vertical logistics alliances actually share a variety of commonalities that suggest the usefulness of a wide array of results across the direction of the cooperative relationship. Common to both streams are the particular industry context, the pivotal role of LSP as alliance partners, and the specific type of interorganizational relationships (cooperation/alliances) that they investigate. We argue that despite the important differences, the shared foundations of logistics alliance research have resulted in a large yet untapped pool of results that is relevant to both streams. Therefore, our literature review helps to bridge these streams by simultaneously increasing their specificity and relevance. We do this by presenting the results of our comprehensive review along four distinct areas that apply to both horizontal and vertical logistics alliances and thereby stress their commonalities, which are: (1) alliance composition, (2) alliance structure, (3) relational behavior, and (4) operational process design. We present the findings of the literature streams on horizontal and vertical logistics alliances separately along these four areas, and then juxtapose the different approaches, topics, and results for the two streams in order to finally offer, in the final section of the paper, our cross-fertilizing synthesis that emerges when comparing these different foci.

## **2.4 METHODOLOGY: REVIEW SCOPE AND SELECTION CRITERIA**

In order to arrive at a broad, comprehensive, and scholarly relevant literature basis for our analysis, we reviewed high-ranking academic journals with primary domains of logistics, operations management, and supply chain management (Mentzer et al., 2008). The focus on these domains enabled us to capture a broad scope of logistics scholarship along its functional (planning, controlling, and executing intra-functional activities), cross-functional (operations management), and cross-organizational management levels (SCM) (Mentzer et al., 2008). Because there is no global consensus regarding which logistics journals should be considered “top-tier,” we consolidated a list of 40 high-ranking journals based on three ranking systems that are widely acknowledged beyond their countries of origin. These are: (a) the Journal Citation Reports provided by Thomson Reuters, (b) the JourQual2 ranking published by the German Academic Association for Business Research, and (c) the logistics and transportation journal ranking from the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney (see Table 2). Next, in keeping with Daugherty’s (2011) notional review on interfirm relations in logistics, we searched the article abstracts or topics (Web of Science) within the selected journals for the following terms: “alliance”, “partnership”, “collaboration”, “cooperation”, “joint venture” and “buyer-supplier relationship”. The search returned a total of 1,037 articles published between 1990 and 2012. To identify relevant articles on logistics alliances, we then defined and employed inclusion and exclusion criteria to analyze the articles’ titles and abstracts (Petticrew and Roberts, 2006; Tranfield et al., 2003). We included all articles that studied alliance design and management parameters and linked them to the explanation of logistics alliance performance. We excluded articles that studied (a) the choice of alternative governance options to alliances (for example, alliances vs. mergers and acquisitions), (b) relations with governmental actors or relations among geographically proximate but heterogeneous actors (as in urban studies), and (c) non-LSP relationships, such

as manufacturer–retailer relations.<sup>8</sup> The first author performed the selection in this step, and the second author was consulted in cases of ambiguity and uncertainty (142 articles). Upon screening the full texts, both authors reached agreement on inclusion or exclusion from further analysis. As a result, a total of 48 articles were selected as relevant, which provided the basis for our review.

In a fourth step, we reviewed these articles in depth, then consolidated and synthesized them using a data-extraction form (Carter and Ellram, 2003; Tranfield et al., 2003) structured around the research foci, including title, author, publication details, research focus, study type, methodology, sample, independent and dependent variables, findings, and implications.<sup>9</sup> We also coded each study with keywords to identify emerging themes (Wassmer, 2010). Thus, we were able to systematically and visually record our narrative review process and extract the data from which our results emerged.

Based on this systematic extraction, we made a differentiation between studies that focused on vertical alliances and studies that emphasized horizontal relationships; this was done in order to incorporate the respective idiosyncracies of these alliance types in logistics alliance design and management. Finally, we structured the identified research issues of both vertical and horizontal alliances along four main categories. The review results are discussed in the following section.

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<sup>8</sup> We included all studies that included LSP at least as part of their sample of supply chain collaborators (as in: Fawcett et al., 2008; Fawcett et al., 2006; Zacharia et al., 2009).

<sup>9</sup> The full table of analysis can be provided upon request.

**Table 2 Journal selection and respective number of included articles**

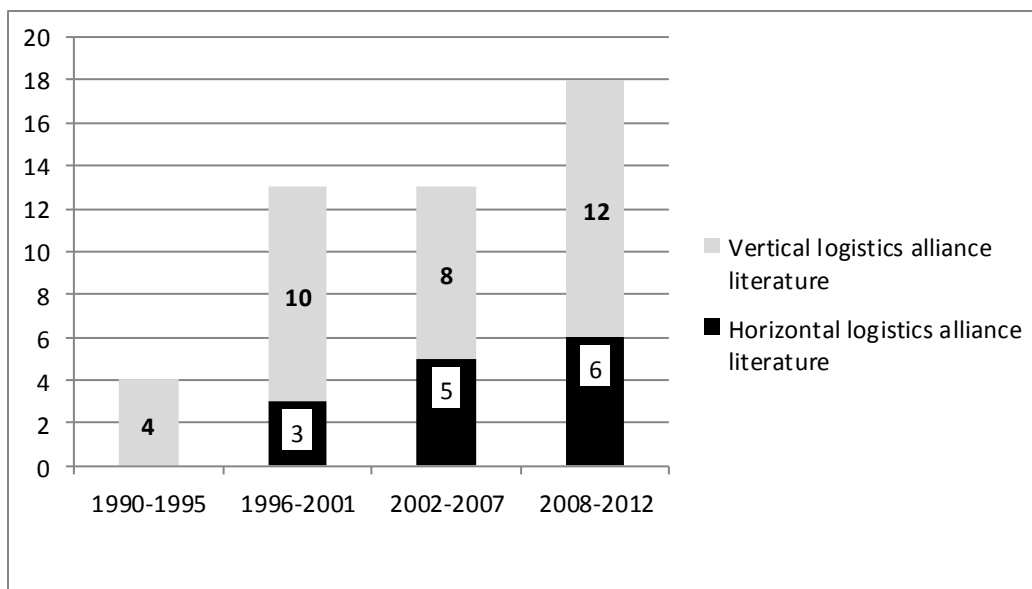
Top-tier Journals	ITLS	Journal Citation Reports	Jour-Qual2	Article hits	Article selected
Accident Analysis and Prevention	X			1	0
Discrete Applied Mathematics			X	0	0
Environment and Planning A	X			0	0
European Urban and Regional Studies	X			35	0
International Journal of Logistics Management	X	X		9	0
International Journal of Logistics: Research and Applications	X			32	3
International Journal of Operations & Production Management		X		104	2
International Journal of Physical Distribution and Logistics Management	X	X	X	102	12
International Journal of Shipping and Transport Logistics		X		3	0
Journal of Business Logistics		X	X	64	13
Journal of Economic Geography	X			13	0
Journal of Environmental Economics and Management	X			12	0
Journal of Operations Management	X	X		62	2
Journal of Purchasing and Supply Management		X		45	2
Journal of Supply Chain Management		X	X	41	3
Journal of the American Planning Association	X			30	0
Journal of the Operational Research Society	X			41	2
Journal of Transport Economics and Policy	X			5	1
Journal of Transportation Engineering	X			3	0
Journal of Urban Economics	X			5	0
Land Economics	X			25	0
Management Science	X		X	101	0
Maritime Policy & Management	X			43	2
Naval Research Logistics	X			2	0
Networks & Spatial Economics	X			3	0
Operations Research		X		28	0
Production and Operations Management	X			22	0
Public Transport	X			0	0
Regional Science and Urban Economics	X			6	0
Regional Studies	X			101	0
Supply Chain Management – An International Journal		X		14	0
The Town planning review	X			13	0
Transportation	X			3	0
Transportation Research Part A: Policy and Practice	X		X	19	0
Transportation Research Part B: Methodological	X		X	5	0
Transportation Research Part C: Emerging Technologies	X			8	1
Transportation Research Part D: Transport and Environment	X			2	0
Transportation Research Part E: Logistics	X		X	25	4
Transportation Science	X		X	8	1
Transportmetrica	X			2	0
Sum: 40	32	10	9	1037	48

Selection criteria: ITLS (all journals (32) ranked in the top two categories (tiers 4 and 3) of the ITLS ranking ([http://sydney.edu.au/business/itls/research/journal\\_rankings](http://sydney.edu.au/business/itls/research/journal_rankings))); Journal Citation Reports (all journals from the Business and Management category maintaining either Logistics, Supply Chain Management or Operations Management in their title and with an impact factor > 1); JourQual2 (all A- and B-ranked logistics and transportation subset journals of the German JourQual2 ranking (Schrader and Hennig-Thurau, 2009))

## 2.5 REVIEW RESULTS ALONG THE KEY RESEARCH CATEGORIES

Scholarly interest in logistics alliance design and management has increased in recent decades (see Figure 2). The number of articles on the subject indicates that it has drawn particularly high interest from the more strategy-oriented logistics journals (see Table 2). The majority of the selected studies have applied a quantitative research design (15 vertical, six horizontal logistics alliance articles). The next most common research designs were qualitative (10 vertical), mixed quantitative and qualitative (four vertical), analytical (two vertical, six horizontal), and conceptual (three vertical, two horizontal) (see Table 3).

Our review shows four main research areas across horizontal and vertical logistics alliances: (1) alliance composition, (2) alliance structure, (3) relational behavior, and (4) operational process design (see Figure 3). We elaborate on each of these four areas below; first in the context of vertical logistics alliance and then with a focus on horizontal logistics alliances.



**Figure 2** Number of selected articles published per period in top-tier logistics journals (that fulfilled the search/selection criteria)

**Table 3 Descriptive review results**

	1990-1995	1996-2001	2002-2007	2008-2012	Sum
<b>Unit of analysis: Vertical alliance</b>					
<b>Alliance size</b>					
Bilateral	3	7	6	11	27
Trilateral	1	2	1	-	4
Multilateral	-	1	1	1	3
Not specified					-
<i>Sum</i>	4	10	8	12	34
<b>Research methodology</b>					
Conceptual	1	2	-	-	3
Analytical	1	-	-	-	1
Survey	1	2	4	8	15
Case study	-	3	1	3	7
Interviews/expert panel	-	1	1	1	3
Interviews/case study and survey	1	2	1	-	4
<i>Sum</i>					
<b>Research foci</b>					
Alliance composition	-	5	4	5	14
Alliance structure	2	6	5	3	16
Relational behavior	1	4	3	5	13
Operational process design	2	5	4	6	17
<i>Sum</i>	5	20	26	19	
<b>Empirical context</b>					
US	2	5	1	1	9
EU	-	1	5	5	11
Asia	-	1	-	1	2
International	-	-	-	2	2
Absent	2	3	2	3	8
<b>Unit of analysis: Horizontal alliance</b>					
<b>Size of horizontal alliances</b>					
Bilateral			3	2	5
Trilateral	-	-	-	-	-
Multilateral	-	2	2	1	5
Not specified	-	1	-	3	4
<i>Sum</i>	-	3	5	6	14
<b>Research Methodology</b>					
Conceptual	-	1	-	-	1
Analytical	-	1	4	3	8
Survey	-	1	-	2	3
Interviews/expert panel	-	-	-	-	-
Interviews/case study and survey	-	-	1	1	2
<i>Sum</i>		3	5	6	14
<b>Research foci</b>					
Alliance composition	-	2	1	2	5
Alliance structure	-	1	-	3	4
Relational behavior	-	-	-	2	2
Operational process design	-	1	5	3	9
<i>Sum</i>	-	4	6	9	
<b>Empirical context</b>					
US	-	-	-	1	1
EU	-	-	2	4	6
Asia	-	-	-	-	-
International	-	1	-	1	2
Absent	-	2	4	1	5



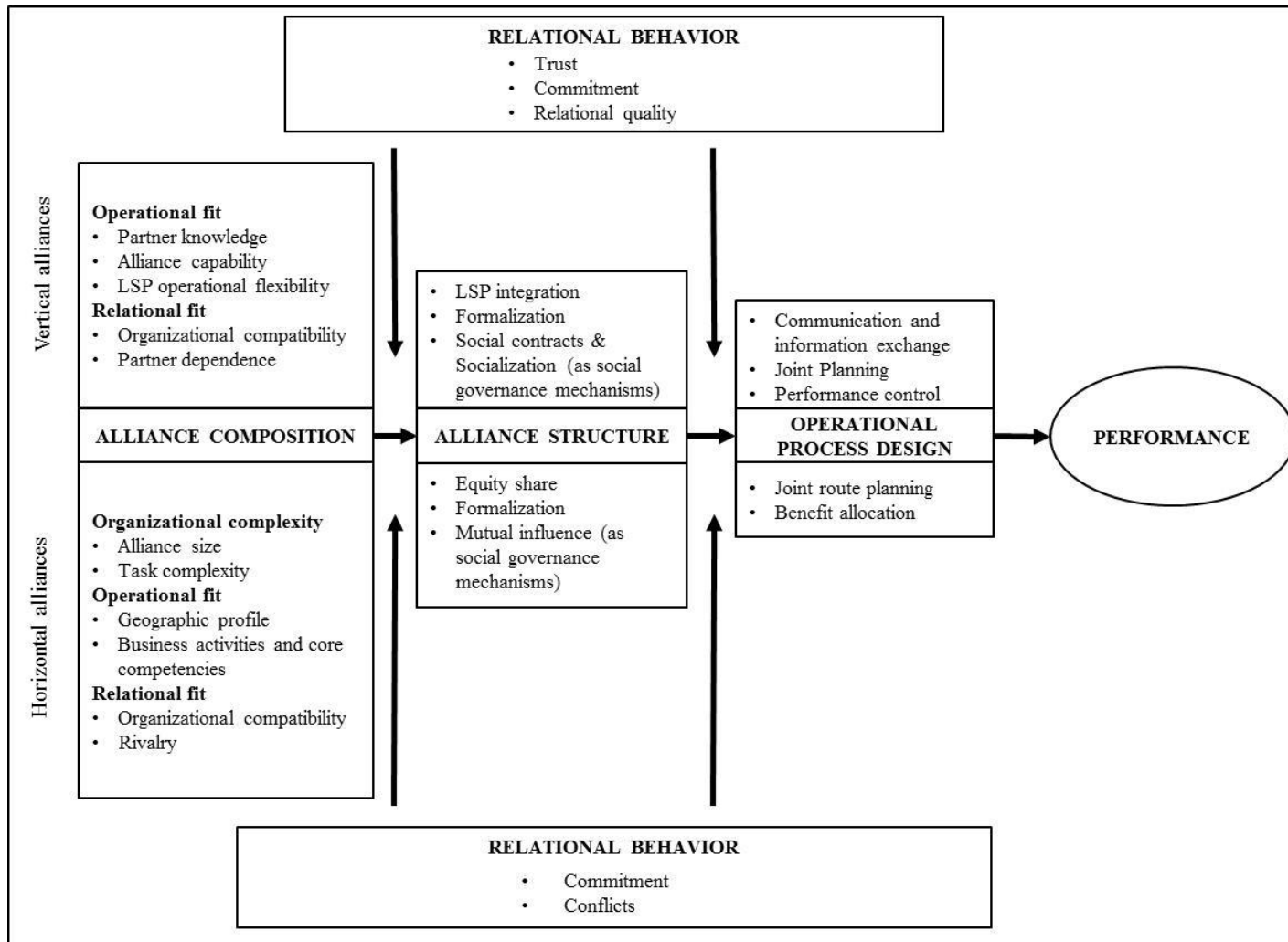


Figure 3 Overview of the identified four research fields in logistics alliances

## 2.5.1 Vertical Logistics Alliances

### *Alliance composition in client-LSP alliances*

Researchers focusing on vertical alliances have emphasized the importance of the fit of partner's individual resources and competences (a) towards the alliance tasks (operational fit), and (b) towards each other (relational fit) as determinants of alliance effectiveness and productivity (see Appendix 1 for an overview of performance impact factors of vertical logistics alliances)..

### *Operational fit*

#### *Partner knowledge*

Knowledge about partners benefits both LSPs and clients (Zacharia et al., 2009). It fosters the level of cooperation between LSPs and clients, and yields increases in alliance outcomes and client performance. Thus, this knowledge compensates the additional efforts invested in gaining these partner insights (Zacharia et al., 2009). From a client's perspective, knowledge about LSPs facilitates the evaluation of competences, reputations and organizational profiles, which enhances the selection of qualified LSPs (Bagchi and Virum, 1998; Zacharia et al., 2009). From an LSP perspective, the positive impact of a deep understanding of the client's business rests upon three mechanisms. First, being able to put oneself in a client's place improves openness and cooperation between LSPs and clients (Bagchi and Virum, 1998; Chen et al., 2010; Hartmann and De Grahl, 2011; Lambert et al., 1999; Zacharia et al., 2009). Second, client knowledge enables LSP to customize their services yielding operational improvements (Bagchi and Virum, 1998). Third, client knowledge also enables LSPs to anticipate and acquire necessary capabilities in order to flexibly cope with changing customer demands, which ensures ongoing value creation (Bagchi and Virum, 1998; Hartmann and De Grahl, 2011). This value creation is a prerequisite for customers to engage in logistics

alliances (Gibson et al., 2002; Hartmann and De Grahl, 2011). Empirical findings support the logic behind client knowledge, indicating that it improves the LSP-client collaboration (Chen et al., 2010) and LSP flexibility, thereby indirectly driving customer loyalty (Hartmann and De Grahl, 2011). However, partner knowledge requires both LSPs and clients to be willing to spend time and effort to understand each other (Bagchi and Virum, 1998) and implies a clear articulation and explanation of a firm's business and its expectations from the alliance (Bagchi and Virum, 1998; Panayides and Gray, 1999; Tate, 1996; Zacharia et al., 2009). Logistics scholars suggest that continuous and systematic access to valuable partner insights (Tate, 1996; Zacharia et al., 2009) can be realized by, for example, involving LSPs in a firm's planning process (Tate, 1996), implementing intense exchange and specific cross-firm trainings among employees, hiring alumni or other experts, and/or establishing educational and research facilities (Hartmann and De Grahl, 2011).

#### *Alliance capability*

Partners looking to cooperate effectively in supply chains require specific alliance capabilities to unfreeze, transform, and continuously improve their interactions if they are to achieve high levels of collaboration that yield competitive advantages (Fawcett et al., 2008). Taking a client perspective, Chen et al.'s (2010) empirical findings indicate that a client's capability to drive vertical alliances depends on the client's top management championship facilitating client-LSP collaboration, thereby indirectly enhancing client logistics performance (Chen et al., 2010). From a LSP perspective, empirical findings show that LSP alliance capability fosters client loyalty (Hartmann and De Grahl, 2011), alliance outcomes (Deepen et al., 2008) and business performances (Zacharia et al., 2009). The logic behind this is that the cooperative attitude (a) helps LSPs overcome the "not-invented-here" syndrome (Zacharia et al., 2009), (b) enhances the exchange of valuable information (Hartmann and De Grahl,

2011), and (c) facilitates continuous alliance improvement (Bagchi and Virum, 1998; Deepen et al., 2008; Gibson et al., 2002). To achieve greater collaboration, Zacharia et al. (2009) suggested frequent face-to-face meetings, a high level of joint decision-making, open sharing of information, free flow of useful and novel ideas, openness to new ways of thinking, and discovering new knowledge among LSPs and clients. Bagchi and Virum (1998) emphasized employees' motivation and training as crucial determinants of excellent services and empowerment to act. Empirical findings show that alliance capability as joint exploitation of alliance opportunities fosters a client's market performance; interestingly, this capability has no significant impact on its logistics performance, which was blamed on these factors' late occurrence (Sinkovics and Roath, 2004).

#### *LSP operational flexibility*

Given the focus on operational performance in vertical alliances, it is not surprising that both LSPs and clients perceive operational flexibility as a major performance impact factor (Gibson et al., 2002). From a client's perspective, operational flexibility is recognized as the main evaluation and selection criterion of qualified LSPs (Gibson et al., 2002). For LSPs, operational flexibility reflects their ability to meet changing customer demands (Bagchi and Virum, 1998; Hartmann and De Grahl, 2011; Makukha and Gray, 2004) and/or to create proactively alliance improvements (Bhatnagar and Viswanathan, 2000; Deepen et al., 2008; Gentry, 1996a; Gibson et al., 2002), which determines the likelihood of achieving client satisfaction (Gibson et al., 2002), loyalty, and competitive advantage (Hartmann and De Grahl, 2011). In addition, operational flexibility can be seen as a result of mutual adjustments and specific processes for flexibility within vertical alliances (rather than a specific LSP capability). Logistics scholars who held this view found empirical evidence for operational flexibility having a positive impact on alliance improvements (Bhatnagar and Viswanathan,

2000) and on the logistics and market performance of clients (Sinkovics and Roath, 2004; Tate, 1996). However, empirical results indicate that clients are not yet satisfied with LSPs' operational performance in terms of yield cost reductions (Gibson et al., 2002) and perceive LSPs as having insufficient capabilities to organize and manage the entire or large parts of their supply chains (Makukha and Gray, 2004). This distrust of clients in LSPs' operational performances impedes a stronger integration of LSP in client's business on a more strategic level (Gibson et al., 2002; Makukha and Gray, 2004).

### ***Relational fit***

#### *Organizational Compatibility*

Organizational compatibility is generally acknowledged as a performance impact factor on alliance success (Tate, 1996). However, it does not seem to be perceived as a major success factor in vertical alliances by LSP and/or clients, as both ranked it relatively low in importance (ranked 10<sup>th</sup> (client) and ninth (LSP) out of 13 factors) (Gibson et al., 2002).

#### *Partner dependence*

Partner dependence, which has been defined "as the way in which different firms perceive they need each other to perform their work and reach certain outcomes" (Zacharia et al., 2009: 103), emerges due to the complementary assets, skills, and knowledge resident in the partnering firms. To prevent failure, both LSPs and clients need "a realistic chance of obtaining significant benefits from the relationship" (Lambert et al., 1999: 169). Zacharia et al. (2009) indicated that a partner's interdependence positively impacted collaboration, which in turn impacted operational, relational, and business performance outcomes. To counter mutual dependency, Makuhka and Gray (2004) suggested concentrating on core business and pursuing mutual benefits.

### *Alliance organizational structure in client–LSP alliances*

In pursuit of an effective governance system of LSP–client alliances, partnering firms face the challenge of driving “strong operational excellence and corporate competence while simultaneously promoting inter-organizational process collaboration” (Fawcett et al., 2006: 30). To cope with this complexity and to optimize the interactions among LSP and clients in order to accomplish the alliance goal(s), logistics scholars have emphasized (a) the degree of LSP integration, (b) the extent of formalization, and (c) social governance mechanisms.

#### *LSP integration*

“Integration is the hallmark of logistics” (Bagchi and Virum, 1998: 207). Therefore, the integration of the LSP into a client’s business operations is widely acknowledged and empirically supported as major impact factor on the effectiveness of the inter-firm coordination (Bagchi and Virum, 1998), and on the responsiveness of LSP’ services to client’s changing demands (Rogers and Daugherty, 1995). From a client’s perspective, closer integration of LSPs allow for “customized or tailored logistics solution providing a unique or superior service for a shipper’s customers” (Makukha and Gray, 2004: 368), which improves both the client’s operational and the overall supply chain performance (Gentry, 1996a, b). However, clients are reluctant to fully integrate LSPs due to their concerns about LSP’s abilities to autonomously design, manage, and develop their whole logistics strategy, to keep control and reduce their dependence (Makukha and Gray, 2004). Thus, they prefer joint management and planning teams that are controlled by the client (Makukha and Gray, 2004). From the LSP’s perspective, stronger integration of LSP increases their importance, as perceived by the clients (Gentry, 1996a, b). LSP’s involvement in the buyer–supplier negotiation process is required to optimize the supply linkages, while it increases the number of concerns to be solved in the negotiation phase (Carter and Ferrin, 1995). Hofenk et al.’s

(2011) results indicate a negative relationship between a carrier's thoroughness during contract negotiation and the alliance's effectiveness for the LSP, with no effect on customers. However, there are integration barriers to the requirement of data availability and sharing between partners, negotiation of transfer payment, legal ramifications, and coordination of operating schedules (see Carter and Ferrin (1995) for details). Scholars have suggested specific organizational modes that can steer the LSP integration effectively, such as employees stationed full-time on the client's premises (Bagchi and Virum, 1998), cross-functional and interorganizational teams (Fawcett et al., 2006; Makukha and Gray, 2004), and a modified reporting structure to enhance communication and coordination among partners (Fawcett et al., 2006). Makukha and Gray (2004) observed that, overall, the majority of client–LSP alliances are still more operational than strategic in nature, as “shippers tend to avoid close integration with LSPs, whereas LSPs claim to be true strategic partners but remain unable to provide the service required” (Makukha and Gray, 2004: 361).

### *Formalization*

Formalization refers to the specification of roles, responsibilities, policy guidelines, and procedures (Makukha and Gray, 2004; Tate, 1996) and their codification within the contract design (Lambert et al., 1999; Lei et al., 2006; Makukha and Gray, 2004). Thus, formalization helps to synchronize a broad scope of activities (Tate, 1996). Formalization defines the desired behavior and outcomes of involved parties based on enforceable agreements and sanctions (Frankel and Whipple, 1996). It also determines the formal alliance power and control relations among LSP and clients, both within the alliance (Gibson et al., 2002) and internally in the organization (Emberson and Storey, 2006). Research results from Hofenk et al. (2011) indicated a positive relationship between contract formality and alliance effectiveness, both for LSPs and customers, in building effective, productive working

relationships, carrying out mutual responsibilities and commitments, developing and maintaining relationships, and creating alliance satisfaction.

Despite these advantages, empirical evidence interestingly indicates ambiguity regarding the perceived importance of written contracts as a significant impact factor for both clients and LSPs on the success of an alliance (Frankel and Whipple, 1996; Gibson et al., 2002). In addition, even with written mutual agreements, alternative corporate strategies and priorities may brush aside alliances, revealing the general dependencies and vulnerability of alliances in practice (Emberson and Storey, 2006).

### *Social governance mechanisms*

Alliance performance depends on the interplay between formal and relational alliance design (Hofenk et al., 2011) to develop mutual understanding, cooperation and commitment among partnering LSPs and clients (Kee-hung, 2009). Social contracts, as “unwritten agreements between firms which are enforced not by formal authority and power but rather by the desire to create and maintain a positive reputation for integrity and fairness” (Frankel and Whipple, 1996: 49), facilitate interest alignment without formal enforcements (Frankel and Whipple, 1996). However, they also require organizational commitment to human resource development for individuals involved in the alliance, particularly at the senior executive level (Frankel and Whipple, 1996). Logistics scholars have recently recognized socialization as an important mechanism to foster personal familiarity, communication, and alliance improvements (Cousins and Menguc, 2006; Van De Vijver et al., 2011). Socialization unfolds over time through such means as cross-functional teams, social events, joint workshops, on-site visits, and regular conferences (Cousins and Menguc, 2006; Van De Vijver et al., 2011). However, there has not yet been any unanimity regarding socialization’s positive performance impact. For example, Cousins and Menguc (2006) found a strong direct relationship between



the LSP's socialization and its operational and communication performances, allowing for improvements in the client's perceived level of contractual conformance. Van De Vijver et al. (2011), on the other hand, maintained that socialization does not invariably have a positive impact on communication quality because socialization tactics must be tailored to the history and current phase of the relationship.

### ***Relational behavior in client–LSP alliances***

The third area identified in our literature review concerns the relational quality that partners display based on (a) the trust among LSPs and clients and (b) their alliance commitment.

#### ***Trust***

Trust is the extent to which alliance partners believe in each other's credibility, while goodwill between LSPs and clients (Nyaga et al., 2010) is the key driver of alliance success (Gibson et al., 2002; Lambert et al., 1999; Tate, 1996). Trust enhances an open and fair attitude towards partners, at the same time as reducing the perceived risk regarding specific investments and dependency (Makukha and Gray, 2004). Trust emerges over time due to joint communication and relationship efforts (Hofenk et al., 2011; Nyaga et al., 2010) that demonstrate goodwill and facilitate trust among partners (Nyaga et al., 2010). It provides the groundwork for an effective alliance management for both buyers and carriers adding to alliance effectiveness (Hofenk et al., 2011), alliance commitment, and satisfaction (Nyaga et al., 2010).

#### ***Commitment***

Commitment is widely acknowledged by both academia and practitioners (LSPs and clients) as a major determinant of the alliance's effectiveness (Hofenk et al., 2011), and of alliance

and firm performance (Nyaga et al., 2010) allowing for competitive advantages (Fawcett et al., 2006). Commitment is embodied in partners' perceptions of the relationship as something valuable (Hofenk et al., 2011) and can be conceptualized as having four types of managerial support: top management support, broad-based functional support, channel support, and infrastructural/governance support (Fawcett et al., 2006). However, Nyaga et al.'s (2010) empirical results indicated that the effect of commitment is positive only on the client's performance, and does not ensure the LSP's performance; therefore, trust remains the main impact factor on performance for LSPs. Logistics scholars have identified two main determinants of continuous alliance commitment. The first is individual champions who convince the involved parties of the alliance's benefits (Emberson and Storey, 2006), and the second is dedicated alliance investments that create dependencies and reduce the threat of opportunism (Gardner et al., 1994; Lambert et al., 1999; Nyaga et al., 2010). Interestingly, Nyaga, et al.'s (2010) results support the idea that investments positively impact commitment, but not – interestingly – trust, both for clients and LSPs.

### *Relational quality*

Logistics scholars strive to capture the different dimensions of relational behavior within a multi-dimensional second-order construct of so-called relational quality or social exchange behavior (Moore and Cunningham III, 1999; Nyaga and Whipple, 2011). Nyaga and Whipple (2011) empirical findings indicated that the greater the level of so-called relational quality, the better the supply chain's operational performance and satisfaction, both for buyers and the LSP (Nyaga and Whipple, 2011). However, the relational quality of a LSP-client alliance depends more on the effectiveness of the relationship than on the underlying relationship type (transactional versus alliance agreement) (Nyaga and Whipple, 2011), which shifts the managerial focus from how business is transacted to performance issues (Moore and

Cunningham III, 1999).

### *Operational process design in client–LSP alliances*

The fourth category of performance impact factors in logistics alliances refers to the management factors, which determine how alliance potentials are achieved (Lambert et al., 1999). Logistics scholars have emphasized three major components in LSP–client alliances: (a) communication and information exchange, (b) joint planning, and (c) performance control. Each of these are examined in turn below.

#### *Communication and information exchange*

Logistics scholars have elaborated on the articulation of client’s expectations (Bagchi and Virum, 1998) and on the communication structures and processes (Bagchi and Virum, 1998; Gibson et al., 2002; Panayides and Gray, 1999; Tate, 1996). This knowledge and data base forms the basis for the alliance’s implementation and benefit realization (Mortensen and Lemoine, 2008). It also enables a seamless, smooth, and timely exchange of information and ideas (Zacharia et al., 2009) and, thus, the coordination and synchronization of joint alliance activities. Empirical findings have indicated that frequent, open, computer-based communication and information sharing facilitates joint problem-solving, cost reduction programs, and improvement-oriented evaluation of carriers (Gentry, 1996b). Empirical evidence has shown (a) that information sharing mediates the impact of trust and commitment on alliance satisfaction and performance (Nyaga et al., 2010), and (b) that communication directly impacts the degree of cooperation, and indirectly proactive improvements of an alliance (Deepen et al., 2008). Linking communication, flexibility, and alliance outcome, Hartmann’s empirical study indicated that communication has a direct positive effect on LSP flexibility and an indirect positive effect on customer loyalty through their relationship to

collaboration (Hartmann and De Grahl, 2011).

### *Joint Planning*

Logistics scholars have acknowledged and provided empirical evidence for the positive relation between joint planning in client–LSP alliances and channel profitability (Lei et al., 2006). To foster joint planning, scholars suggest joint planning teams (Lambert et al., 1999; Makukha and Gray, 2004) and the integration of LSPs into the planning process (Gibson et al., 2002). Although Cousins and Menguc (2006) found that joint planning has a positive impact on communication performance and clients’ perceptions of the level of an LSP’s contractual conformance, they found no relationship between this kind of integration and operational performance. The major impediment of joint planning lies in the lack of aligned information systems among partners (Cousins and Menguc, 2006).

### *Performance control*

Logistics scholars have pointed out the importance of effective systems to measure alliance performance over time (Gibson et al., 2002; Kleinsorge, 1991) in order to steer and monitor the execution and outcomes of LSP–client alliances. Therefore, the essential performance variables must be developed and applied in order to initiate the required adaptations and maintain expected alliance performance (Bagchi and Virum, 1998). Examples include cost-based pricing tools for transportation services, which improves information exchange and efficiency for both clients and LSPs (Bø and Hammervoll, 2010).

Adequate performance measurement forms the basis for assessing risks and rewards and allocating them among the partners. These “pie-sharing” mechanisms are another potential performance impact factor for logistics alliances (Lambert et al., 1999; Wright et al., 2010). Risk-sharing improves the client’s perception of the LSP and increases the LSP’s asset

utilization because of guaranteed business and fair compensation agreements (Gentry, 1996b). Although the logistics literature generally acknowledges the impact of risk- and reward-sharing and control processes on alliance success, Gibson et al.'s (2002) empirical results showed that both shippers and carriers rank these factors lowest in terms of importance.

### **2.5.2 Horizontal Logistics Alliances**

The literature on horizontal alliance design and management can be systematized along the same major categories regarding the explanation of alliance effectiveness as the literature on vertical alliances (see Appendix 2 for an overview of performance impact factors of horizontal logistics alliances).

#### ***Alliance composition in LSP alliances***

Logistics scholars have emphasized the three following major performance impact factors of LSP alliances: (a) organizational complexity based on the alliance size and alliance task complexity, (b) operational fit, and (c) relational fit among partnering LSPs.

#### ***Organizational complexity***

##### ***Alliance size***

LSP alliances with a higher number of involved parties (both LSPs and business functions) offer the opportunity for pooling more resources to either broaden LSPs' service offerings or to optimize their resource utilization within the alliance. Thus, the greater the alliance size, the higher the potential for service improvements, for lower prices, and for higher profitability and profit margins within LSP alliances (Schmoltzi and Wallenburg, 2011, 2012). However, increasing alliance size comes with greater alliance complexity due to two reasons. The first emerges simply due to a significant increase in coordination efforts to synchronize logistics

products, processes, and systems and to steer partners' behavior and outcomes among a growing number of partnering LSP. Second, the higher number of partnering LSP adds to the likelihood of goal inconsistency, hidden agendas, and opportunistic behavior raising coordination and monitoring efforts (Schmoltzi and Wallenburg, 2011, 2012). The potential of intra-alliance competition, overlaps, and redundancies increase challenges an effective alliance management (Schmoltzi and Wallenburg, 2011, 2012), and drives instability by, for example, impeding smoothness and pace of decision-making (Midoro and Pitto, 2000). Empirical findings indicate that the alliance size and the accompanied increased organizational complexity impacts the functioning of structural coordination mechanisms. For example, it hampers the positive impact of social governance mechanisms, at the same time as increasing the importance of formal governance mechanisms for alliance effectiveness, success, and satisfaction (Schmoltzi and Wallenburg, 2012). Similarly, Midoro and Pitto (2000) found that bilateral alliances are the most efficient and stable agreement in the shipping industry. However, data on the German logistics industry shows that the majority of horizontal LSP alliances are multilateral agreements with up to 100 LSPs, which indicates the strong organizational complexity of LSP alliances (Schmoltzi and Wallenburg, 2011) and the requirement for effective LSP alliance management.

### *Task complexity*

Task complexity in LSP alliances emerges due to the scope of activities (Evangelista and Morvillo, 1999; Hernández et al., 2011; Midoro and Pitto, 2000) and the environmental uncertainty in which these tasks are performed (Midoro and Pitto, 2000). The scope of alliance activities – which vary in their nature (Evangelista and Morvillo, 1999), geographical reach, transportation modes, and areas of value creation (Schmoltzi and Wallenburg, 2011) – determines the alliance potential of value creation (Midoro and Pitto, 2000), the degree of

partner integration (Evangelista and Morvillo, 1999), and the operational performance of LSP alliances (Evangelista and Morvillo, 1999; Schmoltzi and Wallenburg, 2011). The environmental uncertainty surrounding the alliance activities (that is, specific antitrust laws) adds to the task's complexity, thereby causing further market instability (Midoro and Pitto, 2000).

### ***Operational fit***

Operational fit is achieved if the partners' similar or complementary resources and competencies can be synergistically combined. Operational fit implies at least some familiarity with the alliance tasks and facilitates interorganizational coordination among partnering LSP. Therefore, it has a major impact on alliance performance (Crujissen et al., 2007b; Schmoltzi and Wallenburg, 2011, 2012). Empirical evidence suggests that the most effective alliances are formed by LSPs with complementary contributions—(i.e. highly complementary geographical networks and customer portfolios) but similar business activities and competencies. This operational fit reduces the degree of managerial complexity and rivalry between partnering LSPs (Schmoltzi and Wallenburg, 2011). However, the lower the similarity of LSP's geographic and service profile, the less familiar the partner will be with the alliance tasks. Also, lower geographic and service similarity increases the likelihood of task-related information asymmetry and the risk of exchange hazards, hampering the harmonization of joint market offerings, and thus resulting in alliance failure (Schmoltzi and Wallenburg, 2011). On the other hand, empirical findings indicate that high similarity between LSP's contributions to the alliance still leads to significant managerial complexity. For example, significant overlaps in geographical and competences profiles cause intra-alliance competition, which compromises both interfirm coordination and decision-making processes (Schmoltzi and Wallenburg, 2012).

### ***Relational fit***

Relational fit refers to how the partners fit with each other, as reflected in the degree of corporate culture similarity and rivalry between the partners (Schmoltzi and Wallenburg, 2012). Empirical findings indicate that the most effective LSP alliances are formed by LSPs with similar corporate structures (Schmoltzi and Wallenburg, 2011). However, other empirical evidence shows that competitive tensions emerge due to overlaps in geography and competences, which hinder alliance value creation (Schmoltzi and Wallenburg, 2012). Given the importance of strategic know-how for LSPs' competitive advantages and the lack of safeguards (for example, regarding intellectual property rights) in this industry, there is a high risk of inadvertent exchange of strategic knowledge and threat of rivalry (Schmoltzi and Wallenburg, 2012). To face the threat of intra-alliance competition, Midoro and Pitto (2000) suggested limiting the number of partners, differentiating their roles and contributions, and coordinating sales and marketing activities. They noted that the adequacy of a partner's resources, competencies, and familiarity were not as important to alliance success as the firm's ability to leverage these competencies efficiently.

### ***Alliance structure in LSP alliances***

Given the low interdependence and the rivalry among partnering LSPs in horizontal alliances, the effectiveness of an alliance structure underlies specific and significant challenges. To foster effective alliance execution and reduce the threat of opportunism, logistics scholars have emphasized three social governance mechanisms: equity share, formalization, and mutual influence. These are discussed in turn below.



### *Equity share*

Equity is frequently seen as an effective instrument to align partner interests in alliances (Albers, 2005). Echoing this general finding, studies concentrating on LSP alliances suggest that the importance of equity involvement grows with the strategic importance of the alliance for its members (Schmoltzi and Wallenburg, 2011) and with the scope of alliance activities performed (Evangelista and Morvillo, 1999).

### *Formalization*

Formalization, in the form of mutually binding agreements or written contracts regarding areas such as tasks, activities, and authority structures, builds an agreed-upon basis among the partnering LSPs (Schmoltzi and Wallenburg, 2012). This basis facilitates the alignment of the partners' various interests, steers the day-to-day interactions, and provides transparency about the relationship behavior, processes, and outcomes, all of which enhance the alliance's commitment and effectiveness (Schmoltzi and Wallenburg, 2012). While formalization increases in importance with increased alliance complexity (high number of partners, high degree of rivalry), it causes conflicts among LSPs, due to two reasons. The first is its limitations regarding foreseeing and capturing all possible contingencies ex ante. The second is inflexibility, in terms of coping with these deviations from expectations, which raises conflicts among involved decision makers about sticking to and deflecting predefined rules (Wallenburg and Raue, 2011). Thus, the more formalized an LSP alliance is, the higher the extent of conflicts hampering goal achievement, improvements of productivity, and competitive position and overall alliance satisfaction (Wallenburg and Raue, 2011).

### *Social governance mechanisms*

Another viable way to improve alliance performance is to facilitate the creation of mutual

influence. Mutual influence, in the form of self-regulative imperatives combined with moral perspectives (Schmoltzi and Wallenburg, 2012), creates an atmosphere of forbearance, respect, and balanced reciprocity among the partnering LSPs (Wallenburg and Raue, 2011). The generally positive impact of mutual influence on alliance commitment, and effectiveness, depends on the alliance complexity. This impact grows as the heterogeneity of a partner's geographical or business activities increases, but decreases with the growing number of LSPs and business functions involved (Schmoltzi and Wallenburg, 2012). Interestingly, empirical findings indicated that the functioning of both formalization and mutual influence depends of the underlying type and degree of alliance complexity (organizational and strategic) reconciling the ambiguity of the governance–performance link (Schmoltzi and Wallenburg, 2012).

### ***Relational behavior in LSP alliances***

The third category implies performance impact factors on the relational behavior level of horizontal LSP alliances, including the commitment (Schmoltzi and Wallenburg, 2012) and conflict among partnering LSPs (Wallenburg and Raue, 2011).

#### ***Commitment***

Commitment – as reflected in the partners' attitudes towards long-term investments, resource dedication, and alliance-specific sacrifices – emerges due to the partners' expectations of positive alliance benefits in the future and their identification with the collective goals and values (Schmoltzi and Wallenburg, 2012). Empirical evidence indicates that commitment increases an alliance's effectiveness and that even its importance rises in the context of highly complex alliances (organizational and strategic) (Schmoltzi and Wallenburg, 2012).

### *Conflicts*

Conflicts among partnering LSP impact the alliance's performance and innovativeness (Wallenburg and Raue, 2011). Wallenburg and Raue's (2011) differentiated between the extent of conflict and the conflict functionality, finding that the extent of conflict has a significant negative impact on the LSP alliance performance (in fact, there was even a slightly positive impact on alliance-based innovation), which can only partially be balanced by the positive effect of conflict functionality. The reasoning behind this is that horizontal LSP alliances are "predominantly based on smooth operations that do not require creative tensions and constant innovation" (Wallenburg and Raue, 2011: 393). Thus, unresolved conflicts among LSPs lead to increased coordination costs in terms of resources and managerial efforts and disunity of efforts, which hinders information exchange and alliance success (Wallenburg and Raue, 2011). To reduce the extent of alliance conflicts, empirical findings indicate that LSPs should invest in their relational capital based on close personal interactions, mutual respect and trust, personal friendship, and high reciprocity, as these factors positively influence the functionality of conflicts, enhancing both alliance performance and alliance-based innovation (Wallenburg and Raue, 2011).

### *Operational process design in LSP alliances*

The fourth category of performance impact factors refers to management components on the operational level of LSP alliances, including joint route planning, and profit allocation impacting alliance success.

#### *Joint route planning*

Joint route planning among partnering LSPs is acknowledged as a key impact factor on the alliance operational performance as it allows effective synchronization of joint activities and

reduction of inefficiencies, redundancies, and overlaps. Empirical evidence shows that joint planning – understood as the pooling of all partner’s distribution processes to serve customer requests – allows for cost savings of up to 30 percent (Crujssen et al., 2007a; Krajewska et al., 2008). Specifically, this pooling can reduce the distance traveled by up to 30 percent, load factors by over 95 percent, and reduce fleets by up to 50 percent (Crujssen et al., 2007a). Crujssen et al.’s (2007a) findings suggest that joint route planning is most beneficial in horizontal alliances with a high number of LSPs with a “uniform and not too large size” (Crujssen et al., 2007a: 302). However, these benefits are based on trade-offs between waiting for more affordable collaborative capacity and incurring higher holding costs (Hernández et al., 2011). Therefore, they require reliable and sufficient exchange of data among the partnering LSPs, which may be constrained by the misalignment of indispensable information and communication technology (Crujssen et al, 2007b). Focusing on horizontal alliance in the aviation industry, scholars have differentiated between three forms of planning and scheduling: (a) complementary (pooling a partner’s network while only one partner operates on these routes); (b) parallel (pooling flights of the same route with all partners operating on these routes) (Chen and Chen, 2003; Park, 1997); and (c) mixed route (combination of parallel and complementary) (Yan and Chen, 2007). The empirical results of the abovementioned studies show that the impact of joint planning and scheduling varies across the planning type (complementary, parallel, or mixed). The mixed alliance type outperformed coordinated flight scheduling in terms of operating cost reductions and profit increases (Yan and Chen, 2007), while parallel alliances allow for higher load factor increases than complementary alliances do (Chen and Chen, 2003). However, a complementary alliance is likely to increase economic welfare, while a parallel alliance is like to decrease it (Park, 1997). Bilotkach (2007) analyzed the impact of airline partners’ pricing and scheduling choices under different degrees of coordination (only joint scheduling versus joint scheduling

and pricing). The mathematical calculations in that study show that cooperation in prices and scheduling leads to lower prices, higher product quality, and higher consumer welfare compared to cooperation only in scheduling.

### *Benefit allocation*

Given the differences in contributions and bargaining powers among partnering LSP, a major concern in horizontal alliances is the distribution of realized cost savings and profit gains in the alliance (Cruijssen et al., 2007a). Krajewska et al. (2008) found that a fair and stable distribution mechanism of total alliance gains is based on the benefits allocating weighted sum of each partner's alliance contribution. In a similar vein, in the context of airline alliances, Wright et al. (2010) found that static revenue-sharing mechanisms as fixed transfer prices are outperformed by dynamic transfer prices ("bid prices") based on the actual value of seat inventory. Despite their advantages, dynamic mechanisms are constrained by significant impediments; specifically, technical incompatibilities among revenue management systems within an alliance, competitive considerations, and antitrust laws (Wright et al., 2010).

## **2.6 SYNTHESIS AND RESEARCH AGENDA**

Our review findings inform both practice and research on effective logistics alliances design and management. The reviewed studies have primarily focused on understanding four individual components of logistics alliances: (1) their composition (absolute and relative partner characteristics), (2) the organizational structure that links the alliance partners, (3) the partners' relational behavior towards each other, and (4) the design of the underlying operational value-adding activities and processes that ultimately drive the alliance benefits. Our review has identified relevant performance impact factors of logistics alliances. However,

guidance on their effective deployment for an increased logistics alliance performance is lacking. To address this gap, we now derive and discuss our review implications. We do so by leveraging the hitherto neglected cross-fertilization potential of research results from horizontal for vertical logistics alliances, and vice versa. We also formulate concrete managerial implications from our review results that should aid logistics alliance practitioners (see Figure 4 and 5). In addition, our research agenda highlights a number of research opportunities that we believe have the strongest impact on logistics alliance performance and may guide further research.

### **2.6.1 Effective Design and Management of Horizontal Alliances**

Horizontal LSP alliances are mostly seen as an instrument for LSP to realize synergies by exploiting similar resources. Our findings show five main levers to capitalize the alliance value (see Figure 4). However, further research could still improve our understanding of LSP alliance performance by further analyzing the significant organizational complexity and competitive tensions horizontal alliances are facing in realizing alliance success.

#### ***Under-explored aspects of horizontal logistics alliances***

Our review highlights that logistics research still lacks evidence on how to cope with the threat of rivalry and significant complexity within horizontal logistics alliances. Formalization, fair benefit distribution systems, and relational capital have been identified as important factors to cope with these impediments. Research findings from vertical logistics alliances research provide evidence that interdependence, partner integration, and socialization are important for alliance success. Studies on performance impacts of horizontal logistics alliances, however, have not taken these factors into account, even though all three

address relevant mechanisms in these settings as well. This is of significant interest to explore how to take the identified performance impact factors into account in order to create and sustain alliance success.

#### **Figure 4 Managerial implications for horizontal logistics alliances**

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##### **Main performance levers of horizontal logistics alliances**

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- Select LSPs as partners that have similar corporate structures, business activities, and competencies, but complementary geographical networks and markets. This will increase the likelihood of an effective alliance value creation and reduce the threat of rivalry (Crujssen et al., 2007b; Midoro and Pitto, 2000; Schmoltzi and Wallenburg, 2011, 2012).
  - Adapt the formalization degree (specialization/codification of tasks, activities, and authority structures) to the alliance context (alliance size). This facilitates alliance commitment and effectiveness and reduces the threat of conflicts for goal achievement. (Schmoltzi and Wallenburg, 2012; Wallenburg and Raue, 2011).
  - Secure alliance commitment (for example, through mutual influence mechanisms) to enhance alliance effectiveness, especially in the context of high alliance complexity. However, the positive impact of mutual influence on alliance commitment and effectiveness increases as the heterogeneity of an LSP's geographical or business activities increases, but diminishes as alliance size. (Schmoltzi and Wallenburg, 2012)
  - Implement joint planning (in the case of large alliances), pricing, and revenue-sharing systems among partnering LSP to coordinate interactions. This enhances the potential for cost savings and profits. (Bilotkach, 2007; Chen and Chen, 2003; Crujssen et al., 2007a; Crujssen et al., 2007b; Park, 1997; Yan and Chen, 2007)
  - Develop an alliance capability that enhances the likelihood of leveraging partner's resources and competences pooled within the LSP alliance and of orchestrating effectively the alliance activities (Midoro and Pitto, 2000).
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##### ***Multifaceted reality of horizontal logistics alliances***

To gain a more comprehensive understanding on the design, management and performance of horizontal LSP alliances, research would benefit from a broader perspective on these arrangements. Only recently scholars (3 out of 14) have begun to investigate the interrelationships among alliance composition, alliance structure, relational behavior, and operational process design (Midoro and Pitto, 2000; Schmoltzi and Wallenburg, 2011, 2012; Wallenburg and Raue, 2011). As the logistics literature suggests, additional research efforts on these interdependencies would be worthwhile. For example, the alliance size and the level of partner rivalry (alliance composition) affect the functioning of formalization, mutual

influence (alliance structure), and commitment (relational behavior) (Schmoltzi and Wallenburg, 2012). A more holistic and multilevel understanding of logistics alliances would therefore advance a more comprehensive understanding of alliance success. We encourage scholars to conduct survey studies to explore the linkages and interdependencies among performance impact factors. This knowledge is of major importance to understand, explain and consider existing moderating effects for an effective design and management of horizontal LSP alliances.

### *Contingency factors*

A significant opportunity for further research lies in the ambiguity of identified impact factors' effects. Contingency theory suggests that it is very unlikely that a specific factor, mechanism, or arrangement, will be universally more effective than another – its effectiveness is rather influenced by contextual parameters (Donaldson, 2001). A further elucidation of such contexts could help to resolve present ambiguities and offer further insights on relevant conditions (“contingency factors”) of effective logistics alliance activity. Candidate contingency factors include alliance size (bilateral versus multilateral), alliance strategy (exploitative versus explorative) (Pettigrew, 1990), and industry context as they are applied in the strategic management literature (Albers et al., 2013). We would expect that the underlying alliance type has a major influence on the effectiveness of specific alliance designs and management forms. Thus, multiple case studies and survey studies need to incorporate contingency factors in order to identify patterns of alliance design and management for different alliance types. For example, an alliance for the exploitation of existing resources will most probably be designed and managed differently than an explorative alliance aiming to gain new knowledge among LSPs.



## 2.6.2 Effective design and management of vertical alliances

Based on our review, we observed that the performance of vertical alliances depends primarily on the ability of both clients and LSPs to become familiar and interlined with each other. Our findings reveal the major performance impact factors facilitating vertical alliance success (see Figure 5). However, we identify some gaps in the vertical alliance literature and propose the following research agenda.

### Figure 5 Managerial implications for vertical logistics alliances

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#### Main performance levers of vertical logistics alliances

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- Create operational fit between LSP and client in relation to the specific alliance tasks based on the specific knowledge the partners have regarding the other's business, the firm-specific alliance capability, and the LSP's operational flexibility. The operational fit facilitates the selection of valuable partners, which enhances the likelihood of higher collaboration degree, operational flexibility, and alliance adaptability, all of which contribute to the alliance's success.
  - Create interdependence to enhance the degree of LSP–client collaboration and alliance performance, while corporate compatibilities are not considered a major performance factor.
  - Strengthen the LSP integration in the client's business to facilitate the customization of services provided by the LSP and to enhance LSP's reputation. Consider that clients are reluctant to pursue stronger LSP integration due to their lack of belief in LSP capabilities.
  - Adapt the formalization degree to increase alliance effectiveness and satisfaction, even if it is not perceived by clients or LSPs as a major success factor.
  - Consider the impact of socialization on alliance performance which depends on the alliance's history and current phase (its impact is discussed ambiguously in literature)
  - Increase the relationship quality (that is, the trust and commitment of the partnering LSP and clients) to increase alliance performance and satisfaction. Consider that this quality depends more on the alliance performance than on the underlying alliance type.
  - Strengthen the communication and information exchange to enhance the degree of collaboration, proactive improvements, LSP flexibility, and the alliance's effectiveness and client's loyalty. In addition, this exchange mediates the impact of trust and commitment on alliance outcomes.
  - Conduct joint planning to improve the channel profitability, communication, and the client's perceived level of LSP's contractual conformance. The impact of joint planning on operational performances is not yet confirmed.
  - Control performance to monitor desired behavior and outcomes and to facilitate the adaptability of the alliance over time.
  - Share risks and rewards to increase LSPs' asset utilization and the client's perception of LSP, even it is not perceived as a major success factor.
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### ***Multilateral alliances along the supply chain***

The majority of studies focused on bilateral client-LSP arrangements (27 out of 34). However, logistics scholars have indicated a trend towards so-called supply chain collaborations among multiple supply chain actors, including manufacturers, suppliers, retailers, and LSPs. We argue that these alliances among multiple supply chain actors come with an increase in complexity. This complexity emerges due to (a) the higher number of involved partners with differing interests, (b) a broader scope of activities as more value creation processes are integrated in the alliances, and (c) a shift in the power relation between LSPs and clients as the LSP gains a more importance as central coordinator in the supply chain. Thus, further research is needed to redress this complexity increase in vertical alliances challenging the above-discussed governance mechanisms which base on a clear power structure within vertical alliances (Daugherty, 2011). While the horizontal alliances literature provides some initial evidence (e.g. captured in the impact factors of organizational complexity, joint planning and revenue-sharing (research impulses can come from the general management literature (Albers et al., 2015; Das and Teng, 2002)), more conceptual work and case studies are needed to explore this emerging type of vertical alliances.

### **2.6.3 Research opportunities for both vertical and horizontal alliances**

Although logistics scholars have devoted considerable attention to both vertical and horizontal alliances as instruments to gain competitive advantage, many of these alliances do not meet the partners' expectations as they unfold over time, and some may even be considered failures (Kampstra et al., 2006; Stank et al., 2011; Wilding and Juriado, 2004). This well-established diagnosis encourages redoubled efforts in two directions: First, concentrating on failed alliances, future studies could investigate concrete pitfalls of logistics alliances and their

mechanisms of failure. Second, future studies could analyze alliances' evolution over time, i.e. identify underlying drivers of change and its mechanisms in order to improve logistics alliance performance.

### ***Incorporation of pitfalls and negative effects***

Current studies – not only those in the logistics literature – tend to emphasize the positive effects of alliances; therefore, a major research opportunity is the investigation of the negative and lock-in effects of logistics alliances (Daugherty, 2011). As a better understanding of the “dark side” of alliances is required to adequately inform logistics management practice, additional research should explore such potential negative outcomes, pitfalls, and lock-in effects (Cruijssen et al., 2007b; Lambert et al., 1999; Stank et al., 2011; Zineldin and Bredenlow, 2003). Empirical studies of logistics alliances have indicated such negative effects as increased complexity, difficulties, and costs of changing relationships because of greater integration and connectedness of firms (Hertz, 2001), or post-contractual lock-ins to supplier dominance because of transaction specific investments (Lonsdale, 2001). Future research is warranted to provide (empirical) evidence that will elicit ideas for avoiding or managing these negative effects, such as the pioneering work of Narasimhan et al. (2009), which identified specific pricing policies and investment intensity as a means to handle lock-in situations.

### ***Consideration of alliance dynamics***

Based on our review we observed that most of the extant inquiries into logistics alliance design and management have been static and performed at a given point in time (Li et al., 2011). This is in line with Daugherty's (2011) observation: “Typically, a great deal of time/effort/resources are expended on the formation of a cooperative relationship. But, how

often do companies check on the ongoing viability and vitality of the relationship? Business certainly is not static; you cannot assume relationships will be either” (Daugherty, 2011: 24). However, the logistics industry is dynamic, with some alliances operating for more than a decade and others collapsing even before they begin operations (Albers and Klaas-Wissing, 2012). However, only a few studies of vertical alliances have pointed to the need for alliance transformation over time by referring to a firm’s specific strategic (Fawcett et al., 2008) or operational capabilities (Bhatnagar and Viswanathan, 2000; Tate, 1996) of a firm. Additional analysis of such “survivors,” which explores their potentially adaptive structures and processes, could generate valuable insights into key management and design practices for maintaining a continuous alliance change/transformation (Stank et al., 2011). A related suggestion for alliance adaptability rests upon specific logistics alliance management capability (Hofer et al., 2009; Li et al., 2011; Williams, 2002; Zacharia et al., 2009) that ensures the continuous reflection, development, and modification of approved alliance management routines in response to changes in contexts or conditions and to shape situations allowing for sustainable competitive advantages for the partnering firm (Brekalo et al., 2013). Conceptualized along multiple levels, this capability builds on operational logistics activities, comprising alliance design, relational governance, coordination and monitoring, and adaptation routines (Brekalo et al., 2013), providing a potential starting point for further research. To uncover the complex nature of logistics alliances, research into alliance evolution would require explorative research designs and qualitative research methods that provide an open approach toward identifying the logistics-specific drivers of alliance evolution.

## 2.7 CONCLUSION

Alliances are a well-studied phenomenon in the logistics field. By analyzing both research streams of vertical and horizontal logistics alliances, we identified four main categories in the domain of effective logistics alliance design and management: (1) alliance composition, (2) alliance structure, (3) relational behavior, and (4) operational process design. Within these categories we present the current state of research by (a) identifying the major impact factors and their effects on alliance outcomes and (b) by consolidating their understanding and conceptualizations discussed in the logistics literature. In line with Daugherty (2011) stating that “previous research provides a solid foundation for future research, and there still seem to be ample research opportunities“ (Daugherty, 2011: 27), we provide a comprehensive consolidation of these findings that contributes to both academia and practice by adding to our understanding of logistics alliance performance. First, practitioners get a systematic overview of relevant performance impact factors providing insights into potential managerial levers to improve alliance performance. Second, our consolidation acts as a starting point for scholars who may be encouraged by our developed research avenues inter alia benefitting from cross-fertilization between vertical and horizontal alliance literature or may be supported by a comprehensive picture on the state of the research. Overall, these research opportunities will enable scholars to gain additional, meaningful results on logistics alliances and their successful functioning.

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## 2.9 APPENDIX

### 2.9.1 Appendix 1: Overview of performance impact factors of vertical logistics alliances

ALLIANCE COMPOSITION	Understanding and Conceptualization
<b><i>Operational fit</i></b>	
Partner knowledge	<ul style="list-style-type: none"> <li>- Understanding partner's business needs: who are you, what are you going to do, what your plans are for the future (Tate, 1996)</li> </ul> <p><i>Client perspective</i></p> <ul style="list-style-type: none"> <li>- Knowledge on LSP's cost orientation: ability to take cost out of the operation; the ability to control costs; an emphasis on supply chain cost reduction (Gibson et al., 2002)</li> <li>- Insight to understand partner's skills/capabilities; business model; business risks; products; processes; business objectives; communication style; industry jargon; organizational culture; value they provide to their customer) (Zacharia et al., 2009)</li> </ul> <p><i>LSP perspective</i></p> <ul style="list-style-type: none"> <li>- Supply chain partner insight (LSP's understanding of client's skills, capabilities, business model, business risks, products, processes, business objectives, communication style, organizational culture, customer value) (Hartmann and De Grahl, 2011)</li> <li>- Client service expertise ( 3PL's effort to understand buyer's situation; adequacy of 3PL's knowledge/experience; strength of 3PL's communication skills) (Chen et al., 2010)</li> </ul> <p><i>Organizational modes</i></p> <ul style="list-style-type: none"> <li>- Frequent and systematic communication at all levels of organizational structure to build client knowledge (Panayides and Gray, 1999)</li> </ul>
Alliance capability	<ul style="list-style-type: none"> <li>- Supply chain collaboration capability: unfreeze, transformation and continuous improving capability (Fawcett et al., 2008)</li> </ul> <p><i>Client perspective</i></p> <ul style="list-style-type: none"> <li>- Client's Top Management Championship: level of participation in formulating a strategy; establishing goals and standards to monitor; clear vision (Chen et al., 2010)</li> </ul> <p><i>LSP perspective</i></p> <ul style="list-style-type: none"> <li>- Culture of trust and flexibility (Panayides and Gray, 1999)</li> <li>- Openness to new ways of thinking, to discover new knowledge, to improve joint performance (Zacharia et al., 2009)</li> </ul> <p><i>Mutual capability</i></p> <ul style="list-style-type: none"> <li>- Joint pulling; joint decision making; mutual respect (Deepen et al., 2008)</li> <li>- Joint exploitation of unique opportunities; looking for synergistic ways to do business; joint development of ideas (Hartmann and De Grahl, 2011)</li> <li>- Joint exploitation of opportunities; looking for synergies; joint idea development; sharing proprietary information (Sinkovics and Roath, 2004)</li> <li>- Redefinition of client's goals (Bagchi and Virum, 1998)</li> <li>- Mutual strategic management knowledge (Makukha and Gray, 2004)</li> </ul> <p><i>Organizational modes</i></p> <ul style="list-style-type: none"> <li>- Frequent face-to-face meetings, high level of joint decision-making, open sharing of information, free flow of useful and novel ideas, openness to new ways of thinking and discovering new knowledge. (Zacharia et al., 2009)</li> </ul>

LSP operational flexibility	<p><i>Meeting changing demands</i></p> <ul style="list-style-type: none"> <li>- Fit towards client's operational objectives (Bagchi and Virum, 1998)</li> <li>- Management of customers' supply chain; listening and responding to client's needs (Makukha and Gray, 2004)</li> <li>- Handling of unforeseen problems/changes; making adjustments; responding to requests (Hartmann and De Grahl, 2011)</li> </ul> <p><i>Proactively improvement</i></p> <ul style="list-style-type: none"> <li>- Proactive management of special needs and exceptions; the ability to handle changing carrier requirements (Gibson et al., 2002)</li> <li>- Proactive improvement: LSP continuously suggests improvements; in case of changes, LSPs modifies the system respectively; LSPs shows initiative to suggest improvements; LSPs shows a high level of innovation (Deepen et al., 2008)</li> <li>- Supply chain re-engineering (applying SC strategies: adapt modes of transport, consolidation/deconsolidation point, inventory centralization, warehouse management, reassignment of roles and responsibilities among supply chain entities) (Bhatnagar, 2000)</li> <li>- Co-operative and continuous improvements as carriers ability to make cost or service improvements when problems surfaced requiring partner's business knowledge (carrier involvement in joint problem-solving efforts with buyers and suppliers, in cost reduction programs; carriers being evaluated for continuous improvement) (Gentry, 1996a)</li> </ul> <p><i>Mutual efforts</i></p> <ul style="list-style-type: none"> <li>- Mutual adjustments making; processes for flexibility (Sinkovics and Roath, 2004)</li> <li>- Work together to respond to changing marketplaces and customer's needs (Tate, 1996)</li> <li>- Supply chain re-engineering (applying SC strategies: adapt modes of transport, consolidation/deconsolidation point, inventory centralization, warehouse management, reassignment of roles and responsibilities among supply chain entities) (Bhatnagar, 2000)</li> </ul>
<b>Relational fit</b>	
Organizational Compatibility	<ul style="list-style-type: none"> <li>- Shared culture and values, strategic fit, firm philosophy, vision, commitment to alliances (Tate, 1996)</li> <li>- Compatible strategies, goals and objectives; similar management styles; compatible corporate cultures (Gibson et al., 2002)</li> </ul>
Partner dependence	<ul style="list-style-type: none"> <li>- Partners are dependent for an effective solution; needed knowledge/skills the other possessed; needed each other to reach their goal (Zacharia et al., 2009)</li> <li>- Win-win situation (Lambert et al., 1999)</li> </ul>

## ALLIANCE STRUCTURE

## Understanding and Conceptualization

LSP integration	<p><i>Strength of relationship</i></p> <ul style="list-style-type: none"> <li>- Type of agreement ("arm's length" versus "strategic alliances") (Gentry, 1996b; Makukha and Gray, 2004; Rogers and Daugherty, 1995)</li> <li>- Number of involved functions, time horizon, strength of ties and sharing (Lambert et al., 1999)</li> <li>- Long-term commitments; open communications/information sharing; cooperative continuous improvement; sharing of risks/rewards (Gentry, 1996a; b)</li> </ul> <p><i>Involvement in process</i></p> <ul style="list-style-type: none"> <li>- Involvement in buyer-supplier negotiation process (Carter and Ferrin, 1995)</li> <li>- Negotiation thoroughness: insisted on integrated logistics management; carefully handled staffing issues; considered quality issues, not just delivery performance (Hofenk et al., 2011)</li> <li>- Employee of logistics providers stationed on-site and full time by the client (Bagchi and Virum, 1998)</li> <li>- Cross-functional/inter-organizational teams (Fawcett et al., 2006; Makukha and Gray, 2004)</li> <li>- Logistics information system as framework (Bagchi and Virum, 1998)</li> </ul>
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Formalization	<p><i>Specification</i></p> <ul style="list-style-type: none"> <li>- Client's clear definition of logistics management goals (Bagchi and Virum, 1998)</li> <li>- Roles, responsibilities, policy guidelines, and procedures within (Makukha and Gray, 2004; Tate, 1996)</li> <li>- Rules of engagement: written, detailed contract; conflict resolution process; formal process to analyze performance; process to renew, amend, or end contract (Gibson et al., 2002)</li> <li>- Operational business rules and procedures (regarding damage, returns, complaints, record-keeping requirements, etc.) (Tate, 1996)</li> </ul> <p><i>Codification</i></p> <ul style="list-style-type: none"> <li>- Contract design (Lambert et al., 1999): Formal/informal (Frankel and Whipple, 1996), explicit/implicit (Kee-hung, 2009)</li> <li>- Contract formality: terms are written down; expectations are communicated; contractual terms are developed for coordination of activities; terms are verbalized and discussed (Hofenk et al., 2011)</li> <li>- Internal authority: Threat of alternative corporate strategies and priorities brushing aside alliances (Emberson and Storey, 2006)</li> <li>- Control/power: equal power in the relationship; mutual authority to end the partnership; authority to require process changes by partner (Gibson et al., 2002)</li> </ul>
Social governance mechanisms	<p><i>ocial contracts</i></p> <ul style="list-style-type: none"> <li>- Implicit contracts (Kee-hung, 2009)</li> <li>- Unwritten agreements enforced by the desire to create and maintain a positive reputation for integrity and fairness and build trust (Frankel and Whipple, 1996: 49)</li> </ul> <p><i>Socialization</i></p> <ul style="list-style-type: none"> <li>- Social events; joint workshops; on-site visits; regular suppliers conferences; team building exercise (Cousins and Menguc, 2006)</li> <li>- Workshops, strategic sessions, informal outings, special events (Van De Vijver et al., 2011)</li> </ul>
<b>RELATIONAL BEHAVIOR</b>	Understanding and Conceptualization
Trust	<ul style="list-style-type: none"> <li>- Culture of cooperation and trust; adversial views are placed by cooperation and loyalty; expectation of a long-term relationship (Gibson et al., 2002)</li> <li>- High integrity; counted on to do what is wright; sincere in their promise; treats our company fairly and justly; we trust completely (Hofenk et al., 2011)</li> <li>- Concerned about partner's success; consideration of partner's interests; consideration of partner's welfare (Nyaga et al., 2010)</li> <li>- Belief that partner is committed to other's long-term success (Lambert et al., 1999)</li> <li>- Builds over time on mutual understanding, communications, commitment, flexibility and fairness among involved parties (Tate, 1996)</li> </ul>
Alliance commitment	<ul style="list-style-type: none"> <li>- Top Management, broad-based functional, channel, and infrastructural/governance support (Fawcett et al., 2006)</li> <li>- Amount of specific investment (Gardner et al., 1994)</li> <li>- Long-term commitment (utilization of long-term carrier contracts; the carrier's participation in the strategic planning process of buyer-supplier partnership; assessment of carriers for their long-term financial stability) (Gentry, 1996a)</li> <li>- Very committed to the relationship; intended to maintain; effort to maintain; do almost everything to keep; cares great about long-term (Hofenk et al., 2011)</li> <li>- Expectation of long duration; committed to supplier/buyer; expectation of growing strength; considerable effort and investments undertaken) (Nyaga et al., 2010)</li> <li>- Dedicated investments: dedicated personnel; proprietary expertise and/or technology; significant investments (Nyaga et al., 2010)</li> <li>- Mutual commitment (all in together to meet our customers' needs, working through hard times) (Tate, 1996)</li> </ul>

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Relational quality	<ul style="list-style-type: none"> <li>- Guanxi (good relationships between top management; logistics managers; logistics employees) (Chen et al., 2010)</li> <li>- Relationship stability and efficiency (Emberson and Storey, 2006)</li> <li>- Relationship stability (how well partners have worked together) (Kee-hung, 2009)</li> <li>- Social exchange behavior (trust, equity, commitment, conflict and opportunisms) (Moore and Cunningham III, 1999)</li> <li>- Relational quality (trust, relationship-specific investments, commitment, satisfaction) (Nyaga and Whipple, 2011)</li> </ul>
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**OPERATIONAL PROCESS DESIG**      Understanding and Conceptualization

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Communication and information exchange	<ul style="list-style-type: none"> <li>- Communication (well working of information exchange; speed of information exchange; reliability of information; suitability of the way of information exchange) (Deepen et al., 2008)</li> <li>- Systematic operational information exchange (Gardner et al., 1994)</li> <li>- Open communication and information sharing requiring multiple levels, access to production forecasts or shipping schedules, computer linkages between carriers (frequent carrier communications with buyers and suppliers; carriers having access to production schedules or shipping forecast; carriers being linked to buyers and suppliers through computer information systems) (Gentry, 1996a)</li> <li>- exchange of information; speed of exchange; reliability of information; adequacy of exchange) (Hartmann and De Grahl, 2011)</li> <li>- Communications (balanced, two-way, multilevel, joint teams)</li> <li>- Risk/reward sharing (willingness of either party to take a short-term "Hit" for the good of the other) (Lambert et al., 1999)</li> <li>- Information and communications technology: Communication systems (e.g. EDI, Bar codes, track and trace) (Mortensen and Lemoine, 2008)</li> <li>- Information sharing (inform in advance; information is provided; keep informed) (Nyaga et al., 2010)</li> <li>- Communication (horizontal/vertical communication, frequency, systems (media/personal)) (Tate, 1996)</li> <li>- Communication process (meeting frequently; amount of information shared; flow of information (usefulness, novelty) (Zacharia et al., 2009)</li> </ul>
Joint planning	<ul style="list-style-type: none"> <li>- Tool for cost-based pricing (fixed (depreciation and interest related to capital investment in vehicles, insurance, administration costs, taxes, others) and variable costs (repairs and maintenance, fuel costs, tire costs, wages, others) (Bø and Hammervoll, 2010)</li> <li>- Supply chain integration (scheduling; order management; forecasting; operation planning) (Cousins and Menguc, 2006)</li> <li>- Planning (Gardner et al., 1994)</li> <li>- Open discussion of demand forecast; joint development of service schedules and goals; participating in each other's strategic planning (Gibson et al., 2002)</li> <li>- Design principles of physical distribution channel (Principle of transportation costs; separation principle; unit load principle; Weber's location principles; selective stocking principle; postponement; uncertainty absorption principle; Principle of data compatibility; Co-ordination principle) (Gill and Allerheiligen, 1996)</li> <li>- Coordination and pricing policies (Lei et al., 2006)</li> <li>- Joint planning (joint teams, regular meetings among managers) (Lambert et al., 1999)</li> <li>- Joint relationship effort (joint teams; joint planning; joint decisions) (Nyaga et al., 2010)</li> <li>- partners used intensive collaborative planning; joint decision making; joint goal setting (Zacharia et al., 2009)</li> </ul>

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Performance control and measurement	<ul style="list-style-type: none"> <li>- Joint performance measurements (Bagchi and Virum, 1998)</li> <li>- mutual operating controls (Gardner et al., 1994)</li> <li>- Performance measurement tool (Kleinsorge, 1991)</li> <li>- Joint operating controls (jointly developed control measures, changes of partner operations) (Lambert et al., 1999)</li> </ul>
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Risk/reward sharing	<ul style="list-style-type: none"> <li>- Sharing of benefits and burdens(Gardner et al., 1994)</li> <li>- Sharing of risks and rewards reflected in specialized or dedicated transport equipment/investments, cancellation clause and fair compensation (carriers providing dedicated equipment or drivers; using carrier contracts cancellation or penalty clauses for service failures; carrier being responsive to unforeseen special requests/scheduling changes) (Gentry, 1996a)</li> <li>- Shared risk and reward: specific rewards for outstanding performance; penalties for unacceptable performance; equal distribution of planned and unexpected costs; willingness to share cost savings (Gibson et al., 2002)</li> </ul>
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## 2.9.2 Appendix 2: Overview of performance impact factors of horizontal alliances

<b>ALLIANCE COMPOSITION</b>		Understanding and Conceptualization
<b>Organizational complexity</b>		
Number of involved parties	-	Number of partners, nature of their role and contribution; level of mutual trust (Midoro and Pitto, 2000) - Number of partners and functional scope: areas of value creation (production, marketing and sales, procurement, human resources, research and product development, IT and administration and finance and accounting)(Schmoltzi and Wallenburg, 2011; Schmoltzi and Wallenburg, 2012)
Task complexity	Scope of activities	- Service scope: mode of transport; value-added services(Schmoltzi and Wallenburg, 2011) - Geographical scope: national versus international scope (Schmoltzi and Wallenburg, 2011) - Scope of alliance activities; environmental uncertainty surrounding these activities; adequacy of skills and competencies within the alliance (Midoro and Pitto, 2000) - Activities (waterborne transport; port terminal; inland transport; logistics services) and nature (joint scheduling; space agreements; joint services; cost and investment sharing; joint marketing activities) (Evangelista and Morvillo, 1999)
<b>Operational fit</b>		
Resource/competence compatibility	-	Physical assets; less-tangible assets; organizational capabilities (Crujssen et al., 2007b) - Business activities and core competencies, geographical network and customer portfolio (Schmoltzi and Wallenburg, 2011)
<b>Relational fit</b>		
Organizational compatibility	-	Corporate structure (similarity of companies' financial strength, managerial strength, management style, corporate culture) (Schmoltzi and Wallenburg, 2011)
Rivalry	-	Competitive tension due to overlaps in geography and competences (Schmoltzi and Wallenburg, 2012)
<b>ALLIANCE STRUCTURE</b>		Understanding and Conceptualization
Formalization	<i>Contract design</i>	- Contractual agreements; Joint venture; minority stakes (Evangelista and Morvillo, 1999) - Verbal agreements, contractual agreements that involve no equity stakes, minority equity agreements, joint venture agreements (Schmoltzi and Wallenburg, 2011)
	<i>Formal governance mechanisms</i>	- Operational formalization (Schmoltzi and Wallenburg, 2012) - Formal control mechanism: written documents, detailed standard operating procedures (Wallenburg and Raue, 2011)
Social governance mechanisms	-	Mutual influence: equal say and influencing right (Schmoltzi and Wallenburg, 2012)
<b>RELATIONAL BEHAVIOR</b>		Understanding and Conceptualization
Commitment	-	Cooperation commitment (attitude towards long-term investments, resource dedication, cooperation specific sacrifices (Schmoltzi and Wallenburg, 2012)
Conflict	-	Conflict: extent, functionality (Wallenburg and Raue, 2011)



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Relational quality - Relational capital: social control mechanisms: close personal interaction, mutual respect, trust, personal friendship, high reciprocity (Wallenburg and Raue, 2011)

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**OPERATIONAL PROCESS DESIGN**

Understanding and Conceptualization

Joint route planning - Scheduling and price (Bilotkach, 2007)  
- Joint route planning (parallel; complementary; mixed ) (Chen and Chen, 2003; Park, 1997; Yan and Chen, 2007)  
- Joint route planning (Crujssen et al., 2007a)  
- Joint Planning under dynamic capacities (level of discount rates) (Hernández et al., 2011)  
- Lack of appropriate information and communication Technology (ICT) as impediments (Crujssen et al., 2007b)

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Benefit allocation - Lack of fair allocation mechanism determining and dividing the gains as impediment (Crujssen et al., 2007b)  
- Unequal negotiation positions of partners (Crujssen et al., 2007b)  
- Request allocation and profit sharing (game theory) (Krajewska et al., 2008)  
- Revenue-sharing mechanisms (static, dynamic) (Wright et al., 2010)

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### 3. LOGISTICS ALLIANCE MANAGEMENT CAPABILITIES: WHERE ARE THEY?

#### 3.1 ABSTRACT

**Purpose:** Due to the continued high failure rate of logistics alliances, we propose incorporating the widely neglected dynamic capabilities approach into the explanation of logistics alliance performance.

**Design/methodology/approach:** We identify specific characteristics of logistics alliances that we use to argumentatively develop our framework of logistics alliance management capabilities.

**Findings:** We propose an initial framework of logistics alliance management capabilities, based on the dynamic capabilities approach of strategic management, with the aim of improving logistics alliance success.

**Research implications:** Our framework offers a basis for a wider range of empirical studies. Qualitative researchers are encouraged to further specify and better understand the sub-processes that underlie logistics alliance management capabilities in different alliance settings. Quantitative studies could help to reliably assess the differences and performance implications of these capabilities.

**Practical implications:** Our conceptualization supports managers in their relevant strategic and organizational attempts to enhance logistics alliance success.

**Originality/value:** This paper contributes to the logistics literature by making a more general yet established construct accessible to logistics scholars and practitioners. The roots of our logistics alliance management capability construct in dynamic capabilities provide a framework that is new and potentially more comprehensive than the collection of somewhat isolated alliance success factors that have hitherto been proposed in the logistics literature.

**Keywords:** Strategic alliances, Logistics (Business), Alliance capabilities, Logistics Service Providers

**Type of paper:** Conceptual paper

### **3.2 INTRODUCTION**

Alliances between supply chain entities, such as buyers, suppliers, third-party providers, and customers have grown in popularity and have been promoted as an important component of the corporate and competitive strategy of the involved firms. Logistics involves the management of a wide range of core activities for the spatial and temporal transfer of goods, services, and related information, as associated with order processes, inventory management, transportation, warehousing/ handling, and facility network management (Bowersox et al., 2007). Recently, value-added services, supply chain management, and financial services have complemented these traditional logistics functions (Carbone and Stone, 2005; Delfmann et al., 2002). Logistics alliances gained attention due to the outsourcing trend of logistics activities in the 1980s and 1990s, which aimed to reduce costs, respond flexibly to demand fluctuations, and reduce capital investment (Daugherty, 2011; Frankel and Whipple, 1996b; Gunasekaran and Ngai, 2003). The importance of logistics alliances has continued to grow due to ongoing deregulation, globalization, and reduced time for the order fulfillment processes (Hertz, 2001). However, not all logistics alliances are successful. For example, according to Dittmann (2010), “successful collaborative relationships between a firm and its core suppliers are still rare”; this is reflected in the fact that almost 70 percent of strategic alliances fail (Zineldin and Bredenlow, 2003).

Thus, although the importance of logistics alliances is widely acknowledged and such alliances have been studied extensively for more than two decades in a great variety of aspects (e.g. with regard to their types and governance forms (Golicic et al., 2003; Lambert et al., 1996; Rogers and Daugherty, 1995; Tokman et al., 2007), success factors (Frankel and Whipple, 1996a; Gibson et al., 2002; Skjoett-Larsen et al., 2003) and outcomes (Cruijssen et al., 2007c; Ellram and Krause, 1994; Goh and Uncles, 2003; Sjögren and Söderberg, 2011), their failure rate remains surprisingly high and not entirely explained. Daugherty (2011), for

example, suggests that the current logistics alliance models may be incomplete and do not make it possible to monitor the viability and vitality of the relationship continuously.

Against this backdrop, it appears useful and valuable to consider additional perspectives and constructs. The study of alliances in the general management, strategy, and organization theory literatures has offered such newer constructs: alliance management capability as a specific dynamic capability is seen as a major source of alliance success (Kale and Singh, 2007; Schreiner et al., 2009) but has not been incorporated into the logistics and SCM alliance management discussions to date. We suggest that there is considerable value in linking the logistics alliance literature with the dynamic capabilities literature. Logistics research will potentially benefit from a new and important theory that contributes to the explanation of alliance success and superior firm performance that should also be useful and beneficial for logistics services. This study seeks to provide a first step towards creating this link. As an understanding of logistics alliances based on the dynamic capabilities approach has not yet been advanced in the logistics literature, this paper develops a specific logistics alliance management capability framework that leverages the explanatory potential of the dynamic capabilities approach for logistics alliance research and management. In this way, we contribute to theory development in the field of logistics alliance research, but also support managers in their relevant strategic and organizational considerations and the priorities they must adopt in order to enhance logistics alliance success and, thereby, firm performance.

The paper proceeds as follows: The alliance management capability construct based on the dynamic capabilities approach is briefly explained next. In the following section, specific characteristics of logistics alliances are derived and the general alliance management capability construct for logistics alliances is specified and integrated into our framework of logistics alliance management capabilities. The final section concludes and points out avenues for further research.

### **3.3 THE DYNAMIC ALLIANCE MANAGEMENT CAPABILITIES CONSTRUCT**

With regard to evolutionary economics (Zollo and Winter, 2002), and resource-based view reasoning (Eisenhardt and Martin, 2000; Teece, 2007), the strategic management literature has devoted a lot of attention to the construct of dynamic capabilities (and alliance management capabilities). Extant studies provide strong conceptual and empirical support for the positive impact that a firm's dynamic alliance management capability can have on various outcome measures, such as alliance success, firm performance, and stock market returns (Heimeriks and Duysters, 2007; Kale and Singh, 2007; Schilke and Goerzen, 2010; Schreiner et al., 2009).

Dynamic alliance management capabilities (DAMC) are perceived as a multidimensional construct of specific organizational routines (Døving and Gooderham, 2008; Sarkar et al., 2009; Schilke and Goerzen, 2010; Schreiner et al., 2009), reflected in behavioral patterns and processes that address key alliance management issues (Jones et al., 1998; Sarkar et al., 2009) such as absorptive capacity (Mowery et al., 1996) and relational capability (Capaldo, 2007; Dyer and Singh, 1998; Wang, 2007). Because DAMCs enable firms to “purposefully create, extend, or modify the firm's resource base, augmented to include the resources of its alliance partners” (Schilke and Goerzen, 2010, p. 1195), these firms are able to face, or even create successful market changes and realize sustainable competitive advantages (Eisenhardt and Martin, 2000).

Schreiner et al. (2009), Schilke and Goerzen (2010), and Sarkar et al. (2009), among others, have conceptualized DAMC according to five constitutive elements: coordination, learning, proactiveness, transformation, and relational governance. Because “capabilities are complex, structured, and multidimensional” (Winter, 2003, p. 992), the design and coherent interplay of these five dimensions determines a firm's dynamic alliance management capability. These dimensions constitute the firm's systematic method for modifying alliance-related routines,

which means that they represent a high-order capability (Zollo and Winter, 2002) that arises from learning about how to manage alliances (Cyert, 1963; Nelson and Winter, 1982). Learning occurs when organizations modify their actions according to the difference between expected and obtained outcomes (“error detection and correction in theories-in-use”) (Argyris, 1978). The existing literature has acknowledged and empirically supported learning mechanisms as the main drivers for a firm’s dynamic alliance management capability (Anand and Khanna, 2000; Zollo and Winter, 2002) and has shown them to be positively affected by a firm’s alliance experience (Schilke and Goerzen, 2010) and a dedicated alliance function (Kale et al., 2002).

### **3.4 A LOGISTICS ALLIANCE MANAGEMENT CAPABILITIES MODEL**

In the general strategy field, the general dynamic capability construct is specified to functional domains in order for them to be more concretely analyzed and more specific implications to be formulated. For example, dynamic capabilities in purchasing (Schlömer, 2011) and new product development (Eisenhardt and Martin, 2000) are identified and specific routines and adaptation mechanisms are forwarded. In order to leverage this potential and to yield more meaningful results for logistics alliance management, there is a need for a specific logistics alliance management capabilities (LAMC) model that builds on and further specifies the general DAMC framework to the peculiarities of the logistics alliance context.

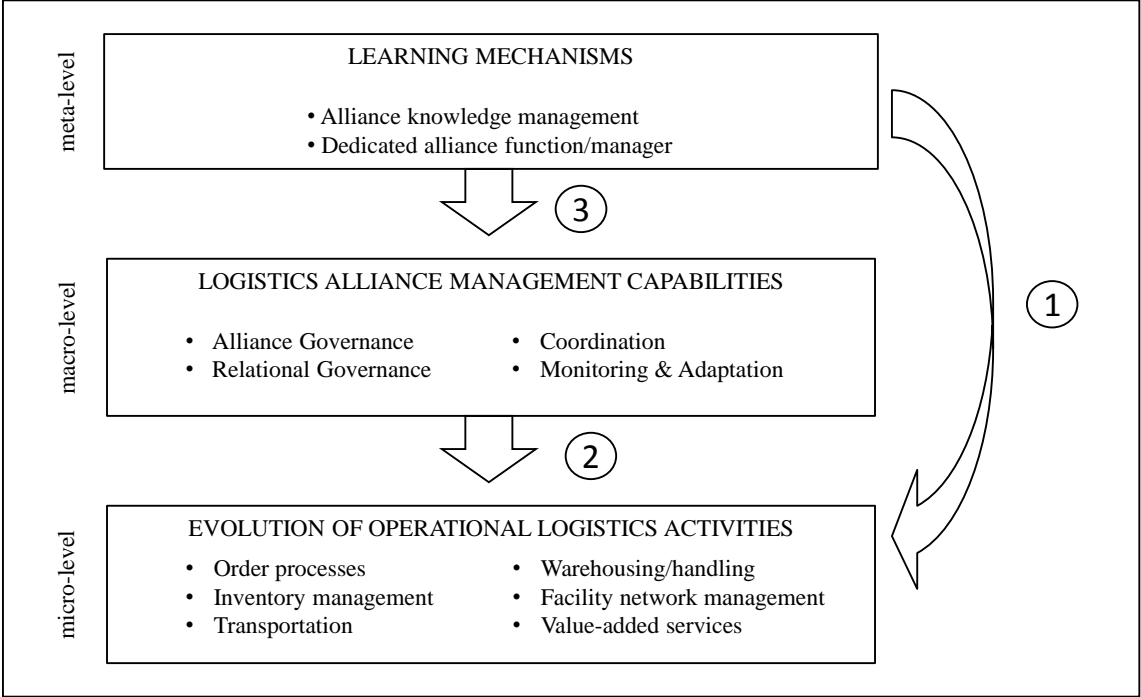
Based on the main drivers of logistics alliance success discussed in the logistics alliance literature (see Table 4) and the basic dimensions of DAMC (Zollo and Winter, 2002), the present paper proposes a specific three-dimensional LAMC model that illustrates how the general DAMC logic is specified to the logistics alliance context and how LAMC can explain improved logistics alliance success.

**Table 4 Overview of identified logistics alliance success factors, alliance management capabilities dimensions and derived logistics alliance management capabilities**

<b>Logistics alliance success factors</b>	<b>DAMC dimensions</b>	<b>LAMC dimension</b>
<b>Alliance governance</b> <ul style="list-style-type: none"> <li>• Partner(s) selection</li> <li>• Alliance type choice</li> </ul>	<b>Proactiveness</b> Identification of valuable alliance opportunities	<b>Alliance governance</b> <ul style="list-style-type: none"> <li>• Identification of valuable Partner and alliance type choice</li> </ul>
<b>Operational process design</b> <ul style="list-style-type: none"> <li>• Information exchange</li> <li>• Supply chain planning</li> </ul>	<b>Coordination</b> <ul style="list-style-type: none"> <li>• Synchronization of activities</li> <li>• Synergy realization</li> <li>• Information exchange</li> </ul>	<b>Coordination</b> Coordination and communication based on e-technologies
<b>Control and monitoring</b> <ul style="list-style-type: none"> <li>• Alliance performance</li> <li>• Alliance reorganization</li> </ul>	<b>Transformation</b> Change management	<b>Monitoring and adaptation</b> Monitoring and initiation of alliance modification
<b>Trust and commitment</b> <ul style="list-style-type: none"> <li>• Managerial behavior</li> <li>• Involvement</li> <li>• Conflict management</li> </ul>	<b>Relational governance</b> <ul style="list-style-type: none"> <li>• Openness</li> <li>• Trust</li> <li>• Commitment</li> <li>• Conflict management</li> </ul>	<b>Relational governance</b> Creation and maintenance of effective working atmosphere
	<b>Learning</b> Absorption, seizing and integration of new knowledge	<b>Learning mechanisms</b> Continuous improvement of alliance management capabilities through learning

The three layers of the LAMC model are: (1) *operational logistics activities* (micro-level) that deal with the execution of joint (alliance) logistics processes; (2) *logistics alliance management routines* (macro-level), which ensure effective alliance management and, therefore, alliance performance; and (3) *learning mechanisms* (meta-level) that aim to improve the firm's logistics alliance management routines continuously over time. The peculiarities of the logistics market result in differential requirements for the design of all LAMC dimensions. These peculiarities include the variety of supply chain actors and different logistics alliances constellations (LSPs, OEMs, combinations), the scope and diversity of logistics activities that call for a significant integration/coordination of joint logistics processes, analytical, dense and detailed information exchange and monitoring mechanisms, and the moderate velocity of this market characterized by detailed and analytical

routines based primarily on existing knowledge that is dependent on data and information systems (Eisenhardt and Martin, 2000). Figure 66 summarizes our model of LAMC as specified dynamic alliance management capability.



**Figure 6 Logistics alliance management capabilities model.**  
Based on general framework of Zollo and Winter (2002).

The *operational logistics processes* encompass order processes, inventory management, transportation, warehousing and handling, facility network management, and value-added services. The way in which these services are performed is mostly based on learned, stable, collective, and approved behavior patterns that result from tacit knowledge, prior experience, and organizational learning (Winter, 2003). Depending on the aim of a given alliance, a subset of these activities is performed within (or on behalf of) the logistics alliance (see micro-level in Figure 6). These activities require specific adaptations depending on the alliance partner(s) – either in the technologies used, the location or sequence of physical processes performed, or underlying informational processes. From an LAMC perspective, the execution of logistics



activities and their adequate adaptation relative to the specific alliance context is ensured and improved due to learning mechanisms over time (as illustrated by arrow 1 in Figure 6), which results in the micro-level foundation of LAMC. For instance, within a manufacturer-logistics service provider (LSP) alliance that either focuses on simple shipments, or on highly integrated operational activities (such as the assembly of doors within a customer's car manufacturing process), the effectiveness and efficiency of the logistics activities depends on the LSP's expertise in the respective activity and its adaptation to the specific customer. Prior alliance experience with the respective activity and partner(s) enables the LSP to improve its service offerings and joint work due to the knowledge it has gained about (a) specific customer's peculiarities, such as IT systems, processes, and procedures; and (b) potential opportunities, obstacles, and problem solutions within the operation of specific logistics activities, such as time-sensitive assembly of goods within a customer's process.

The performance of the operational logistics activities is impacted by a firm's logistics alliance management capability. In particular, the LAMC of a firm is reflected in the approved and effective execution of these operational activities and, more importantly, allows this execution to be adapted to the requirements of various alliance contexts, such as a manufacturer-LSP alliance or LSP-LSP alliance constellation, based on gained alliance knowledge (Eisenhardt and Martin, 2000) (see macro-level and arrow 2 in Figure 6). This logistics alliance management capability incorporates alliance and relational governance, coordination, and monitoring and adaptation routines. While *alliance* and *relational governance routines* are somewhat generic alliance management routines, the *coordination* and the *monitoring and adaptation routines* address peculiarities of logistics alliances, incorporating the high reliance on quality and the degree of data and information exchange, as well as control and monitoring mechanisms to steer the effective execution of the operational processes (named above), thereby improving the logistics alliance's performance.

Firstly, a firm needs *alliance governance routines* that ensure (a) a proactive search, identification, and evaluation of potentially valuable alliance opportunities (for example, vertical, horizontal or lateral alliances; bilateral or multi-lateral alliances); (b) the choice of an adequate relationship type (for example, joint venture versus contractual outsourcing relationship; exploitation versus exploration alliance); and (c) the clarification of goals, rules, responsibilities, and specific investments among the partner(s) (such as joint operational, service, or strategic improvements). These decisions define the fundamental organizational frame of the alliance, such as the alliance governance structure, and therefore strongly determine the execution and evolution of the alliance activities. Apart from these fundamental conditions, effective logistics alliance management requires *relational governance routines* that are individually adjusted to a firm's alliances and partners to create and maintain an effective working atmosphere among the partners in all of a firm's alliances involving trust, commitment, openness, and specific partner-oriented conflict management and managerial behavior. The attitude between partners will have a major impact on the degree and quality of information flow, the decision making method, and therefore the effectiveness of all operational alliance activities.

Because the performance of logistics alliance activities is highly dependent on the degree and quality of data and information flow and on the synchronization of supply chain activities, *coordination routines* are required in order to ensure effective information exchange and supply chain planning among partners. These routines involve a firm's ability and willingness to exchange information and to plan logistics activities with the alliance partner(s) that are effectively based on the utilization of e-technologies. This implies the implementation, use, maintenance, and alignment of data and information systems within the organization, as well as with the partners' technical requirements and standards. These systems, which include Efficient Customer Response (ECR), Vendor-Managed Inventory (VMI), Continuous

Replenishment (CR), Collaborative Transportation Management (CTM), and Collaborative Planning, Forecasting and Replenishment (CPFR) process related systems, allow for operational improvements, competency development, and learning between firms, and therefore increased operational performance and alliance success (Skjoett-Larsen et al., 2003; Smaåros, 2003; Thomas, 2010).

In order to leverage the coordination of joint activities and the use of e-technologies purposefully within their alliance operations, firms need specific *monitoring and adaptation routines*. These routines ensure that reasonable performance measures are defined, in areas such as financial, productivity, quality, and customer satisfaction (Kampstra et al., 2006), that are technically applicable and make it possible to interpret meaningful results out of the data pool provided. Therefore, adaptation routines are crucial for firms that require general openness and flexibility towards internal and external change requests, to develop and initiate alliance modifications, such as alliance governance or route planning changes based on measured alliance performance outcomes. In a manufacturer–LSP alliance, for example, the choice of an adequate alliance governance structure that includes a clear assignment of responsibilities, reward, and risk sharing instruments, significantly impacts the partners' motivation and commitment to the alliance, due to predefined consequences (beneficial or unfavorable). Such alliance governance structures necessarily differ across an LSP's various manufacturer–LSP alliances: depending on such factors as partner characteristics and preferences, the adequate adaptation and implementation of alliance governance structures to different alliance situations reflects a firm's LAMC.

Furthermore, the implementation of adequate monitoring measurements to identify optimization potential and error sources is necessary in order to develop and initiate practical implications, such as adjustments of existing IT systems for an improved information flow. In particular, the identified challenges within the alliance requires adequate behavior in terms of

communicating and interacting with the customer, allowing for changes in cases such as a customer's misuse of existing IT systems, through information meetings, trainings, or even penalties if no improvements occur over time.

In order to realize ongoing improvements of operational logistics activities performance, and therefore logistics alliances success over time, *learning mechanisms* as a high-order dynamic capability arising from prior alliance experience are needed (see meta-level and arrow 3 in Figure 6) to ensure continuous development, reflection, and adaptation of logistics alliance management routines and activities providing a dynamic perspective (Zollo and Winter, 2002). Because these learning mechanisms improve a firm's alliance management capability, and therefore alliance success, they yield practical implications for purposeful LAMC development and, consequently, constant logistics alliance success improvements. The strategic management literature has identified the implementation of an effective alliance learning process and the realization of a dedicated alliance function as practical, organizational measures that ensure the articulation, codification, sharing, and internalization of alliance management knowledge within the organization (Anand and Khanna, 2000; Kale et al., 2002; Kale and Singh, 2007) to enhance alliance success over time (Hofer et al., 2009; Zollo and Winter, 2002). In the logistics field, this can imply such developments as the extension of existing customer relationship management functions to incorporate a systematic alliance knowledge management as one of various logistics-oriented implications from the DAMC framework. For instance, a LSP that has cooperated or continues to cooperate with a shipper, with a focus on transshipment activities, has gained knowledge about areas such as technical requirements, potential obstacles, and improvement methods in this specific alliance setting; this enables the LSP to leverage this know-how in a new alliance or in the management of other alliances. In particular, if a LSP knows that the usage of a specific IT system or tool is one of the main alliance obstacles, it might institutionalize IT training with

its alliance partners from the outset in order to reduce potential error sources.

Furthermore, the logistics market is characterized by a variety of supply chain actors that primarily focus on logistics activities. Therefore, logistics alliances comprise different constellations (LSPs, OEMs, combinations) that might also be reflected in relevant facets of DAMC. The ability to identify and adjust opportunities for an alliance with a supplier from the perspective of an OEM will require different sets of monitoring measures and routines than the same aspects would in a LSP–LSP cooperation. Also, the logistics industry structure and market environments represent a rather moderate velocity market, which results in different requirements for the design of routines and, therefore, firm's capabilities. Eisenhardt and Martin (2000) suggested that this kind of market is characterized by detailed and analytical routines that are based primarily on existing knowledge. These tendencies towards analytical, dense, and detailed information exchange are already apparent in the high dependency of logistics alliance success on data and information systems and monitoring mechanisms.

### **3.5 CONCLUSION AND OUTLOOK**

Alliances are a relatively well-studied phenomenon in the logistics field. However, few studies have attempted to link logistics alliance performance to the existence of specific organizational capabilities of the involved firms. This finding is surprising given the insights that capability-oriented studies have been able to achieve in the strategy field, and it suggests valuable potential for an application in the logistics domain. This paper has proposed an initial model of logistics alliance management capabilities that provides a new perspective to the explanation of logistics alliance performance and success.

Substantial additional research efforts are required. As the number of theoretical and empirical contributions to the topic of DAMC is quite small, studies that follow a quantitative

research design will tend to base their construct operationalizations and measures on existing DAMC scales from the strategy literature. While this approach has some advantages, in terms of circumventing the arduous process of generating and validating logistics-specific measures of alliance capabilities, their explanatory contributions are likely to be of only a rather general nature, with few touch-points to logistics activities and processes. Due to the above-mentioned disadvantages of large-scale, quantitative studies, we suggest that explorative research designs are particularly useful at the current theoretical development stage of the DAMC concept in logistics (Dinwoodie and Xu, 2008; Gammelgaard, 2004; Naslund, 2002; Yin, 2003). An exploratory research design provides an open approach towards the identification of specific LAMC. The exploration of their design, organizational determinants, and interplay makes it possible to develop a logistics business-related construct and implications for managers to strengthen alliance success. Future research should build upon an explorative design in order to provide more in-depth answers to the following questions:

- What are the constitutive elements of a specific LAMC and how do these elements interact?
- What are the effects of differences in the design of these constitutive elements?
- How can LAMC be purposefully developed?
- What are impediments to the development and leverage of a firm's LAMC?

As DAMC are embodied in firm-specific alliance management behavioral patterns, routines, processes, and structures, case studies in the logistics industry provide promising research opportunities. In order to uncover the complex and evolving nature of the dynamic alliance routines, future data collection should benefit from discovery-oriented in-depth interviews with key informants in order to gain a deep and comprehensive understanding of their experience with regard to the specific logistics alliance context under investigation. Longitudinal case studies are suggested because of their ability to investigate contemporary

phenomena within their real-life, highly complex contexts over time (Wilhelm, 2011). Such longitudinal case analyses could focus on investigating firms' alliance management activities within the organization, such as the interplay with different internal stakeholders, or organizational mechanisms; externally with regard to the partner(s); as well as identifying continuous alliance modifications as a firm's LAMC impact to meet or create changes, either within the alliance constellation (such as new partner entrance) or externally in the environment (such as new technologies or market offerings).

Contrasting multiple-case designs (Yin, 2003) involving successful and less successful logistics alliances of firms competing in alliance intensive industries also seem to be fertile as they yield differences in a firm's LAMC by comparing these alliance-experienced firms. This makes it possible to identify and analyze relevant determinants of the suitability of alliance management capabilities. In addition, an investigation of the role of LAMC in different alliance types, such as exploration or exploitation relationships, is recommended in order to explore further differences in alliance management capabilities designs and modes of functioning. Overall, these avenues for further research will potentially enable scholars to gain additional results about logistics alliances and the role that dynamic capabilities play for their successful functioning. This conceptual paper has offered the first links between the capability research focus and the specific logistics functions and tasks.

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## **4. THE DYNAMICS OF LSP ALLIANCE FAILURES: A GROUNDED THEORY APPROACH**

### **4.1 ABSTRACT**

The paper explores the dynamics and mechanisms of alliance failure. Based on a case analysis employing the qualitative method of grounded theory, this research indicates that alliances between Logistics Service Providers (LSPs) fail due to an iterative self-enforcing process. This evolutionary process is marked by: (1) limiting alliance setup, (2) an inferior alliance structure, (3) non-satisfactory performance, and (4) stagnation and failure. The underlying mechanisms that drive LSP alliances through these stages towards failure consist of: (a) low partner dependence, (b) a lack of benefit allocation, (c) non-agreement on adaptations, and (d) a lack of alliance value. The self-enforcement of failure emerges as non-satisfactory performance, which reduces the likelihood of alliance adaptations. This limited alliance adaptability, however, fails to improve future alliance execution and performance, leading finally to alliance failure. The research provides an initial process-based conceptualization of LSP alliance failure. Accordingly, the research provides initial and valuable insights into the black box process of alliance failure which add to our existing understanding of LSP alliances and provide a promising starting point for further research. By explaining the drivers and their underlying mechanisms, this study helps alliance managers to develop meaningful implications to prevent alliance failure and improve alliance performance.

Keywords: Logistics business; Strategic alliances; Collaboration; Logistics service provider; Alliance evolution

## 4.2 INTRODUCTION

Over recent decades, horizontal alliances between LSPs have increasingly gained attention both in academia and in practice (Carbone, 2005; Cruijssen et al., 2007b; Long, 2015). LSP alliances as “*voluntary initiated, long-term relationships among autonomous LSPs... that strive for benefits that could not be achieved by the individual companies alone*” (Schmoltzi and Wallenburg, 2012: 54) allow partnering LSPs to cope with both the fierceness of competition in global markets and the pressure of increasing customer demands. Through horizontal alliances, LSPs increase their productivity, service portfolio and quality while reducing costs, yielding competitive advantages and thus improved market position (Carbone, 2005; Cruijssen et al., 2007b; Schmoltzi and Wallenburg, 2012). These alliance benefits emerge due to the realization of economies of scale (i.e., resource and knowledge sharing), economies of scope (optimized asset and capacity utilization, minimized empty mileage) and specialization in core activities (reduced costs of non-core/supporting activities). Prominent examples of LSP alliances can be found in the aviation industry (e.g., Star Alliance, Oneworld, SkyTeam), the maritime shipping industry (Midoro et al., 2005; Midoro and Pitto, 2000), and also increasingly in the freight market (Klaas-Wissing and Albers, 2010). According to empirical surveys, almost 60 percent of German LSPs engage in at least one horizontal partnership (Schmoltzi and Wallenburg, 2012) and over 30 formal LSP alliances are created solely in Belgium and the Netherlands (Cruijssen et al., 2007b). Despite the growing relevance of horizontal LSP alliances in practice, a large percentage do not meet the partners’ expectations, and may even be considered failures (Kampstra, 2006; Stank, 2001; Wilding and Humphries, 2006). Alliances are considered to be failures if performance expectations are not met, no value is created, and/or alliances “persist beyond their useful life” (Inkpen and Ross, 2001; Wittmann, 2007).

While scholars argue that LSP alliance failure may emerge due to the strong independence of and rivalry among partnering LSPs, yielding a high risk of opportunism and expressive management complexity (Rindfleisch, 2000; Schmoltzi and Wallenburg, 2012), the empirical evidence is very limited on LSP alliance management in general, and LSP alliance failure in particular. The only exception is Cruijssen et al.'s (2007b) initial attempts towards an explanation of LSP alliance failure by recognizing inter-organizational impediments (partner selection, a fair allocation mechanism, the unequal negotiation positions of partners, and information and communication technology (ICT)). The sparse literature on this phenomenon is surprising given the growing importance of horizontal alliances for LSPs and their impact on LSPs' value (Cruijssen et al., 2007b; Schmoltzi and Wallenburg, 2012). Among the reasons for this shortcoming are that logistics scholars have traditionally spent considerable effort in explaining mainly vertical logistics alliances, thus explaining major gaps in our understanding of horizontal LSP alliances. The initial scholarly work on LSP alliances emphasizes either: (a) the identification of success factors and their correlation with alliance outcomes (Krajewska et al., 2008; Schmoltzi and Wallenburg, 2011; Schmoltzi and Wallenburg, 2012; Wallenburg and Raue, 2011), or (b) the operationalization and quantification of costs savings based on simulation models and success stories (Chen and Chen, 2003; Cruijssen et al., 2007b; Wright et al., 2010), i.e., in the context of maritime shipping (Midoro et al., 2005; Midoro and Pitto, 2000) and the airline industry (Chen and Chen, 2003; Fan et al., 2001; Yan and Chen, 2007). Thus, the prior research recognizes the importance of horizontal alliances for LSPs' value, but very little is known about the dynamic process of alliance evolution, incorporating both alliance success *and* failure. The scarcity of the (empirical) research on LSP alliance failure causes a "process black box", resulting in an incomplete understanding and explanation of LSP alliances and how they evolve over time. However, given the widely acknowledged difficulty of alliance management yielding failure

rates of strategic alliances up to 70 percent (Zineldin and Bredenlow, 2003), it is crucial that both scholars and managers gain insight into the reasons for alliance failure (Wittmann, 2007). This holds true in particular for LSP alliances due to: (a) their high degree of independence and rivalry, and (b) the significant operational integration required to capitalize an alliance's potential, increasing managerial complexity and thus the likelihood of alliance failure. To avoid and cope successfully with the problems and risks accompanying LSP alliances, further research is needed on the dynamics of alliance failure, extending our understanding of LSP alliances and adding to our practical knowledge of how to management them (Lambert et al., 1999) and what is required for improving alliances (Wittmann, 2007).

To address this research gap in the dynamics of LSP alliance failure (Crujssen et al., 2007b; Zineldin and Bredenlow, 2003), I conduct a grounded theory-based case analysis. Based on the case study of THE ALLIANCE, a multilateral LSP alliance, I gain new insights into the process of LSP alliance failure by emphasizing its drivers and underlying mechanisms. As such, this paper advances horizontal LSP alliance theory and practice by taking an explorative view of the alliance failure process by considering its underlying mechanisms and their functioning over the whole alliance lifecycle. This process-based conceptualization of LSP alliance failure provides new insights into the mechanisms that drive an alliance towards failure and thus adds to our understanding of LSP alliance evolution. These findings help managers to develop meaningful implications to prevent failure and improve alliances' performance. Thus, the research results serve as a starting point for further research and for managers to take actions to prevent alliance failure and thus improve the likelihood of alliance success.

The study is structured as follows. The following paragraph synthesizes the current knowledge of horizontal LSP alliance management and failure. The next chapter describes the

research design based on an explorative case study of THE ALLIANCE, a multilateral LSP alliance. Following the qualitative method of grounded theory, the results that emerged from the data are reported in Section 4. Section 5 concludes with a discussion and considerations of further research.

### **4.3 FAILURE OF LSP ALLIANCES**

During the 1980s and going into the 1990s, vertical logistics alliances increasingly gained importance as firms began to outsource logistics functions to third parties to meet increasing customer demands for speed, reach, quality and affordability of logistics services (Bowersox, 1989; Daugherty, 2011; Ellram and Cooper, 1990). Horizontal LSP alliances as “voluntarily initiated, long-term relationships among autonomous LSPs that operate on the same stage of the supply chain... [and] strive for benefits that could not be achieved by the individual companies alone” (Schmoltzi and Wallenburg, 2012: 54 ) emerged more recently. LSPs as “companies which perform logistics activities on behalf of others” (Delfmann; et al., 2002: 204) build horizontal alliances primarily for two reasons: first, to realize efficiency gains through the optimization of capacity and inventory management (Cruijssen et al., 2007b), and second, to improve customer service by pooling complementary assets, resources and competencies, such as, LSPs’ geographic networks (Cruijssen et al., 2007b; Schmoltzi and Wallenburg, 2011). Due to these potential benefits, alliances allow the LSPs involved to generate competitive advantage. Meanwhile vertical LSP relationships are traditionally differentiated among the chosen governance structure (transactional versus partnership-based agreement) (Daugherty, 2011) or their degree of partner integration (operational versus strategic partnerships) (Lambert et al., 1999; Mortensen and Lemoine, 2008; Stefanson, 2006). More recently, Schmoltzi and Wallenburg (2011) conceptualized LSP alliances as multidimensional systems varying in terms of their contractual, organizational, functional, geographical, service and resource scope.

The management of LSP alliances as cooperative endeavors among autonomous LSPs is not based on legal entities. This informal and non-hierarchical nature of alliances differs significantly from the governance of organizations, M&A or equity-based cooperation. Alliances (as social networks) build on “pro-social feelings and acts of reciprocity, rather than relations of dominance” (Bunge, 1996: 271).

In general, the challenge of multilateral alliance management lies in the coordination of interactions among independent partners without the benefit of a hierarchical authority in order to create and extract alliance value (Dhanarag and Parkhe, 2006; Grandori and Soda, 1995). Given the strong rivalry among partnering LSPs acting as (either close or distant) competitors in the market, the complexity of LSP alliance management even increases as the tension between cooperation and competition is balanced (so called “co-opetition”) to secure the collective pursuit of alliance goals and expected behavior.

Despite these idiosyncrasies of LSP alliances, the research on horizontal LSP alliances has emerged only recently (Cruijssen et al., 2007a; Schmoltzi and Wallenburg, 2011). While horizontal alliances have definitely gained increasing attention in logistics research, the prior research primarily emphasized the identification of either specific outcomes (based on analytical and simulation studies) or performance impact factors within the context of LSP alliances (see Table 5 for an overview). However, their isolated identification and definition of static antecedents (Cruijssen et al., 2007b; Midoro and Pitto, 2000; Schmoltzi and Wallenburg, 2011, 2012) fails to explain how and why LSP alliances evolve (either successfully or not) over time. For example, Cruijssen et al. (2007b) identify four major impediments of horizontal LSP alliances (partner selection, determining and dividing the gains, unequal negotiating positions of partners and ICT). Assuming the negative impact of



these factors on alliance performance, their study lacks further clarification of the underlying processes of how and why these (supposed) negative alliance outcomes emerge.

**Table 5 Overview of impact factors on LSP alliance performance**

<b>Categories and dimensions of impact factors</b>	
Partner selection	<ul style="list-style-type: none"> <li>• Resource scope (Crujssen et al., 2007c; Midoro and Pitto, 2000)</li> </ul>
Alliance structure	<ul style="list-style-type: none"> <li>• Legal form (contractual agreements; joint ventures; minority stakes) (Evangelista and Morvillo, 1999)</li> <li>• Organizational complexity (number of partners, nature of their role and contribution, level of mutual trust, task complexity) (Midoro and Pitto, 2000)</li> <li>• Degree of (contractual) formalization (Evangelista and Morvillo, 1999; Makukha and Gray, 2004; Schmoltzi and Wallenburg, 2011; Schmoltzi and Wallenburg, 2012; Tate, 1996)</li> </ul>
Alliance management	<ul style="list-style-type: none"> <li>• Degree of partner integration (Evangelista and Morvillo, 1999; Hernández et al., 2011),</li> <li>• Cost/synergy allocation (Krajewska et al., 2008)</li> <li>• Joint route planning (Crujssen et al., 2007b; Park, 1997).</li> </ul>
Alliance control	<ul style="list-style-type: none"> <li>• Performance measurement (Van Hoek and Mitchell, 2006; Zineldin and Bredenlow, 2003)</li> </ul>

Moreover, the extant strategic management literature on alliance evolution, and in particular on alliance failure, remains sparse (Wittmann, 2007). Only a few evolutionary models of alliance evolution exist. Among them, the most prominent conceptualizations are those of Ring and Van de Ven (1994) and Doz (1996). These conceptualizations identify and define alliance drivers, such as governance structure, trust and risk (Ring and Van de Ven, 1994), or initial conditions, learning, re-evaluation and revised conditions (Doz, 1996). Furthermore, Wittmann (2007) identifies various drivers of alliance failure (different kinds of managers' decisions) and conceives of them (rather obviously observable) as developmental stages of alliances (strategic planning, partner selection, termination). However, I argue that these

evolutionary conceptualizations are not sufficient to understand and explain the process of LSP alliance evolution (whether success or failure).

A promising approach to the explanation of a process provides in general for the concept of social mechanisms (Pajunen, 2008), which holds true for LSP alliance failure processes. Mechanisms are processes that activate or prevent some change in a concrete system (Bunge, 1997), such as an alliance. Thus, mechanisms help to understand observed relationships as they explain “how and/or why one thing leads to another” (Anderson et al., 2006: 103). Thus, the mechanisms-based approach turns out to be a solid vehicle for shedding light on the black box process of LSP alliance failure. It allows us to explain and articulate the causal linkages within the processes that drive alliance failure (i.e., understanding the processes by which X causes Y (Anderson et al., 2006)). As such, I overcome the shortcomings of the prior research on the identification of individual alliance variables (stating that X causes Y). The proposed mechanisms-based conceptualization provides a more comprehensive picture of the overall LSP alliance failure process.

#### **4.4 RESEARCH DESIGN**

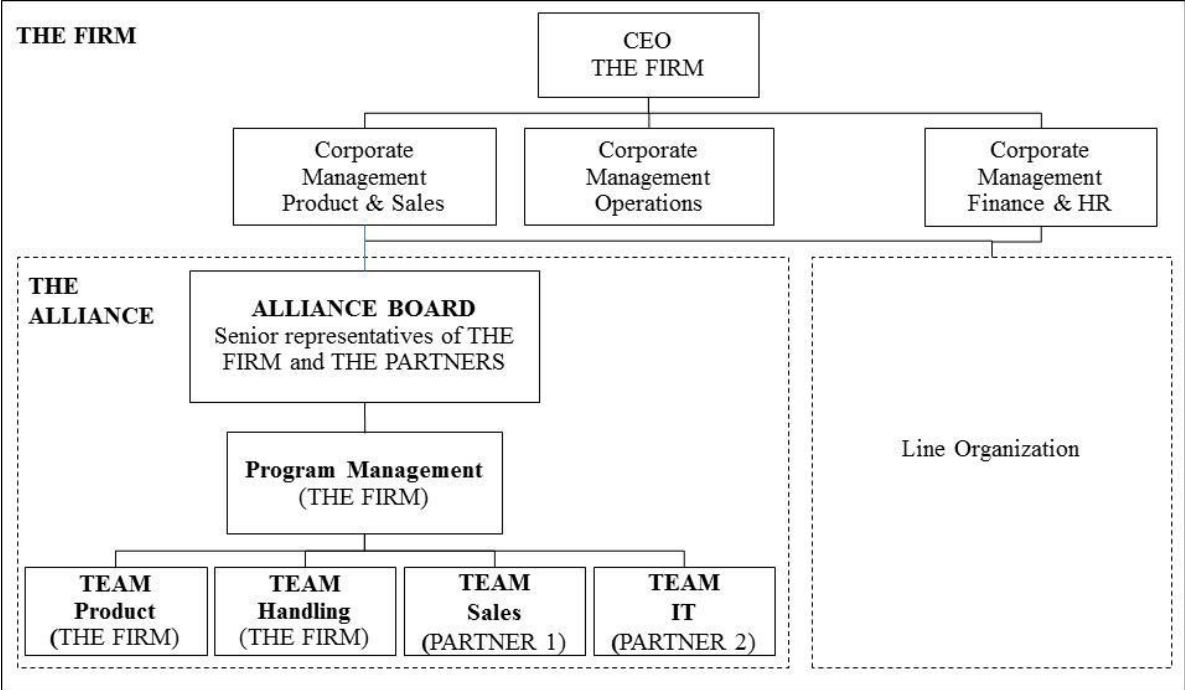
I conducted an explorative study employing the qualitative method of grounded theory formulated by Glaser and Strauss (1967) and Strauss and Corbin (1998) to elaborate upon, expand existing findings and generate new insights (substantive data-based theory). Accordingly, I provide relevant predictions, explanations, interpretations and implications for the under-investigated phenomenon of LSP alliance failure. Since case studies allow the gaining of new insights into underexplored research areas (based on rich the detail which is only provided by founders and participants) (Weick et al., 2005; Yin, 2003), I conducted an intensive case study of THE ALLIANCE – a multilateral alliance between LSPs – from the perspective of a focal firm (in the following, called THE FIRM). The data analysis followed

grounded theory methods, allowing for the purposeful investigation of processes and their evolving nature (Langley, 1999; Glaser and Strauss, 1968; Maurer and Ebers, 2006). Thus, grounded theory turned out to be a particularly useful method for uncovering and examining the dynamics of the LSP alliance failure process and its underlying mechanisms, effects and interplay over time. In addition, this research design corresponds to the emerging call from operations management research for more qualitative research methods to: (1) systematically observe and incorporate real-life situations and/or problems, and (2) develop (new) theories and models rather than only testing them (Kumar and Nathwani, 2012; Lavie and Miller, 2008).

#### **4.4.1 Sample: The case of THE ALLIANCE**

The ALLIANCE was a voluntary agreement between THE FIRM and two — after two years between three — other international freight carriers (in the following, called THE PARTNERS). The partnering LSPs aimed to increase customer value and each other's profitability through a jointly operated seamless global network, and they harmonized products and processes, promising competitive advantage for all alliance members. THE ALLIANCE was completely and collectively governed by the alliance members themselves. This so-called “participant governance” (Provan and Kenis, 2008: 234) was formally accomplished through a dedicated alliance project team consisting of an alliance board (THE ALLIANCE BOARD) and five sub-teams (THE ALLIANCE TEAMS) staffed equally with designated experts of the partnering LSP organizations. These ALLIANCE TEAMS reported directly and exclusively to the ALLIANCE BOARD (illustrated in Figure 7). THE ALLIANCE BOARD was collectively responsible for the alliance’s management and decisions-making based on symmetric power relations among the partnering LSPs (irrespective of differences in the partners’ organizational sizes, resource capabilities or performance). It met regularly every two-to-three months and functioned as a final decision-

making and escalation committee in charge of the alliance and for reporting to the individual corporate managements. THE ALLIANCE BOARD dedicated a central program manager who made decisions that were representative of all the partners and steered the four ALLIANCE TEAMS. These equally staffed teams focused on partner harmonization (in terms of products, handling, IT systems, sales and, after two years, also networking), striving for the conceptualization and implementation of the alliance’s opportunities. THE ALLIANCE TEAMS met physically every six weeks in Europe or Asia, held audio conferences weekly, and constantly exchanged information via email and telephone. The lead positions (the central program manager and team leaders) were equally shared and rotated every two years among the partnering LSPs. However, THE ALLIANCE did not, in the end, succeed in yielding the slow downscaling of alliance interactions after four years. In its ninth year, THE FIRM officially resigned from THE ALLIANCE (after three years of hold-up).



**Figure 7 The organization of THE ALLIANCE**

#### **4.4.2 Case relevance of THE ALLIANCE**

The ALLIANCE is a particularly relevant case for exploring the dynamics of LSP alliance failure. First, the ALLIANCE represents one of the alliance types which is acknowledged as exhibiting the highest complexity, volatility and failure rate, as it comprises international competitors, on the one hand, and requires a significant degree of partner integration, on the other hand, to perform a joint logistics system globally based on highly integrative operational interactions. Second, THE ALLIANCE provides a complete picture of an LSP alliance's evolution over an entire alliance lifecycle, allowing for the capture of the evolutionary process of alliance failure required for gaining new insights into its underlying dynamics, their mechanisms and interplay. Third, access to former participants from different organizational functions, managerial levels and partner firms allowed for obtaining diversified, detailed and valuable insights, thereby providing a solid database for theory development (see Table 7). In addition, THE ALLIANCE exhibited interesting and well-known success factors (in both the logistics and strategic alliance management literature) in the beginning, such as strong top-management commitment and the implementation of a dedicated alliance function (Kale et al., 2002), raising the question as to why THE ALLIANCE did not succeed in leveraging these favorable initial conditions and failed in the end. Overall, THE ALLIANCE represents a particularly relevant case for investigating the current study's object of interest in depth and to elaborate as to how and why THE ALLIANCE evolved over time. In doing so, this case study contributes to the "process gap" and to the existing understanding of LSP alliance failure in the literature.

#### **4.4.3 Data collection**

Grounded theory, as with the generation of data-based theory, builds on the simultaneous and iterative collection, codification and analysis of empirical data (Glaser and Strauss, 1967). To secure the relevance of the collected data, I applied the method of theoretical sampling

whereby the process of data collection is controlled by the emerging theory (in the form of: What data needs to be collected next, for what theoretical reason, and by which comparative group?) (Glaser and Strauss, 1967). I considered THE ALLIANCE TEAMS as the first comparative group for the analysis of logistics alliance failure due to their theoretical relevance for the alliance's management and evolution. Based on the initial key categories emerging from the comparison among THE ALLIANCE TEAMS (e.g., between different focus teams, such as IT and Product), I selected further comparative groups THE ALLIANCE BOARD and THE FIRM, to elaborate on and interrelate emerging categories and their properties, striving for theoretical saturation (no generation of additional data that would allow for the development of further category properties). The data collection took place from June 2011 and November 2012. The primary data sources for theory generation were 20 semi-structured, face-to-face interviews (except for two telephone interviews), lasting between one and four-and-a-half hours. These (audio-recorded and transcribed) interviews were guided around open questions aiming to gather data about the research question: Why did the LSP alliance fail? (see Table 8 for the interview structure). Due to these loosely framed interviews, I remained open throughout the data collection to aspects of alliance failure that my informants defined as important and valuable, providing insights into the evolutionary failure process. While the 20 interviews were the primary data source for this study, I referred to further sources of evidence (Yin, 2003) by also including archival data (newspapers, market reports) and internal presentations, memos and documents, including written corporate long-term plans concerning the objectives and milestones of THE ALLIANCE. These sources proved useful for providing and verifying context in relation to the interviewees' statements. To meet Lincoln and Guba's (1985) criteria for credibility, I discussed the preliminary research results with selected interview partners (member-checking as a trustworthiness

technique) (see also Amit et al., 1993) as well as with scientists and market experts at various stages in the study.

**Table 6 Overview of conducted interviews**

Management level	Informant level	THE ALLIANCE BOARD/TEAMS	THE FIRM	Sum
Top management (Executive Board Member/ President/ Senior Program Manager)	(Senior) Vice	5*	4	9
Operational management (IT, Sales, Product, Handling, Network)		10**	1	11
Sum of interviews		15	5	20

\* Includes one interviewee from one of the allied LSPs.

\*\* Includes two interviewees from one of the allied LSPs.

**Table 7 Interview Guideline**

Interview structure	Questions
A. General information about the individual participation in THE ALLIANCE	Please describe your participation in THE ALLIANCE.
B. Alliance goals	What were the alliance goals?
C. Problems in THE ALLIANCE	Which problems did you face in pursuing the alliance goals, and why? How did you address these problems? Did you succeed or not, why?
D. Alliance performance	Why was THE ALLIANCE terminated ultimately?

#### 4.4.4 Data analysis

The data analysis process occurred in parallel to the data collection and followed the method of grounded theory formulated by Glaser and Strauss (1967) and as applied by several others (Isabella, 1990; Suddaby, 2006). Following constant comparative analysis, the data and the theory were permanently compared and contrasted throughout the process of data collection and analysis to yield diversified, data-based theoretical conceptualizations (Glaser and

Strauss, 1967). By comparing emerging incidents with previous codified incidents or properties of a category (within and across different groups), I gained insights and findings from the data (such as underlying similarities, differences and patterns), allowing me to develop increasingly more abstract conceptual categories and properties. The emerging theoretical conceptualization was constantly reflected for its suitability as an analytical framework for more recently collected data, resulting in permanent reconceptualization — often based on the researcher’s theoretical sensitivity (Isabella, 1990; Suddaby, 2006). Through the constant comparison of the emerging data and the theory, the research results should yield a relevant data-based theory.

In this study, the process of theory generation began during the data collection phase at THE ALLIANCE. In an initial step, I assigned the data to an emergent code scheme based on the research question: What were the dynamics of alliance failure and how did they work? As such, the initial codes used to structure the data were problems faced within the alliance management process, their rationales and consequences for the alliance’s evolution. I constantly modified these initial codes by comparing them with new incidents, eliminating old ones and integrating new ones, to identify and develop relevant categories and their properties. For example, the category “non-satisfactory performance” emerged as the interviewees stated that the lack of significant alliance benefits added to alliance failure. By constantly comparing how the involved parties (within and across different comparative groups) evaluated the alliance’s performance, I identified that alliance performance evaluation underlies different attributes and that it may change over time. The comparative analysis across different groups indicates in which circumstances (e.g., the design of incentive systems, corporate cultures, alliance tasks) I find different kinds of alliance performance evaluation. Table 9 outlines the increasing integration and reduction of the initial codes into more relevant aggregated dimensions. The final results of this analysis process reveal that



alliance failure emerges due to an iterative self-enforcing process marked by four different development stages and mechanisms. These findings are presented in the following section.

**Table 8 Structure of the grounded theory analysis – emergence of dimensions**

First-order codes	Second-order codes	Aggregate dimension
<p>Complementarity of:</p> <ul style="list-style-type: none"> <li>• Geographical networks (number of additional destinations, countries, customer markets)</li> <li>• Assets (warehouses, means of transportation)</li> <li>• Product portfolio and customer services (frequencies, capacities, value-added services)</li> </ul>	Limited partner complementarity	<b>Limiting alliance setup</b>
<ul style="list-style-type: none"> <li>• Different business philosophies (market perception, strategies, goals)</li> <li>• Different corporate cultures (i.e., decision making styles, communication modes and control systems)</li> </ul>	Organizational incompatibility	
<ul style="list-style-type: none"> <li>• Lack of antitrust immunity</li> <li>• Different antitrust immunities with the partnering LSPs</li> </ul>	Competition law	
<ul style="list-style-type: none"> <li>• No agreement on mutual assessment criteria and equity share through the negotiation process</li> <li>• Collective authority and shared responsibilities (joint steering committee)</li> <li>• No-binding commitment (lack of specification and codification of partner contributions) but mutual stated alliance commitment (reflected in the allocation of human capital; top management statements)</li> </ul>	Shared alliance governance	<b>Inferior alliance structure</b>
<ul style="list-style-type: none"> <li>• Strong partner integration in a dedicated alliance team</li> <li>• Limited/occasional integration of internal experts/decision-makers</li> <li>• Structure of the dedicated alliance team (complexity, organizational embeddedness, authority structure within the line organizations)</li> </ul>	Weak involvement	
<ul style="list-style-type: none"> <li>• Output formalization focusing on milestones of partner integration (e.g., harmonization of products and processes)</li> <li>• Lack of <i>a priori</i> defined product and process standards but ongoing harmonization pursued by the alliance teams through benchmarks, negotiations and conceptualization</li> <li>• Lack of formalized control systems (<i>a priori</i> commonly agreed-on performance measures; lack of standardized monitoring processes; lack of reliable and effective control of each other's alliance behavior and outcomes)</li> <li>• Lack of common/insufficiently aligned IT systems (limited data exchange), such that the processes of interactions fail with logistics business requirements (time, costs, efficiency, reliability, transparency)</li> </ul>	Lack of common work standards	
<ul style="list-style-type: none"> <li>• Lack of tangible results (increases in sales, asset utilization)</li> <li>• Occasional success stories</li> </ul>	Efficiency	<b>Non-satisfactory performance</b>
<ul style="list-style-type: none"> <li>• Perceived reciprocity among allied LSPs (comparison of one's own contributions with a partner's investments (time, efforts, human capital investments))</li> <li>• Complains about a lack of formalized revenue sharing (joint cash box)</li> </ul>	Equity	

<ul style="list-style-type: none"> <li>• Strategic changes to overcome impediments (significant investments, decisions taken, risks taken)</li> <li>• Perceived adjustments to and treatment of escalated problems and shortcomings (IT, joint cash box, antitrust) over time</li> </ul>	Adaptability	
<ul style="list-style-type: none"> <li>• Actions taken without significant effects (new partner, alliance goals shift on cost aspects, implementation of a new network team)</li> <li>• No or insufficient change of the initial alliance set-up fails to address shortcomings in the partner constellation and alliance structure</li> <li>• Repeat dissatisfaction with alliance performances</li> </ul>	Lack of strategic changes	<b>Stagnation and failure</b>
<ul style="list-style-type: none"> <li>• Strategic fit between alliance and corporate needs (analysis, personal perception)</li> <li>• Personal/corporate experiences with prior alliances and bilateral cooperation (own corporate history, emerging success stories of alliances in related industries)</li> <li>• Personal friendship among founders</li> </ul>	Lack of commercial/strategist dependence	<b>Low partner dependence</b>
<ul style="list-style-type: none"> <li>• Misaligned corporate incentive structure (alliance only secondary priority, alliance targets are not measured/do not count for personal targets)</li> <li>• Self-confidence/ego: strong identity with the parent firm emphasizes the priority of one's own product; process and service solutions neglecting alliance agreements</li> </ul>	Interest conflicts	<b>Lack of benefit allocation</b>
<ul style="list-style-type: none"> <li>• Uncertainty about reciprocity</li> <li>• Fear of negative personal and/or economic consequences</li> <li>• Perception of alliance goals as being unrealistic; demotivation</li> <li>• Threat of "doing something wrong" (lack of antitrust, protection of strategic resources and knowledge) causes resistance and change aversion</li> </ul>	Uncertainty	
<ul style="list-style-type: none"> <li>• Limited willingness to compromise among the involved parties (prioritization of individual benefits)</li> <li>• Ongoing discussions and negotiations (individual targets, expectations performance evaluations) are timely and costly</li> </ul>	Lack of consensus	<b>Non-agreement on alliance adaptations</b>
<ul style="list-style-type: none"> <li>• Alliance leader's decisions/activities depend upon the parent firm</li> <li>• Delayed or ineffective decision-making processes in the alliance board</li> <li>• Instability of alliance commitment/decisions taken due to changes in the external environment and/or shifts in the parent firms' strategies</li> </ul>	Parent firm dependence	
<ul style="list-style-type: none"> <li>• Lack of significant investments or decisions regarding alliance modifications</li> <li>• Continuous escalation of already-known impediments in alliance execution (i.e., IT, joint cash box, capacity management)</li> </ul>	Lack of improvements	<b>Lack of alliance value</b>
<ul style="list-style-type: none"> <li>• Downscaling or refusal of strategic decisions (based on concepts and problem-solutions developed by the dedicated alliance teams) causes frustration</li> <li>• Arising doubts about the alliance's advantages and top management's commitment given the lack of required decisions/investments</li> <li>• Diminishing efforts and priority of alliance initiatives in daily business</li> </ul>	Frustration with performance	
<ul style="list-style-type: none"> <li>• Lack of structural power creates an instable alliance mandate (dependent upon top management's commitment, prior alliance performance, parent firms' priorities)</li> <li>• Use of a personal network for convincing people to support the alliances</li> <li>• Shift of responsibilities in regional centers and their leading managers</li> <li>• Loss of credibility due to past performances</li> </ul>	Diminishing mandate	

## **4.5 RESULTS**

As with other inter-organizational relationships, the evolution of LSP alliances (both success and failure) depends upon a set of initial conditions (Doz, 1996; Ring and Van de Ven, 1994) and their subsequent structural governance and management towards specific alliance goals. The findings of THE ALLIANCE reveal that, in the case of failed LSP alliances, these three drivers are somehow limited in their functioning, explaining the dynamic process of alliance management failure. This process of LSP alliance failure is marked by four stages: (1) limiting alliance setup, (2) inferior alliance structure, (3) non-satisfactory performance, and (4) stagnation and failure (see Figure 8). These stages are driven by specific underlying mechanisms, leading from one stage to another, and resulting in a self-enforcing failure process of LSP alliances. In the following, I explain these four development stages in detail before I elaborate upon the underlying mechanisms (in the next section) which cause the evolution of an alliance from one stage to another, thereby driving the alliance failure process. This combined perspective/analysis provides new insights into both the reasons for and the dynamics of LSP alliance failure by shedding light on the “process black box” of LSP alliance failure.

### **4.5.1 The four stages of the alliance failure process**

#### ***(1) Limiting alliance setup***

The limiting alliance setup among partnering LSPs emerged due to the: (i) The limited complementarity of the partners’ resources and competencies, (ii) Organizational incompatibilities, and (iii) Competition law constraining the cooperative interactions among them.

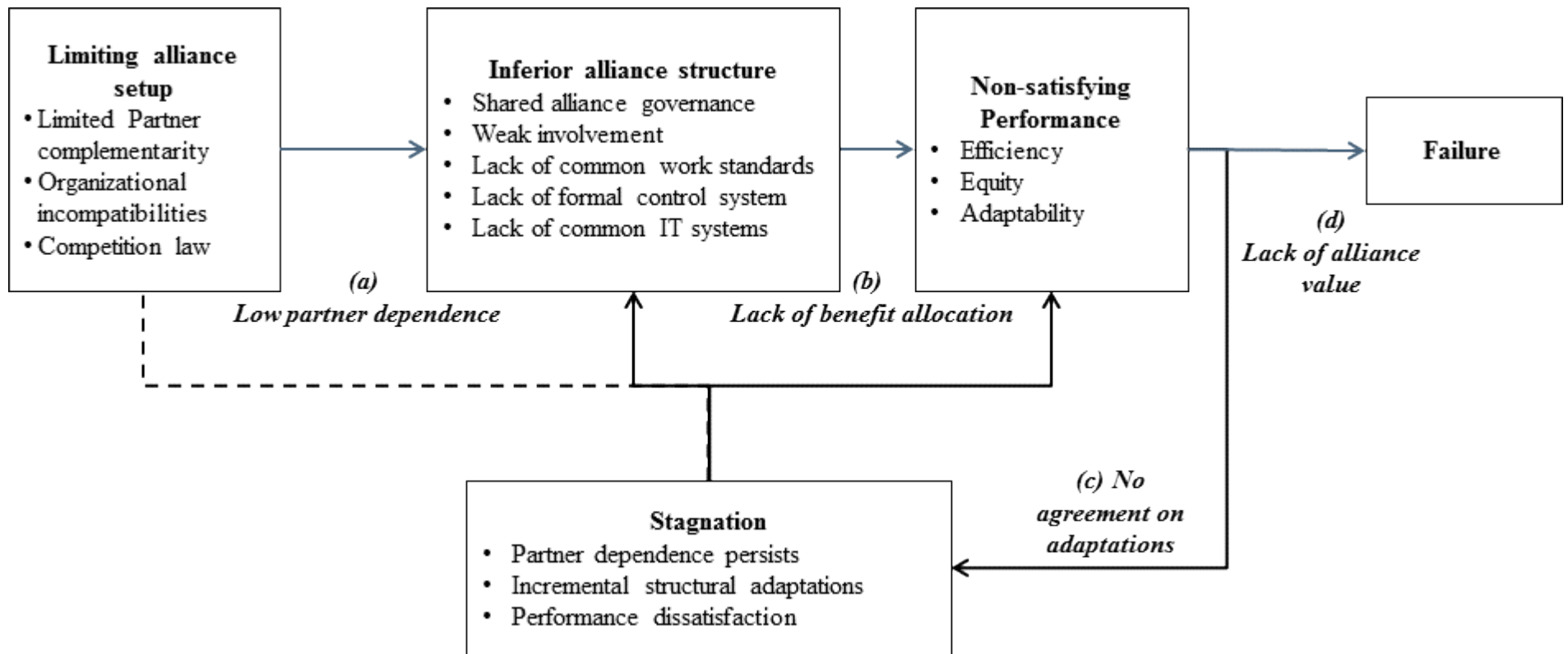


Figure 8 The dynamic process of LSP alliance failure

*(i) The limited complementarity of the partners' resources and competencies*

LSP alliances are motivated by increases in LSPs' service offerings and/or efficiency through pooling and leveraging each other's resources and competencies among partnering LSPs. In the case of THE ALLIANCE, the partnering LSPs aimed to search for and develop joint alliance opportunities. A FIRM representative explains: *"The spirit was more like - we want to see what we can do together - how we can position ourselves in the market, what additional value can we offer to the customer? That did function pretty well overall"* (THE FIRM). However, it turned out that the creation of alliance value depends strongly on the complementarity of the LSPs' contributions. This complementarity is significantly limited in the case of the high similarity of LSPs' geographical networks. A high degree of similarity of LSPs' geographical coverage minimizes the LSPs' potential for geographical extension and the commercialization of additional destinations; however, it allows for greater frequency and capacities. In THE ALLIANCE, three of the four partnering LSPs provided a similar global network, varying only in their home market coverage. Therefore, THE ALLIANCE provided them only with a very limited number of new destinations, minimizing the alliances value for them: *"If I have a network that is so far self-sufficient and requires connections only in a few destinations, and the partner has the same network, then there won't be any interfaces and no demand"* (Manager of the ALLIANCE TEAMS). Moreover, the benefits of additional frequency and capacity were less than expected, as the joint management of the capacities and inventories among the allied LSPs remained limited. The reasons behind this were primarily legal and technical constraints, but also the partners' hesitance to share strategic resources and competencies, such as IT know-how, networks and revenue management, with competitors. Thus, the partnering LSPs failed to build commercial dependence on each other, despite the potential alliance's value.

*(ii) Organizational incompatibilities*

Organizational compatibility refers to the “psychological distance” (Grandori and Soda, 1995: 187) between partnering firms based on the distance of their organizational profiles measured by their operating strategy, corporate culture, management style, nationality (Parkhe, 1993) or even firm-size (Schmoltzi and Wallenburg, 2011). The research revealed that differences in business strategies and activities among partnering LSPs hampered the effective execution of the alliance. In particular, the firm’s legal set-up (an autonomous organization with its own profit center and its business strategy (freight management as a core competence; asset or asset-free carrier) had a strong impact on the partners’ business priorities, e.g., in terms of customer services, handling and training standards. As one manager stated it, differences in business philosophies imply “*completely different starting points and accordingly completely different expectations about the whole topic (of THE ALLIANCE). That made a lot very difficult-to-impossible, causing a lot of discussions*” (THE FIRM). In addition, differences in the partners’ corporate cultures (also driven by national cultures) caused misunderstandings, inefficiencies (both effort- and time-wise) and bounded the alliance’s execution until the involved parties became familiar with each other’s internal processes, i.e., of decision-making, communication and negotiation. These drawbacks increased the time and effort spent on dealing and cooperating effectively with each other (e.g., through frequent personal meetings/social events of THE ALLIANCE TEAMS). Overall, organizational compatibility increases the risks of misunderstandings and mistrust, hampering the effective coordination of interactions and thus driving alliance failure.

*(iii) Competition law*

Competition law (also known as antitrust law) strives to maintain market competition by regulating anti-competitive conduct by companies and may drive LSP alliance failure. Legal ramifications gain in importance with increased levels of partner integration in LSPs

businesses, reflected in, e.g., joint strategic planning, pricing or capacity sharing and/or revenue management. My research results revealed that LSP alliances that require antitrust immunity but which cooperate (enforced or voluntarily) without legal permission are limited in their cooperative activities, and thus in their alliance's value creation. As LSP alliances without antitrust immunity run the risk of being alerted by regulatory agencies, they need to exercise significant care in performing inter-firm activities, causing uncertainty among the alliance's executives (in terms of what it is allowed to do). Overall, the findings reveal that, depending upon the specific alliance's situation and partner composition, legal regulations may limit the activities and processes of LSP alliances. The regulatory agency will be alert to impede the likelihood of illegal agreements among the partnering competitors. The risk of falling under competition law increases in the case of horizontal alliances between competitors, such as multilateral LSP alliances, due to the potential creation of monopoly market situations or illegal price agreements.

## ***(2) Inferior alliance structure***

Organizational structures divide labor into distinct tasks which need to be performed and coordinate these tasks within systems (Mintzberg, 1979), such as alliances. In the present case of LSP alliance failure, the alliance structure remained inferior based on: (i) shared alliance governance, (ii) the weak involvement (of both internal and external parties), (iii) a lack of common work standards, and a lack of (iv) formal control systems and (v) common IT systems. As such, THE ALLIANCE failed to steer the behavior and outcomes of the involved parties effectively towards the accomplishment of common alliance goals.

### ***(i) Shared alliance governance***

Shared alliance governance refers to the equal involvement of all allied partners in the alliance governance process (Provan and Kenis, 2008). THE ALLIANCE was marked by a collective decision-making authority allocated in the executive ALLIANCE BOARD (vertical

centralization (Albers et al., 2013)). All the members were collectively responsible for the decisions and activities of the alliance exclusively based on their commitment and involvement. However, my findings reveal that the effectiveness of this shared alliance governance was challenged by the low degree of independence among the partnering LSPs, allowing for conflicts of interest, opportunistic behavior and change aversion. While the shared alliance governance structure facilitated effective partner interactions on the strategic alliance level (in THE ALLIANCE TEAMS), it failed in steering the partners' interactions on the operational level (in THE FIRM) in response to the threat of opportunistic behavior.

*(ii) Weak involvement*

Involvement refers to the strength of ties among the involved individuals, both from within the firm and among partnering organizations, varying in their scope, density and activity. In the case of THE ALLIANCE, the dedicated ALLIANCE TEAMS, as means to improve and to coordinate alliance activities (Albers et al., 2013; Kale et al., 2002), built the central attachment and connection among all the involved individuals (internal and external parties). A TEAM member summarized thus: *“Each team had physical meetings. We had video conferences and communicated a lot via email or phone. We had conference calls regularly and exchanged documents. There have been very regular steering committee meetings”* (THE ALLIANCE). While these TEAMS covered all the relevant areas of logistics activities (sales, marketing, handling, IT and (later on) networks), this involvement concentrated on individuals from the strategic management level of the partnering LSPs. Through intensive, personal interactions between the involved individuals from the partnering LSPs fostered via regular personal meetings (every six weeks) and exclusive social events (e.g., excursions and leisure activities), the ALLIANCE TEAMS built up mutual understanding and trust, and created a shared identity with THE ALLIANCE over time. This psychological linkage to each other (process of social integration (Weick, 2013)) helped to reduce mistrust and



misunderstandings and the (perceived) threat of opportunistic behavior. As such, the dense integration of the involved individuals from the partnering LSPs increased the effectiveness of the alliance's activities and promoted stability and equity in the ALLIANCE TEAMS. Overall, the central integration of the involved parties with the ALLIANCE TEAMS facilitated intensive cooperation activities at the strategic level of the alliance. However, it proved to be weak in steering more operational alliance activities at lower hierarchical levels among both internally and externally involved parties.

*(iii) A lack of common work standards*

The standardization of work processes understood as standards for guiding doing the work itself (work orders, rules and regulations, etc.) plays a crucial role in the effective coordination among the independent partnering firms and the creation of overall alliance value (Mintzberg, 1979). THE ALLIANCE built upon output formalization (specifications of interaction outcomes) to coordinate the interactions among the allied LSPs. However, this output formalization was revealed to have a significant drawback. While the final outcomes were specified, concrete work processes, standards, rules and manuals which steered the operational interactions, customer services and capacity management among the allied LSPs were missing. My research results revealed that the lack of standardized products and handling processes among the allied LSPs reduced the reliability and efficiency, and thus the customer value, of the joint LSP alliance. These differences among allied the LSPs in their customer services (e.g., time definitions, quality and tracking services) and handling procedures (e.g., loading priorities, training and security), defined by their various product features, significantly constrained the alliance's value capitalization. The findings indicate that the lack of work standards hampered the alliance's executers at the operational level, as clear work and technical standards to jointly perform and/or coordinate the alliance's activities were missing. By being aware of the importance of operational standards, the allied

LSPs in THE ALLIANCE intended to collectively specify and codify joint products (e.g., features, quality and security standards) and handling processes (e.g., automatized data and information exchange processes and handling procedures). However, as these standards were not defined *a priori*, their joint development during the alliance turned out to be highly time consuming and costly, as consensus among the collectivity of the allied LSPs was required. In addition, these agreed on standards (if ever achieved) still varied in their specificities and executions among allied LSPs . In the meantime, standardized products and working processes common to all the partnering LSPs were lacking, which hampered the smooth and effective handling of goods within the LSP alliance until mutual consensus on joint specifications and codifications were finally derived (if ever). Due to this *ex post* formalization process of standardization, the alliance yield increased coordination costs due to the tediousness of collective consensus-finding as constrained by the individual interests of the allied partners. Overall missing or unaligned work standards caused inefficiencies and set aside network effects and customer acceptance in the LSP alliance.

*(iv) A lack of formal control systems*

The lack of formal control systems based on *a priori* defined alliance expectations and performance measures (Spekman and Kamauff Jr, 1998) impedes the reliable and effective control of each member's behavior and outcomes. My research indicated that formalized control systems based on *a priori* defined behavior- or outcome-based criteria and standardized monitoring processes across all allied LSPs are needed to limit opportunistic behavior both within and across a firm's boundaries. THE ALLIANCE lacked formalized performance measures and monitoring processes, or other safeguards to control (and if necessary to sanction) undesirable behavior and outcomes of the involved parties (both within, but especially across, THE FIRM's boundaries). In addition, formalized control systems help to identify room for improvements, facilitating value creation for the alliance.

Despite the acknowledged need for alliance control, difficulties remain in defining and monitoring relevant measures. Allied LSPs either do not know or else fail to agree on relevant alliance performance measures or required reporting processes across all the involved LSPs. The latter are crucial to collecting and analyzing reliable and meaningful data, as the following statement indicates: *“We defined the targets and then I pulled a report and manipulated it, and made a monthly follow-up so you could see whether things went in the right direction or not... As far as I know, THE PARTNERS didn't have the systems to do the same”* (THE ALLIANCE). Overall, the lack of formal control adds to the threat of opportunistic behavior, both among the partnering firms driven by the pursuit of their individual corporate goals and interests, as well as among the internal executors, despite hierarchical structures.

*(v) A lack of common information and technology systems*

IT systems represent one of the central integration mechanisms for managing information flows between organizations (Ebers, 1997) as well as along supply chain entities (Gunasekaran and Ngai, 2004). They make inter-organizational data-sharing among partnering firms feasible, while reducing communication costs (Grandori and Soda, 1995). In the logistics business, IT systems can be seen as the backbone of process optimization, as they align the processes around sales, pricing, route planning, capacity management and customer service. This alignment of processes even gains in importance in LSP alliances in coordinating these logistics activities among multiple independent partners in a way that leverages the alliance's potential. The lack of common IT systems (or the misalignment of them) impedes the reliable, fast, automatic and standardized data exchange among allied LSPs required to perform joint logistics systems. As one manager of the ALLIANCE TEAMS stated: *“Logistics is a dynamic business that needs to be fast. One cannot rely only on telecommunication - these times are gone. Such cooperation has to work quickly. IT systems*

*have to fully support it. But we did not have this” (THE ALLIANCE). The resulting drawbacks hampered the effective performance of the joint logistics system provided by the allied LSPs, and thus impeded the maximization and capitalization of the alliance’s value for both customers and LSPs. My findings reveal that allied LSPs were conscious about the need for more-integrated IT Systems: “One factor that is probably more pivotal or important is IT - because that turned out to be very much a practical obstacle... We still came up against a situation where the - let’s call it the functional capacity of the four IT systems - were very different. And if we would have had concentrated a bit more, if we would have put more money and effort into solving that... I think we would have stood a much, much, much better chance of making it (THE ALLIANCE) happen” (ALLIANCE BOARD). However THE BOARD did not decide on such stronger technical integration of or investment in a common IT System, but instead strived for piecewise technical harmonization. The reasons for accepting these technically driven inefficiencies were based on the threat of opportunistic behavior, the unintended loss of strategic knowledge, and the significant investment costs of an integrative IT system in the face of uncertain alliance outputs in the future.*

### ***(3) Non-satisfactory performance***

As in general, the execution of alliance activities and the efforts of all alliance members determine an alliance’s performance. In the case of THE ALLIANCE, its performance was not satisfactory. This dissatisfaction resulted from the contemplation that the alliance’s performance fell short of the partners’ expectations. My findings indicate that this evaluation was based on three criteria: (i) the alliance’s efficiency in terms of logistics activities, (ii) the equity of the partners’ contributions to the alliance, and (iii) the adaptability of the alliance over time.

(i) *Efficiency*

Efficiency refers to the economic reasoning of the alliance (Ring and Van de Ven, 1994: 93). The partnering LSPs assessed the alliance based on its costs and outcomes and then compared it to going alone: *“As long as there is not a tangible, monetary target behind it, nothing is going to work out. And as long as it is not imaginable and tangible... the whole idea will become obsolete pretty fast. And that's what happened”* (THE ALLIANCE).

(ii) *Equity*

Equity as "fair dealing" (Ring and Van de Ven, 1994: 93) refers to the reciprocity among partnering firms. My findings indicate that allied LSPs assess their received benefits in relation to their own investments to the alliance and in comparison to the perceived benefit-contribution relation of their partners. Perceived imbalances in these two relations cause frustration and demotivation among the involved parties. As such, the lack of equity adds ultimately to the alliance's failure if not addressed properly, as the following statement illustrates: *“We usually provided the project leader or at least the program manager. We invested quite a lot, more than all of the others in total. But that is the attitude of THE FIRM. And then we are regularly disappointed when we are not getting the same in return. We invested a lot but we were not able to force anyone”* (THE ALLIANCE).

(iii) *Adaptability*

Adaptability refers to the alliance's ability to adapt initial alliance set-ups (Doz, 1996: 79) in order to face environmental changes and to secure the alliance's improvement over time. Thus, in THE ALLIANCE, people assessed the alliance according to its ability to overcome identified shortcomings hampering the capitalization of the alliance's opportunities. Thus, the involved parties assessed THE ALLIANCE and its strategic priority based on its progress in overcoming major impediments, namely the collective agreement on a common product and process standards, fair revenue sharing, IT systems solutions and antitrust regulations.

The combined perception of these three performance criteria (efficiency, equity and adaptability) results in a total assessment of the alliance. In addition, these criteria are assessed in relation to the individual alliance members' expectations and goals: *"Each LSP had its own sort of agenda and way of using THE ALLIANCE in whatever way they found right for them, or at least they sort of they read the books with their own eyes, if you know what I mean"* (THE ALLIANCE). Therefore, the alliance's performance evaluation may vary significantly among the involved parties (both within and across each firm's boundaries). For example, the managers involved from the ALLIANCE TEAMS tended to assess the alliance's development positively, primarily based on the accomplishment of their defined targets. On the other hand, the managers involved at the operational level evaluated THE ALLIANCE critically, as they did not see any tangible results (e.g., increased volume, sales or load factors). These differences in the evaluation of the alliance's performance complicated the process of consensus building among the allied LSPs. Given the shared governance structure, THE ALLIANCE needed to find mutual agreement for any alliance decisions and adaptations. A statement of one of the ALLIANCE BOARD member explains the challenge involved in the process of mutual decision-making: *"The business case which has been discussed ran through the organization's own assessment process and everybody got the results: that is not beneficial or that is beneficial for me, but not for the others. But it never came out that the case was beneficial for all four partners, because the applied KPIs aimed to optimize the stand-alone status. To gear the alliance's benefit and to integrate it in the individual cases as a correcting quantity - that never happened"* (THE FIRM).

#### ***(4) Stagnation and failure***

Alliances are always associated with changes in working routines (Das and Teng, 2001). While changes are obligatory, they are always accompanied with resistance and fear. While the allied LSPs identified major impediments to the effective execution of the alliance and

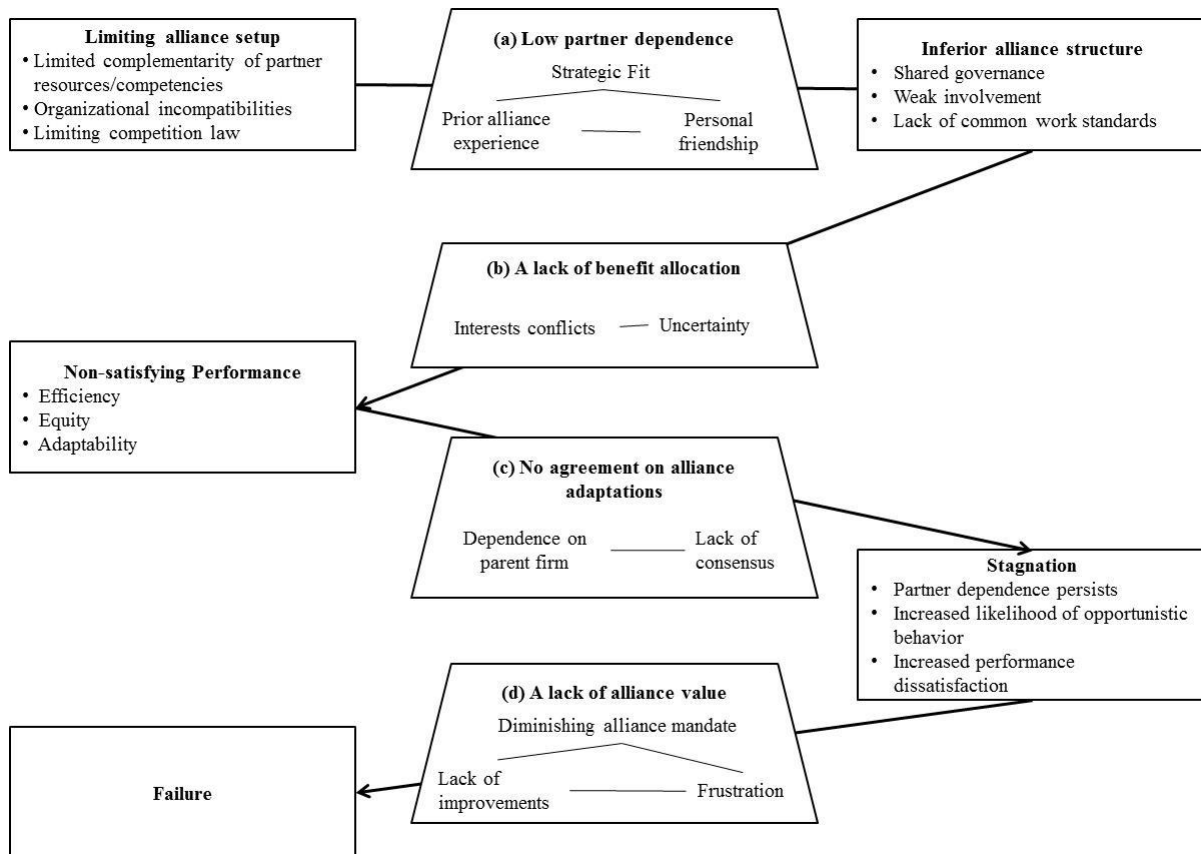
conceptualized solutions, they ultimately could not find collective agreement on strategic change initiatives. Therefore, THE ALLIANCE failed to adapt to these challenges, resulting in a situation of stagnation that finally led to the alliance's failure. For example, driven by the non-satisfactory outcomes of THE ALLIANCE, the partnering LSPs agreed upon searching for new partners to complete the joint global network (the new alliance set-up), as well as upon shifting the alliance's emphasis from service improvements towards costs reductions (the adaptation of the alliance's goals). However, the acceptance of a fourth LSP into THE ALLIANCE did not prove helpful in addressing the shortcomings of the initial alliance set-up (low interdependence among allied LSPs). The new partner's network showed significant overlaps with the existing alliance's network, increasing the degree of complexity in terms of interest alignment and operational coordination among the now four parties rather than providing significant alliance benefits. Furthermore, the emphasis on costs savings within THE ALLIANCE reached its limits as common product and process standards, joint IT systems and fair revenue sharing among the allied LSP remained missing; even the focus on joint asset utilization (e.g., joint warehouses) was rarely realized due to either capacity or technology restrictions or else contractual agreements with third parties. One manager of THE TEAMS summarized thus: *"The idea [of joint warehouses] often failed because people said "we have too much traffic, it is impossible", or due to being bound to premises in the long-term where it was not possible to renegotiate the contract. There have been very many operational issues that could not be solved. But there has been an agreement to monitor this"* (THE ALLIANCE). Overall, THE ALLIANCE failed to increase the (commercial) dependence among the allied LSPs. Given the lack of commercial dependence and/or strategic changes in the alliance's structure, its evolution remained exclusively dependent upon the partners' commitment. This commitment, however, turned out to be unstable and impacted by multiple factors, such as the alliance's performance and the parent firms' strategies and

priorities, as well as individual mindsets and expectations. My findings reveal that this personal commitment diminished over time because it was not absorbed by structural adaptations (e.g., through a joint cash box or enforceable agreements), and because it instead encountered emerging doubts as to the alliance's advantages and credibility. Even highly committed managers became frustrated and resigned over time due to the lack or downscaling of requested alliance adaptations, missing tangible results and an absence of sanctions for undesirable behavior. These repeated bad experiences and disappointments with the alliance's performance (in terms of economic, equity and adaptability outcomes) caused a period of stagnation for the alliance. This situation led finally to the alliance's failure.

#### **4.5.2 Mechanisms of the Alliance failure process**

My findings reveal that the process of alliance failure among LSPs is marked by four developmental stages. To understand and explain how and why these stages emerge, I emphasize the underlying mechanisms which lead an alliance from one stage to another. I identified four main mechanisms that produce an alliance's phases and which drive an LSP alliance towards failure (see Figure 9 for an overview). In the following, I elaborate upon each of these four mechanisms and their component parts in order to explain their orchestrating functionality.





**Figure 9 Mechanisms in the logistics alliance failure process**

**(a) Low partner dependence**

Partner dependence reflects “the way in which different firms perceive [that] they need each other to perform their work and reach certain outcomes” (Zacharia et al., 2009: 103). Through pooling and leveraging resources and competencies of a partnering LSP, joint alliance outcomes are achieved. The importance of the outcomes for the individual LSP, in terms of its performance and competitive market position, determines the degree of partner interdependence as well as a firm’s commitment, investments and efforts spend in the alliance. My research revealed that THE FIRM perceived a rather low – if any – degree of dependence on THE ALLIANCE and/or its partners: *“There were not a lot of new destinations. ...and these three or four transports a week, we could always do by ourselves”* (Manager of the ALLIANCE TEAMS). Only the smallest partner of THE ALLIANCE benefited significantly from THE ALLIANCE network by serving and promoting new

geographical markets, destinations and additional capacities. Thus, the partnering LSPs failed to build commercial dependence on each other, despite the potential alliance's value. As a consequence, the low partner dependence added to the threat of opportunistic behavior. In addition, the research results reveal that partner interdependence may vary significantly among partners in multilateral LSP alliances. This imbalance shifts attention towards the assessment and treatment of partners' contributions, i.e., in terms of the (fair) distribution of jointly generated alliance benefits. This treatment is essential to creating and maintaining sufficient incentives for cooperation among all the involved parties. Thus, THE ALLIANCE built upon the commitment of the involved parties to pursue common alliance goals lacking a binding commercial or strategic interdependence among them.

Commitment refers to the personal responsibility in satisfying the alliance's interests and expectations, varying in its degree of responsibility for the alliance's success (e.g., by vouching for a top manager's good names, relation-specific investments or a firm's own reputation and performance (Fawcett et al., 2006). My results indicate that commitment determines the willingness of both external and internal alliance decision-makers and executers to compromise in favor of mutual alliance benefits. In this case, the commitment of the allied LSPs manifests in the contribution of primarily human resources to dedicated ALLIANCE TEAMS. While the degree of responsibility for the alliance's success remained rather low, THE FIRM invested extensive human resources in THE ALLIANCE. These resources comprised the effort spent by its senior alliance representative on THE ALLIANCE and the assignment of selected experts to the dedicated ALLIANCE TEAMS (a full-time job). THE FIRM allocated, on average, nine full-time positions at any given time to THE ALLIANCE TEAMS, taking up three of the five leading positions. The corporate embeddedness of the ALLIANCE TEAMS (hierarchically, directly below THE FIRM's corporate executive board) symbolized THE ALLIANCE's strategic priority within THE

FIRM. My findings revealed that this commitment among the partnering LSPs was based on: (i) Strategic fit between the alliance's goals and corporate needs (perceived by the founders), (ii) Prior alliance experience of the alliance (i.e., with these partners), and (iii) Personal friendship among the partners' representatives. However, this commitment turned out to be rather uncertain and instable, as it was strongly impacted by the (changing) parent firms' strategies and targets in terms of personal mindsets and structural authorities.

*(i) Strategic fit*

Since commitment emerges if partners perceive the value of the benefits derived from the relationship (Fawcett et al., 2006), the fit between the (expected) alliance outcomes and the firm's strategic needs is fundamental. Based on a systematic analysis and prior experiences, THE PARTNERS' top management selected THE ALLIANCE as the most suitable strategic option (next to M&A and organic growth) to face increasing competition within the logistics industry. One of the ALLIANCE BOARD members summarized thus: *"At least from a theoretical point of view all the possibilities were there, and that was our starting point. Everyone was very open-minded. I think we all wanted to make this happen"* (THE ALLIANCE). The founders decided, initially, on a strategy program striving for successive partner integration primarily based on product and process harmonization to appear on the market as one company. Cross-owner shipments were kept as further integration steps depending upon the alliance's development. The integration was carried out along mutually defined goals and milestones based on a clear schedule. Based on an initial business plan, the allied LSPs expected improved customer services and profitability gains through THE ALLIANCE (i.e., due to new destinations and improved capacity utilization) while keeping their strong and flexible market position. These expected alliance benefits would have helped to sustain competitiveness in the face of the trend of consolidation within the industry.

*(ii) Prior alliance experiences*

The commitment to the alliance was also based on positive experiences of prior bilateral cooperation among the LSPs involved in THE ALLIANCE. THE FIRM had already experienced long-lasting bilateral cooperation with two of the three partners. These experiences provide them with insights into the partner's business activities, operational systems and cooperative behavior. These insights reduce the perceived uncertainty accompanying THE ALLIANCE. In addition, the commitment to the alliance emerged due to positive experiences with multilateral alliances in related business fields made by THE FIRM. Therefore, THE FIRM's corporate management was inclined to transfer this rather innovative idea of a multilateral alliance in their industry to increase the perception of them as market pioneers.

*(iii) Personal friendship*

Beyond the experience of the alliance among the allied LSPs, personal friendships among the initial founders of THE ALLIANCE added to their commitment to it. The individual representatives of the allied LSPs got along very well. This personal trust and understanding facilitated their mutual agreement on strategic alliance decisions, such as alliance goals, strategies, targets and partner contributions. Thus, the friendly representatives of the alliance partners, organized as the ALLIANCE BOARD, agreed on THE ALLIANCE as a voluntary arrangement aiming to realize a win-win situation for all the partners based on a shared governance structure. The so-called "shared alliance governance" was based on collective involvement and commitment (see (i) shared alliance governance in the section above), and allowed the allied LSPs to keep their own identity, power and flexibility, giving consideration to their mutual independence.

***(b) A lack of benefit allocation***

The lack of benefit allocation understood as formalized revenue sharing mechanisms (a so called joint cashbox) within an alliance hampers significantly the share of responsibilities and rewards among partnering LSPs. Given the strong rivalry among allied LSPs, a clear and fair perceived cost/reward sharing mechanisms are required across all the involved parties to secure alliance reciprocity, thereby balancing the tension between cooperation and competition. My findings indicate that, due to the lack of formalized revenue sharing and thus concrete incentive mechanisms, the first priority of each LSP was to maintain their own bottom line. Without clear and fair perceived allocation mechanisms for jointly generated alliance revenues, the LSPs decided in the last instance in favor of their own organization. The alliance's executers, (e.g., sales managers) favored their own (proven) products and processes, striving primarily to optimize their own capacities, because the parent firm's income was that which counted. Therefore, they purposefully neglected alliance agreements and accepted potential disadvantages for individual customers. However, my findings indicated that LSPs might not succeed in defining formalized cost and/or benefit-sharing mechanisms given the difficulties involved in measuring and assessing the comparable worth of each partner's resources and skills allocated to the alliance and their equitable rewards (in line with Wittmann (2007)).

The lack of a formalized benefit allocation facilitated opportunistic behavior among the involved parties and hampered the alliance's execution, both impacting negatively on the alliance's performance. Opportunism as the conscious behavior of partners to take (selfish) advantage of situations plays a crucial role in cooperative partnerships (Das, 2006). As the selected alliance structure builds primarily upon the commitment and involvement of partnering LSPs, the threat of opportunistic behavior can even increase. Such non-cooperative behavior of involved LSPs hampers effective alliance execution significantly, and thus

impedes the capitalization of mutual alliance benefits. My findings revealed that the lack of formalized benefit allocation fosters opportunistic behavior in multilateral LSP alliances as it causes (i) Conflicts of interest , and (ii) uncertainty about the alliance's goals and execution. These drivers hamper the alignment of LSPs' behavior and outcomes in relation to the accomplishment of common alliance goals and thus add to the likelihood of alliance failure.

*(i) Conflicts of interest*

Conflicts of interest emerge due to different preferences and goals among partnering firms and managers, interfering with the commitment and involvement of the involved parties. Given the rivalry and independence of partnering firms in horizontal arrangements, as in the case of THE ALLIANCE, these conflicts of interest are especially relevant, increasing the likelihood of opportunistic behavior. Confronting the tension between being responsive - simultaneously - for the goals of their parent firms and of the alliance, partnering LSPs tended to act opportunistically for two reasons. First, my research reveals that conflicts of interest among involved alliance parties emerge due to a lack of or misaligned incentive systems, such as a joint cash box. This mismatch between corporate and alliance targets facilitates opportunistic behavior among an alliance's executers (internal and external), hampering its execution and performance. My findings revealed that alliance executers (like humans in general) act in favor of the honored, legalized and rather short-term-orientated goals and targets of their parent firm. As such, they more or less continuously neglect the long-term-oriented strategic alliance's goals and benefits in their daily business. Second, my findings indicate that LSPs strongly identify themselves with their own parent firms in terms of their brand, products, processes and services. Identity and involvement are recognized as fundamental drivers of human thought and action (Turner, 1987). Based on the strong self-confidence emerging due to a firm's past successes, reputation and market position, alliance executers may question the necessity and advantages of sharing their own (proven) solutions

with their competitors. The following statement illustrates the tensions: *“I’m tempted to say, we were at a point where even our own people thought about us as debris in the organization. People said to us: “You want to present the accomplishments of THE FIRM on a silver plate and step away from the own identity for the alliance? Is that how it is supposed to be?” We were down to this point”* (THE ALLIANCE). Overall, conflicts of interest emerge especially in LSP alliances due to the existing independence and rivalry among allied LSPs. If these tensions are not sufficiently absorbed by the alliance’s structure (e.g., through formalized revenue sharing mechanisms), these conflicts increase the likelihood of opportunistic behavior which in turn significantly hampers the alliance’s execution and performance.

*(ii) Uncertainty*

While firms have increasingly engaged in alliances in recent decades, the concrete alliance goals are not always obvious to all the involved parties or else are perceived differently among them. My findings indicated that this lack of clarity regarding goals adds to alliance failure. In the case of THE ALLIANCE, this emerges because a clear purpose for the alliance was not defined *a priori* – instead, it was intended to be defined during the alliance’s evolution. THE ALLIANCE’s founders followed the maxim “Let’s see how far we get”. One ALLIANCE TEAM member viewed this approach skeptically: *“The very big guys, they should have, in my view, closed themselves in the room and they shouldn’t have left it until they had a crystal clear picture of what they wanted to gain with this... but it just wasn’t clear enough in my book to be successful”* (THE ALLIANCE). However, the continuous definition of goals leaves this correlation between the alliance and a firm’s strategic needs vague and uncertain. As such, it gives rise to doubts about the alliance’s economic reasoning and strategic relevance for the parent firm, and thus hampers the commitment of the involved parties towards the alliance’s execution (e.g., in terms of resource allocation). In addition, the continuous goal-definition hampered the communication of a clear goal for the alliance down

the firm's hierarchy. This poor communication of the alliance's goals created a knowledge gap between the top management, who defined the alliance's goals, and the lower management who were supposed to execute them. In the case of THE ALLIANCE, significant differences in the perception and assessment of the alliance's goals existed - while the top management agreed on the continuous harmonization of products and processes, striving for full integration, the middle management on the operational level lacked a clear vision of the alliance, thereby doubting the alliance's advantages. As such, the latter were left uncertain about concrete operational implications and consequences (What to do? How to do it? What does the alliance mean to me/my division and firm?). The research revealed that knowledge gaps based on informational asymmetry between the alliance's decision-makers and executors hampered the alliance's execution. This lack of knowledge manifested itself as uncertainty among the alliance's executors about the alliance's goals (Why do we do this?) and the alliance's economic and personal consequences (What does that mean for the firm/for me?), adding to the employees' resistance to change (i.e., in terms of their own proven routines for the execution of the new and uncertain processes and activities of the alliance).

In addition, the alliance's executors acted especially cautiously due to antitrust regulations and the knowledge gap. For example, the sales managers criticize the limited operational opportunities to cooperate with the allied LSPs, given the legal restrictions: *"If I want to increase the business and [its] possibilities significantly, I have to give the sales team the power to do so. If I want to appear consistent and integrated, I have to allow them to do so. This, first and foremost, belongs to the topic of consistent prices, consistent capacity access and common distribution"* (THE ALLIANCE). In their interactions with the allied LSPs, involved parties accepted the alliance's inefficiencies and customer disadvantages in order to protect the firm's strategic resources (e.g., IT know-how and capacity management policies). The emerging nature of the alliance's goals and/or their poor communication may



result in the alliance's executers' perception of alliance targets and strategies as being unrealistic. This perception reduces the willingness and commitment of the alliance's executers, as they know that they will fail to achieve the (overvalued) alliance expectations. Interestingly, the feasibility of alliance goals may vary significantly between the involved parties, since even alliance goals and purposes that are defined and conceptualized by internal and external experts may be perceived as being unrealistic by the operational executers. Here, the question arises as to how far the evaluation of the alliance's feasibility depends upon the managers' self-interest (the problem of conflicts of interest is discussed above). Thus, the lack of clear and realistic alliance goals yields uncertainty among the alliance's executers, which facilitates opportunistic and resistant behavior. This non-cooperative behavior hampers the effective execution of an alliance, and thus drives alliance failure.

***(c) No agreement on alliance adaptations***

Given the shared alliance governance, alliance adaptations require a form of collective decision-making among all the involved partners. However, my findings revealed that disagreements among alliance decision-makers (i.e., alliance board members and alliance managers) on alliance adaptations emerge due to: (i) Lack of consensus among them, and (ii) Dependence upon the parent firm. This disagreement causes lengthy negotiation processes, striving for the required consensus among the decision-makers, holding-off significant alliance changes for long periods. However, even if consensus on collective alliance decisions and adaptation is (finally) achieved, the agreed upon alliance changes might be reduced to a common denominator. These limitations in an alliance's adaptability impede significant improvements in an alliance's functioning and performance. The resulting alliance stagnation causes inefficiencies in the alliance and leads, finally, to alliance failure.

*(i) Lack of consensus*

The collective decisions and the execution of alliance change efforts made by decision-makers emerge through a negotiation process based on their individual alliance performance evaluation. My findings reveal that, despite the knowledge of unsatisfying alliance results, escalated problems for the line organizations, and obstacles and requirements identified by the ALLIANCE TEAMS, THE FIRM was not able to agree upon the requested decisions and/or investments to improve the alliance's situation. In particular, the lack of a joint cash box, IT system and antitrust immunity impeded the execution of the alliance's activities, e.g., joint capacity management for the benefit of the alliance. However, no consensus among the decision-makers on such strategic choices in favor of alliance adaptations could be achieved. The reasons behind this are the nature of the non-binding commitment lacking enforceable agreements, and the differences in the interests and performance evaluations among the involved parties (both internal and external). One ALLIANCE BOARD member justified the lack of consensus in the alliance governance structure: *"As long as it is a voluntary situation, the only situations where you can make it (the implementation of joint IT systems) happen is when you make an acquisition or a merger, if you buy another company and force them to use your system"* (THE ALLIANCE).

Given the independence and rivalry of allied LSPs, different performance evaluations emerge due to individual assessments and interpretations of alliance outcomes (i.e., efficiency, equity, adaptability). These individual alliance evaluations — biased by the interests, mindsets and experiences of the allied LSPs and/or decision-makers — lead to the withdrawal of a common and reliable knowledge base among the involved decision-makers from all the allied LSPs. The emergence of individual alliance evaluations causes a lengthy negotiation process in striving for consensus. THE ALLIANCE required this consensus for collective decisions on alliance adaptations due to the lack of formalized performance control

(alliance structure). THE FIRM (or any other allied LSP) was unable to force a decision as to and/or execution of alliance adaptations without the agreement of the other LSPs. There was nothing else for THE FIRM to do but to follow their strategy of incremental integration, striving to continuously convince (or find consensus among) the partners. Thus, THE ALLIANCE could not overcome situations of non-consensus among the involved LSPs. The collective decision-making policy led to continuous negotiation processes searching for consensus, causing additional coordination costs and stagnation until an agreement could be found (if ever).

*(ii) Dependence upon the parent firm*

The agreement on strategic alliance adaptations depends upon the parent firm's strategy. An alliance's decision-makers generally require the authority of their parent firms to decide upon and execute strategic alliance changes. My findings indicate that limitations to the alliance decision-makers' authority causes increased alliance coordination costs in terms of time and effort (in line with Wittmann (2007)), and reduces the likelihood of strategic alliance adaptations, as the alliance's decision-makers need to obtain approval from their parent firms. The following statement of one of the ALLIANCE TEAM'S members supports this impression: *"Over four years we were in the mood to try various initiatives which did not work out. The parent firms looked already. You won't stand that for long as the managing board. At some point in time, it will be said that we had better leave. I still want to make a career - I do not want to louse it up"* (THE ALLIANCE).

In THE ALLIANCE, the ALLIANCE TEAMS' power relied solely on the top management's commitment and authority residing in the respective allied LSPs. Thus, the ALLIANCE TEAMS depended upon the top management's assistance to give specific orders to others (e.g., to the sales or marketing department) in order to coordinate the alliance's activities. Lacking this assistance, the ALLIANCE TEAMS relied solely on their individual

persuasiveness and personal networks (within and across each firm's boundaries) to convince others in favor of the alliance's goals and their implementation. This dependence upon informal power highlights the importance of these alliance managers' personal embeddedness (i.e., for the recruitment of dedicated alliance team members) for the alliance's evolution. However, both chains of authority are limited in their functioning, as they are highly dependent upon each individual member's commitment to the alliance. In addition, such an alliance power structure, which is exclusively based upon commitment and involvement, is threatened by any other more formalized chain of line authority. For example, shifts in the parent firm's strategy may impede the required approval for requested alliance adaptations. Such shifts in corporate priorities may emerge due to external changes in the environment, such as the market crisis after 9/11, or simply due to changes in the firm's management which lead to it attaching less or even no importance to the alliance. The dependence upon the parent firm and external changes also appears in the statement of one ALLIANCE BOARD member: *"The market was weak and when you already have a slim organization to motivate why you should set extensive management resources aside to work on something, that couldn't really make any solid calculation"* (THE ALLIANCE). The limited authority of the alliance's decision-makers within the power structure of the respective parent firms threatens the alliance's stability (being highly unrestricted in their decision-making) and hampers mutual agreements on alliance adaptations among allied LSPs.

***(d) Lack of alliance value***

As THE ALLIANCE did not succeed in creating significant alliance value for the involved LSPs, the alliance commitment diminished among the involved parties. Commitment as the personal responsibility to satisfy the alliance's interests and expectations constituted the main driving force behind THE ALLIANCE due to the low partner interdependence (both commercial and strategic). Commitment facilitates mutual consensus, helping to realize the

effective execution of an alliance as well as adaptations. However, commitment is only sustained over time if the partners perceive the benefits derived from the alliance. Thus, dissatisfaction with prior alliance performances causes a shrinking commitment among both alliance decision-makers and executors. My results indicate that shrinking commitment emerges over time due to: (i) A lack of improvements, (ii) Frustration with the alliance's performance, and (iii) A diminishing alliance mandate to drive an alliance's implementation. Given the need for commitment and involvement in THE ALLIANCE's governance (shared alliance governance) this shrinking commitment causes significant impediments in alliance execution, reducing the likelihood of alliance adaptations (by increased negotiation costs in terms of effort and time). Accordingly, the lack of significant alliance value resulted in shrinking commitment which leads finally to alliance failure.

*(i) A lack of improvements*

Given the need for collective decision-making on alliance adaptations, strategic changes in THE ALLIANCE (alliance set-up, structure, performance) failed to significantly improve the alliance's execution and performance. My results indicate that THE ALLIANCE lost its drive as central alliance obstacles could not be overcome (even though they were identified), such as a lack of antitrust immunity, fair revenue-sharing and IT alignment. Despite continuous work on problem solutions and interventions through the ALLIANCE TEAMS (partly with strong support by alliance executors from their respective parent firms), the requested and expected top management decisions on alliance adaptations were held off (i.e., there was no agreement on alliance adaptations). The reasons behind this are that their solutions (even those agreed upon in the ALLIANCE TEAMS) could not be enforced among the ALLIANCE BOARD due to a lack of mutual agreement between the alliance decision-makers, and due to their limited mandate in their respective parent firms. Thus, these impediments to alliance adaptability result from the inherent flexibility and adaptability of the alliance structure itself.

The established steering and control mechanisms (a lack of enforceable agreements and a limited alliance mandate in the parent firm) were too weak to enforce the alliance's execution against the independence and emerging opportunistic behavior among the partnering LSPs. Given the need for alliance improvements - despite the difficulties regarding agreement on strategic adaptations - the alliance's decision-makers decided to place more emphasis in the following on joint network management (pursuit by a new 'network' ALLIANCE TEAM), on shifting the alliance goals from a service perspective towards cost reductions (joint asset utilization and procurement), and on shifting the responsibility for the alliance's implementation increasingly from the ALLIANCE TEAMS to senior managers in the line organization. However, and despite these adaptations, the operational obstacles remained important. The lack of significant alliance improvements which would help to address the identified alliance limitations (i.e., in the alliance partner set-up and structure) resulted in alliance stagnation. The allied LSPs were conscious about the required alliance adaptations and possible solutions, but the responsible decision-makers did not succeed in finding mutual agreements among the involved parties on respective change initiatives.

*(ii) Frustration with the alliance's performance*

Over time, the commitment of the involved parties turned into frustration as the alliance's implementation did not succeed as expected. An ALLIANCE TEAM manager perceived this evolution as follows: *"In the beginning we had a quite clear picture. This picture, however, was destroyed during the process, because you felt that you were moving with a different pace and you were using different ways of solving problems. It needed quite a long time, until you agreed on some things"* (THE ALLIANCE). The lack of significant improvements through collective decisions on strategic alliance adaptations results in endless discussions going around in circles and the ongoing downscaling of initial alliance goals. One ALLIANCE TEAM member summarized that, after four years: *"Many have seen that it*

*makes sense, but they said also that joint IT and a cash box are required. And then we worked and discussed and tried. But we never got the permission to take the last step with antitrust and so on”* (THE ALLIANCE). My results reveal that the personal commitment and belief of the involved parties in THE ALLIANCE (also as a strategic priority of their parent firms) faded away. In particular, the initially highly committed ALLIANCE TEAM members felt disappointed that their intensive work failed to realize the expected alliance effects over the years. They resigned as their alliance solutions and change requests were repeatedly denied, down-scaled and turned back to them for further analysis and consensus building by the alliance decision-makers.

*(iii) A diminishing alliance mandate*

LSP alliance failure is also driven by the lack or decline of a clear alliance mandate within and across a firm’s boundary. Driven by non-satisfactory performances over time, the alliance mandate to execute alliance interactions and decisions within and across the firm’s boundaries diminished. My findings indicate that the missing recognition of top management and an absence of commitment (reflected in, e.g., adaptations, investments and top-down devices) weakened THE ALLIANCE’s mandate and reputation in THE FIRM significantly over time. The diminishing mandate became noticeable especially in the alliance’s operational execution. The following statement of one ALLIANCE TEAM member illustrates this process: *“What happens if the commitment is missing? You’ll get an incredible amount of frontiers in your own organization, because the employees are permitted to build frontiers. It is possible to say: “No, we do not participate. We do not change our processes”* (TEAM member). Thus, the ALLIANCE TEAMS, as the responsible organizational unit for the alliance’s implementation, faced increased challenges in convincing executers to engage in alliance activities. The informal authority (and rather small size) of the ALLIANCE TEAMS in relation to THE ALLIANCE’s global scope turned out to be insufficient (determined by the

alliance structure) to cope with the threat of opportunistic behavior among the involved parties. Due to the lack of achieving collective decisions on alliance adaptations, the alliance's implementation progressed slowly despite comprehensive efforts (i.e., of the ALLIANCE TEAMS), providing no tangible alliance benefits for THE FIRM. Acknowledging that the alliance's goals were not feasible without additional investments, and believing that they had pushed the alliance for long enough, THE FIRM passed the responsibility for the alliance on to a partner as its second two-year term as chairman ended after four years. In the following, THE FIRM's commitment to THE ALLIANCE weakened and finally faded away as market changes led the partners to refocus on their own bottom line and as new priorities emerged. After four years, THE FIRM dissolved the dedicated ALLIANCE TEAMS via an internal restructuring program of process and service improvement. The alliance's activities and resources were continuously downscaled to a minimum in THE ALLIANCE's sixth year. One ALLIANCE BOARD member summarized this process as follows: "*We have pushed it for four years, invested capacities and our best people – now it's your turn to see how you get along (meaning THE PARTNERS)... That was done knowingly, that no significant progress will be made in the next few years*" (ALLIANCE BOARD member). However, it would take another three years until THE FIRM officially completed THE ALLIANCE, after nine years. Interestingly, my results revealed that dissatisfaction yields the need for the modification of the alliance's initial conditions, allowing for improvements in its future execution and outcomes (Provan and Kenis, 2008: 247). However, it simultaneously increases the threat of opportunistic behavior and reduces the likelihood of mutual agreements on strategic alliance adaptations among involved parties (both internal and external). This vicious circle between an increased need for modification and shrinking commitment triggered by the alliance's non-satisfactory performances can cause alliance failure if the partners do not succeed in taking strategic changes to break through it



## 4.6 DISCUSSION

The research questions of this study focused on the alliance failure process, aiming to explain the drivers and underlying mechanisms of LSP alliance failure. Taking an evolutionary perspective, this study provides new and valuable insights into the “process black box” of LSP alliance failure. Based on my findings, I developed a process-based conceptualization of LSP alliance failure marked by four alliance stages: (1) limiting alliance setup, (2) an inferior alliance structure, (3) non-satisfactory alliance performance, and (4) stagnation and failure (see Figure 8). The dynamic of this failure process emerges due to an iterative and self-enforcing process based on four mechanisms which drive the LSP alliance towards failure: (a) low partner dependence, (b) lack of benefit allocation (assumed reciprocity), (c) no agreement on alliance adaptations, and (d) a lack of alliance value (see Figure 9). The effects and outcomes of these mechanisms are produced by the specific design and interplay of their sub-elements, driving the LSP alliance through the four alliance stages towards failure. Thus, my findings provide new explanations for the drivers (how these mechanisms are activated) and reasons for alliance failure (how each mechanism’s outcome was produced). As such, my research reveals the path-dependent relations between these mechanisms (as in Pajunen, 2008). In particular, if the strong top management commitment of the three founding LSPs would not have resulted in an inferior alliance structure, then there would not have been any foundation for activating the mechanisms of opportunistic behavior causing non-satisfactory alliance performances. Similarly, if these non-satisfactory performances would not have been performed, the urge for the mechanisms of non-agreement on alliance adaptations would have been lacking, thereby driving the alliance towards stagnation and finally failure. The alliance failure process emerges due to the combination of these mechanisms. Nonetheless, these mechanisms are based on the interplay of their respective sub-elements.

The study provides an initial process-based conceptualization of LSP alliance failure which contributes both to research and practice. By providing new insights into the dynamics and underlying mechanisms of alliance failure, my findings explain the self-enforcing process of alliance failure. This valuable knowledge-base may act as a starting point for further research, and allows for managerial implications to improve LSP alliance performance. In the following, I elaborate upon the main contributions of my study to the existing research (both logistics alliances and general alliance management) and to practices allowing for alliance performance improvements.

#### **4.6.1 Research Contributions**

The research results show that the explanation via mechanisms makes it possible to provide a meaningful account of alliance failure (as with Pajunen's (2008) findings on organizational decline). Accordingly, this study adds to Anderson et al.'s (2006) argumentation that "organization theories will be enriched if scholars expend more effort to understand and clarify the social mechanisms at play in their work and move beyond thinking about individual variables and the links between them to considering the bigger picture of action in its entirety" (Anderson et al., 2006: 102). To understand an alliance's evolution and clarify the reasons for alliance failure, I identify the relevant mechanisms and their underlying component parts which are, in their interplay, responsible for the activation of these mechanisms driving alliance failure. My dynamic rationale of alliance failure based on organizational mechanisms contributes to the existing research of logistics as well as general alliance management in several respects.

First, my mechanisms perspective of alliance failure incorporates the aspect of causal ambiguity which has not so far been tackled by the existing research. While prior research results reveal alliance impact factors such as partner dependence, benefit allocation, and alliance adaptability, they do not consider these mechanisms in the whole system of an

alliance. My results provide comprehensive insights into the component parts of these alliance mechanisms and their interplay, shedding light on the way in which the mechanisms are activated and drive alliance evolution. As such, I provide explanations as to why the identified activities and events may be associated with alliance failure (e.g., partner dependence, management commitment and dedicated alliance teams) as well as with alliance success.

Second, my results capture the evolving nature of alliances in the real world. This process-based conceptualization of alliance failure adds to the existing stage models of alliance failure. By explaining the underlying mechanisms, this study explains how the stages of alliance failure actually emerge over time. The findings indicate that the process of alliance failure is caused by the activation and interplay of different mechanisms rather than the implementation of certain activities or events at a given alliance stage. As such, my results also reveal new activities and events that drive an alliance's evolution, such as agreement on alliance adaptations, which need to find a place in alliance research. These valuable findings of my study may shift the focus from the alliance formation phase towards the opportunities and duties involved in the alliance management phase. Overall, a major contribution of my research consists in the explanation of how the stages of alliance failure emerge over time.

Third, the mechanisms-based conceptualization of alliance failure provides insights into the relation between alliance activities and the entities which perform them. The prior research has focused so far on the identification of specific activities (alliance composition, alliance structure and relational behavior), neglecting the parties involved or else emphasizing top managers' perceptions. However, my research allows for the consideration of the different entities which actually perform the activities. These findings reveal that, besides the top managers, dedicated alliance managers, alliance executors on the operational level as well as decision-makers of the respective parent firms play a crucial role in alliance failure.

Interestingly, I identified different outcomes for the same mechanisms among the involved entities' alliance setting (output formalization facilitates alliance outcomes on the strategic level but hampers the alliance's operational execution). Thus, my findings provide a more comprehensive picture of alliance failure by incorporating a broader alliance environment.

Overall, the research findings indicate that the mechanisms of alliance failure are activated through a specific combination and the interplay of activities and events initiated by different entities. Thus, my results support the view of Bunge (1997) that organizational mechanisms are generally substance-specific. However, in line with the argumentation of Pajunen (2008), I suggest that this specificity does not impede further research or the systematic comparison of my findings (i.e., of my higher-level mechanisms producing LSP alliance failure). I assume that the identified mechanisms and their functioning producing alliance outcomes over time are likely to be recognized in other alliance failures. Thus, my specific mechanisms identified in the case of LSP alliance failure may act as a starting point for further research providing for the specific characteristics of mechanisms that may be worth elaborating in future research to improve (LSP) alliance performances.

#### **4.6.2 Managerial implications**

The dynamic process of LSP alliance failure is based on non-satisfactory outcomes of partner interactions caused by limitations in the initial alliance set-up and the misalignment of the alliance structure. The self-enforcing failure process emerges as these shortcomings hamper the adaptability of the LSP alliance in order to realize significant alliance improvements in both execution and performances. Thus, LSPs need to avoid and cope with non-satisfactory performances, as well as to enact alliance adaptations to improve alliance performances in order to break through the self-enforcing process of alliance failure. This is because non-satisfactory alliance performances emerge due to the limitations in the initial alliance set-up (emerging from limited partner complementarity and an inferior alliance structure), allowing

for undesirable behavior among partners (i.e., opportunism and change aversion). LSPs need to minimize and cope with these challenges. Based on my findings, I identify three central implications: (1) Creating partner dependence among allied LSPs under the compliance of legal constraints, (2) align the alliance structure to the alliance strategy, and (3) enacting alliance adaptations.

### ***(1) Creating partner dependence***

To secure partner dependence, LSPs need to consider and accomplish the following tasks in their alliance planning phase. An LSP which wants to engage in an alliance needs to precisely define the strategic gap that it wants to close by the alliance. The fit between the LSP's corporate strategy and the alliance ensures the economic reasoning of the alliance. The clear definition of a specific and relevant alliance value derived, e.g., through a systematic and comprehensive business case, is required to create meaningful alliance outcomes, and thus secures the sustained alliance commitment of the involved parties over time. LSPs should select alliance partner(s) who allow it to close the identified strategic gap. Thereby, they need to consider both partners' resource complementarity as well as the organizational harmonization necessary to capitalize the partner complementarity. LSP complementarity refers both to the market penetration (geographical coverage and customer portfolio - Schmotzi and Wallenburg, 2011: 562) and the market competence (business activities and core competencies) while the organizational compatibility incorporates the LSP's operating strategy, corporate culture, management style and nationality (Lavie et al., 2012). The evaluation of LSPs' complementarity should be based on the specific strategic gap that a given LSP wants to close under consideration of potential legal constraints. Overall, the higher that the degree of dependence of an LSP's performance on the alliance is (i.e., on the partners' resources and competencies), the higher its alliance commitment. Since alliance commitment reduces the threat of opportunistic behavior while facilitating mutual agreements

among allied LSPs, it increases the likelihood of stable and legitimated alliance interactions. However, to avoid too strong and/or asymmetric dependence among partnering LSPs (causing lock-in situations), LSPs should strive for mutual partner dependence (reciprocity) to ensure that the identified mechanisms hold true for each partnering LSP as well.

***(2) Align the alliance structure to the alliance strategy***

LSPs need to align the alliance structure to the alliance strategy's pursuit in order to close the identified strategic gap. Being dependent upon the alliance strategy, the alliance activities are either strategic or operational in nature, requiring different structural mechanisms for the effective coordination between the allied LSPs, such as a specific type and degree of alliance formalization.

First, rather strategic-oriented activities among LSPs, such as the search for further alliance opportunities and problem solutions (such as the harmonization of products and services pursued by the ALLIANCE TEAMS in my case), are facilitated by standardized outputs of these joint works. While this finding goes in line with the traditional organizational literature (Mintzberg, 1967), it has not yet been applied to logistics alliances. In addition, socialization based on the emergence of mutual norms and values among involved parties plays a crucial role in coordinating strategic interactions, e.g., realized through the implementation of dedicated alliance teams. Through the implementation of dedicated alliance teams staffed by competent representatives of all alliance partners, LSPs facilitate the alliance outcomes as: (a) the involved experts work autonomously in the pursuit of predefined goals animating their creativity and motivation, (b) these teams channel potential conflicts among partnering LSPs, reducing concerns in the parent firms, and (c) they allow for socialization processes based on frequent and personal interactions, creating a joint identity among the involved parties which strengthens their commitment for the alliance.

In comparison, more operational interactions among partnering LSPs require a higher degree of formalization in terms of standardized work processes. Given the importance of efficiency in logistics systems for LSPs' value, the operational activities among the partnering LSPs need to be formalized to: (a) secure the efficiency - and thus the competitiveness - of the jointly performed logistics systems, and (b) enable the effective coordination of joint activities. The standardization of logistics processes and accompanied services is crucial to realize "one face for the customer", yielding (externally perceived) customer value, and to running a logistics system together. In addition, this standardization plays a crucial role in the effective coordination among the partnering LSPs, and requires the implementation of aligned IT systems allowing for reliable and quick information exchange among them. The lack of standardized operational processes defining how to do the work itself, through work orders, rules and regulations, impedes the stable and legitimated implementation of alliance interactions in daily business, and thus the likelihood of expected alliance performances.

Second, to align the various interests among independent LSPs, even competing on the market, an LSP alliance requires a fair and stable revenue-sharing mechanism. This mechanism needs to ensure that each partner gains alliance benefits in relation to their individual contributions. This formalized reciprocity is needed to maintain commitment and prevent mistrust among allied LSPs. In addition, the revenue-sharing mechanisms needs to be flexible and based on real-time considerations to incorporate the ad hoc capacity and revenue-management decisions among partners required to act effectively in the logistics business.

### ***(3) Enacting alliance adaptations***

LSP alliance failure emerges due to a lack of required alliance adaptations preventing tangible improvements in the alliance's performances over time. Thus, LSPs need to ensure that the alliance is able to enact required changes in order to prevent failure. To secure the necessary alliance adaptability, LSPs needs to agree in the negotiation phase of the alliance on

formalized alliance control mechanisms based on *a priori* defined measures, as well as on the formalized responsibilities of the LSPs involved. As such, they secure the enforceability of the decisions and contributions required for the execution of alliance adaptations. The formalization of alliance control should be based on *a priori* defined alliance performance measures relevant in the specific alliance context. LSPs need to overcome the difficulties in defining relevant measures and ensuring adequate data collection to realize a common and accepted performance evaluation among the involved parties. In the case of shared governed LSP alliances, this common evaluation builds the foundation for collective decision-making and facilitates the search for consensus among allied LSPs. In addition, the binding commitment based on formalized responsibilities ensures that decisions are made for the benefit of the alliance's evolution, facilitating the negotiation process and allow for decisions made in the favor of the alliance (despite non-satisfactory results in the first place).

#### **4.7 CONCLUSION**

The study provides the first empirical evidence of the failure of multilateral LSP alliances. Based on the presented results, I developed an initial process-based conceptualization of LSP alliance failure explaining the underlying dynamics and mechanisms in the as yet under-investigated context of LSP alliance failure. Taking an evolutionary perspective, the findings indicate that LSP alliance failure emerges due to an iterative self-enforcing process marked by the development stages of: (1) limiting alliance setup, (2) an inferior alliance structure, (3) non-satisfactory alliance performance, and (4) stagnation and failure. This self-enforcing failure process relies on four mechanisms: (a) low partner dependence, (b) a lack of benefit allocation (assumed reciprocity), (c) non-agreement on adaptations, and (d) lack of alliance value. By explaining the underlying dynamics and mechanisms of LSP alliance failure, my empirical results provide new and valuable insights into the “process black box” of LSP alliance evolution. Accordingly, the research adds to our existing understanding and



explanation of LSP alliances and their outcomes (Crujssen et al., 2007c; Schmoltzi and Wallenburg, 2011). In addition, these theoretical contributions to the research help managers to develop concrete managerial implications. My findings reveal three main levers with respective implications to prevent failure and to improve LSP alliance performance: (1) creating partner dependence, (2) aligning the alliance strategy to the structure, and (3) enacting alliance adaptations.

Acknowledging the limited external validity of my findings due to their focus on a single case study within a specific context, the study nonetheless adds to the existing knowledge by providing new insights that are useful to theory-building in the still young research field of LSP alliances. The findings reveal empirical support for some of the performance-impact factors discussed in the existing research, but they also indicate that the existing conceptualizations of LSP alliances are not yet comprehensive. By providing the first process-based conceptualization of LSP alliance failure, unpacking its underlying dynamics and mechanisms, the study sheds light on the so-called "process black box" of LSP alliance failure. Furthermore, the results contribute to future research on LSP alliances. The provided conceptualization may serve as an initial starting point for further investigation into the identified dynamics and mechanisms, e.g., by investigating and comparing different contexts (such as strategic- and operational-oriented LSP alliances). The study also contributes to the development of managerial implications, as the conceptualization provides useful insights into the underlying dynamics and mechanisms of alliance failure, and thus into potential levers for improving alliance performance.

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## **5. UNPACKING DYNAMIC ALLIANCE MANAGEMENT CAPABILITY: A GROUNDED THEORY APPROACH**

### **5.1 ABSTRACT**

This paper explores alliance management capability understood as specific dynamic capability reflected in the continuous development, reflection and reconfiguration of alliance management processes in response to changes and/or to shape situations. The findings of a case analysis<sup>10</sup> employing the qualitative method of grounded theory suggest that dynamic alliance management capability consists of four constitutive routines: Coordination, proactiveness, mobilization and transformation providing an initial conceptualization in the context of single alliance management. The research provides a dynamic view of the processes and conditions underlying DAMC routines, allow firms to develop and deploy alliance capability to competitive advantages. The core contribution of this study is to identify and explore the constitutive routines of a firm's dynamic alliance management capability and their effect on continuous development and modification of alliance management processes allowing firms to alter their resource base.

### **5.2 INTRODUCTION**

The phenomenon of strategic alliances has gained tremendous attention in literature over the past decades (Gulati, 1998). Alliances allow firm's to alter their resource base through the integration of partner's resources, and thus to realize competitive advantages. Despite the enormous scholarly work on alliances, the failure rate of alliances remains surprisingly high with up to 50 per cent (Koza and Lewin, 2000). Interestingly, Anand and Khanna's (2000)

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<sup>10</sup> This analysis refers to the same case study as the paper „The Dynamics of LSP Alliance Failure“ in chapter four of this thesis.

empirical research indicates that alliance performance differs across firms due to the *“existence of differences in ‘alliance capabilities’ across firms”* (Anand and Khanna, 2000, p.313). Further research provides empirical evidence for the impact on alliance performance and elaborates on surrogates of this capability, such as alliance experience and dedicated alliance functions (Powell et al., 1996; Kale et al., 2002; Schreiner et al., 2009).

Schreiner et al. (2009) conceptualize alliance management capability as a set of specific *“knowledge/skills to address key issues that arise in managing any individual interfirm collaboration (...) embodied in the practices and behaviors of individuals”* (Schreiner et al., 2009, p.1399) consistent of three main dimensions: coordination, communication and bonding. Given the need for dynamization to ensure alliance success under changing conditions over time, scholars interpret alliance capability recently as specific dynamic capability (Eisenhardt and Martin, 2000; Helfat et al., 2007; Sarkar et al., 2009; Schilke and Goerzen, 2010). Dynamic capabilities are *“the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die”* (Eisenhardt and Martin, 2000, p. 1107). Consistent with prior scholars (Helfat et al., 2007; Sarkar et al., 2009; Schilke and Goerzen, 2010), I define dynamic alliance management capability (DAMC) as a specific *“type of dynamic capability with the capacity to purposefully create, extent, or modify the firm’s resource base, augmented to include the resources of its alliance partners”* (Helfat et al., 2007, p. 66.). As higher-order organizational capabilities (Winter, 2003), DAMC ensures a continuous reflection, development and modification of approved alliance management routines in response to changes in contexts or conditions and to shape situations allowing for sustainable competitive advantages. Sarkar, Aulakh and Madhok (2009) and Schilke and Goerzen (2010) provide first attempts to conceptualize DAMC in the context of alliance portfolio management. They identify partnering proactiveness, relational governance, portfolio and interorganizational coordination,

interorganizational learning, and alliance transformation as constitutive routines of DAMC and offer first insights into the process of DAMC. However, research (both conceptual and empirical) is very limited in this young research field of DAMC and remains insufficient to understand and explain the process of DAMC. Given the importance of alliance capability for a firm's alliance success and thus the need for opening the "black box" of DAMC process (Anand and Khanna, 2000; Kale et al., (2002); Sarkar et al. (2009), this study aims to address this gap by exploring and providing new insights into the constitutive routines of DAMC reflected in the process of continuous reflection, development and modification of alliance management practices, processes, and behavior.

Therefore, I conducted a longitudinal case study of ABC, a multilateral alliance between logistics service providers, and analyzed the obtained interview and archival data by applying the qualitative method of grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1998) to elaborate how alliance management processes develop and modify over time. Based on the results of this firm level analysis, the study provides an initial attempt towards the conceptualization of DAMC including its constitutive routines and processes. Thereby, this empirical study contributes to the young research field of dynamic capabilities, and in particular of dynamic alliance management capabilities by exploring and explaining on constitutive routines of DAMC and thus, and gaining new insights that shed light on the "black box" of DAMC process and elaborates on our understanding of dynamic capabilities. Additional, these findings contribute to strategic alliance management literature as constitutive routines of DAMC can be seen as levers of alliance management to sustain alliance performance. Furthermore, with respect to managerial implications, the conceptualization of DAMC allow firms to purposefully develop and deploy DAMC in organizations.



### 5.3 THE DYNAMIC ALLIANCE MANAGEMENT CAPABILITIES CONSTRUCT

Referring to evolutionary economics (Zollo et al., 2002), and resource-based view reasoning (Eisenhardt and Martin, 2000; Teece, 2007), the construct of dynamic capabilities gained a lot of attention in the strategic management literature (Barreto, 2010). Extant conceptual and empirical research indicates the positive impact that a firm's dynamic capabilities have on firm's competitive advantages and performance (Teece et al., 1997; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Teece, 2007). Dynamic capabilities allow firms to continuously alter their resource base by integrating, reconfiguring, gaining and releasing resources, and thus to face, or even create successful market changes and realize sustainable competitive advantages over time (Eisenhardt and Martin, 2000), inter alia through alliances, mergers and acquisitions. In line and consistent with other scholars (Helfat et al., 2007; Sarkar et al., 2009; Schilke and Goerzen, 2010), I interpret DAMC as a specific *"type of dynamic capability with the capacity to purposefully create, extent, or modify the firm's resource base, augmented to include the resources of its alliance partners"* (Helfat et al., 2007, p. 66.). Arguing that DAMC is a complex, structured, and multidimensional construct of specific organizational routines (Winter, 2003; Døving and Gooderham, 2008; Sarkar, 2009; Schilke, 2010), the design of these routines and their coherent interplay determine the firm's process of continuous development, reflection and reconfiguration of alliance management processes. These routines are reflected in organizational practices, processes and behavioral patterns dealing with key alliance management issues (Sarkar, 2009; Schilke and Goerzen, 2010; Brekalo et al., 2013). A first attempt towards a conceptualization of DAMC is provided by Sarkar, Aulakh and Madhok (2009) focusing on the context of alliance portfolio management. They suggest that alliance portfolio management capability consists of three organizational processes: partnering proactiveness, relational governance, and portfolio coordination. Schilke and Goerzen (2010) offer a second conceptualization of dynamic alliance (portfolio)

management capability involving five dimensions: alliance proactiveness, interorganizational and alliance portfolio coordination, alliance transformation, and interorganizational learning. Despite these initial research on DAMC focusing on the context of alliance portfolio management, very little is known about the constitutive routines and processes of dynamic alliance management capabilities in the context of single alliance management. Due to the limited knowledge on DAMC in terms of its constitutive routines and processes, this study aims to add to the existing research by providing new insights on how alliance management processes develop and modify in response to changes resulting in a conceptualization of DAMC.

## **5.4 RESEARCH DESIGN**

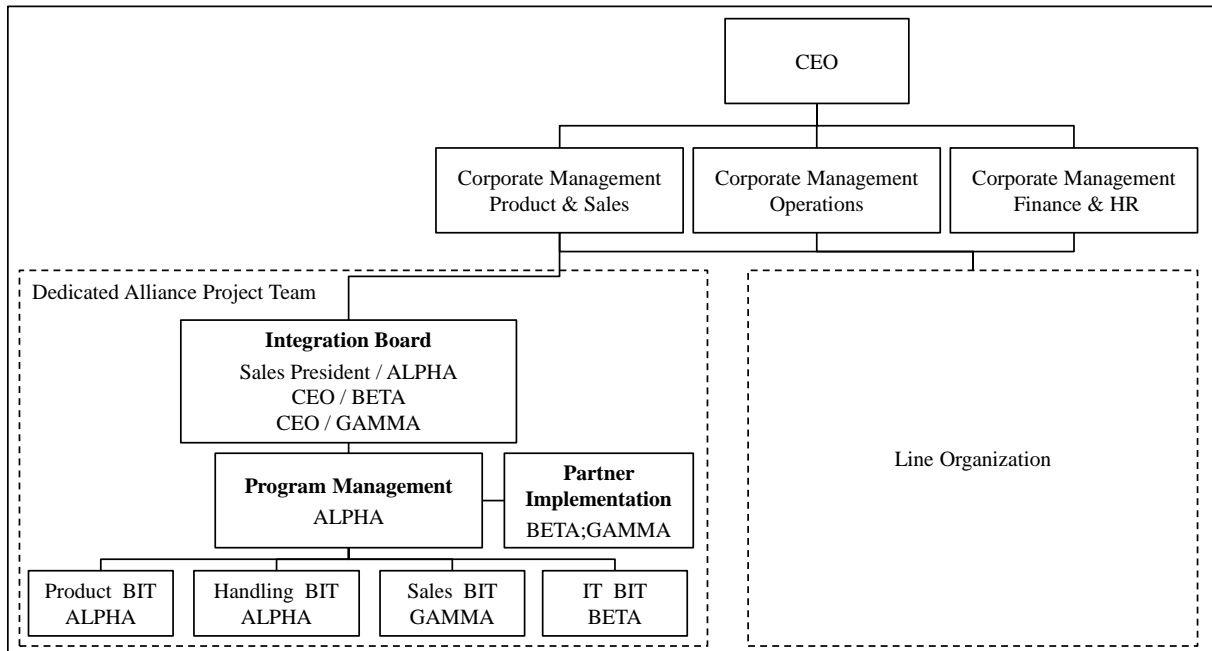
I conducted an explorative study employing the qualitative method of grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1998) to elaborate on and expand existing findings and to generate new insights into the yet under investigated research field of DAMC. Grounded theory allows purposefully investigation of processes capturing their dynamic and evolving nature (Strauss and Corbin, 1998; Langley, 1999; Maurer and Ebers, 2006). Therefore, this approach is particular useful to uncover and examine DAMC as it appears in a lengthy process of continuous reflection, development, and reconfiguration of alliance management practices, processes and behavioral patterns.

### **5.4.1 Sample**

As case studies allow gaining new insights in yet underexplored research areas based on rich detail only provided by founders and participants (Eisenhardt, 1989; Yin, 2003), I conducted a longitudinal, intensive case study of ABC, a multilateral alliance between logistics service providers (LSPs), from the perspective of the focal firm ALPHA. ABC was founded in April 2000 by ALPHA, BETA and GAMMA, three LSPs from Europe (ALPHA and GAMMA) and Asia (BETA) to increase each other's profitability, market position, and customer

services through a seamless network, harmonized products and handling processes (ALPHA's annual report, 2000). With nearly 500 destinations in 103 countries, seven central hubs around the world and 14,68 billion freight tonne-kilometres, ABC wanted to become "*the world's leading logistics system*" (ALPHA's annual report, 2000). To realize the alliance goals, the partners build up a dedicated alliance project team as illustrated in Figure 1010. It reported directly to the President of the Corporate Management Product and Sales and in this function responsible for the international network. The Integration Board led by the CEOs of BETA and GAMMA and ALPHA's Sales Presidents functioned as last decision and escalation committee being in charge for the alliance and reporting to the individual corporate managements. This board met regularly ever two to three months and was supported by personal assistants organized in the Partner Implementation Team. The integration board dedicated a central Program Manager who steered all alliance activities and took decisions representative for all partners being responsible for the alliance. By playing a double role, he had to keep both ALPHA's and ABC's interests together. Four dedicated Business-Integration-Teams (BITs) comprised of and led by partner employees were established taking over the tasks of integration: Harmonization of products (Product BIT) and handling processes (Handling BIT), synchronization of IT-Systems (IT BIT), and seamless sales cooperation (Sales BIT). The BITs searched, identified and analyzed joint alliance opportunities and developed theoretical concepts for their implementation in the everyday business. Therefore, they met physically every six weeks in Europe or Asia, hold audio conferences weekly and exchanged constantly information via email and phone. Their results were discussed with the Program Manager and presented to the Integration Board. In 2002, a fourth partner from Asia (DELTA) joined ABC to complement the alliance network in this region. They took over the lead for the Handling BIT, while ALPHA was then responsible for the new build Net Access BIT. Despite, various initiatives to implement alliance activities and

to overcome accompanied obstacles, the expected alliance effects could not be realized over years, leading to a slow down scaling of alliance activities by 2004 and its official disintegration in 2009.



**Figure 10 The organization of ABC**

ABC is a particular relevant case to explore the constitutive routines of DAMC reflected in the process of continuous development and modification of alliance management processes. First, the formation of ABC as multilateral alliance constituted an innovation for ALPHA (and all partners). Thereby, ALPHA was forced to align their existing approved alliance management routines to this new context forcing the execution of DAMC. Second, ABC provides a complete picture of an alliance evolution capturing the lengthy process of DAMC from the formation until its final dissolution. I selected this case setting of a slowly discontinuing logistics alliance purposefully as it is a useful case to gain new insights (a) into the processes and routines which underlay the DAMC (reflected in the continuous development, reflection and modification of alliance processes over several years), and particularly (b) into the underlying learning mechanisms of dynamic capabilities which help

firms to improve logistics alliance performances in future (systematical learning from alliance failure; codify and leverage of this learning for future logistics alliances). Third, the access to former participants from different organizational functions, managerial levels, and partner firms allowed obtaining diversified, detailed and valuable insights and providing a solid database for theory development (see Table 9). Overall, ABC represents a particular relevant case to investigate the object of interest in depth and to elaborate how alliance management processes change (or do not change) over time contributing to the “process gap” and to the existing understanding of DAMC in literature.

#### **5.4.2 Data collection**

Data collection took place from June 2011 until November 2012 and refers to multiple sources of evidence (Yin, 1984) by including data collected through interviews, internal presentations, documents, and newspapers. The primary sources were the 20 semistructured, face-to-face interviews (except of two telephone interviews) lasting between 1 and 4.5 hours. The interviews were tape recorded and transcript for data analysis. Following theoretical sampling (Strauss and Corbin, 1998), I first interviewed members of the ABC alliance (Alliance Integration Board and Business Integration Teams). As the cooperation with the parent organization emerged as important issue of the alliance management process during research, I included participants from the operating divisions and from the corporate level in the sample.

**Table 9 Overview of conducted interviews**

Informant level	THE ALLIANCE BOARD/TEAMS	THE FIRM	Sum
Management level			
Top management (Executive Board Member/ (Senior) Vice President/ Senior Program Manager)	5*	4	9
Operational management (IT, Sales, Product, Handling, Network)	10**	1	11
Sum of interviews	15	5	20

\* Includes one interviewee from one of the allied LSPs.

\*\* Includes two interviewees from one of the allied LSPs.

The data collection covers the alliance evolution from 2000 until its official closure in 2009. The semi structured interviews are guided around open questions aiming to gather information about (a) the individual respondent and its participation in the alliance (e.g. space of time, and function), (b) the actions/interactions taken to implement alliance opportunities and/or to solve problems (e.g. which actions they took to realize alliance goals and/or to address problems and why they succeeded or not, e.g. which opportunities and/or challenges emerged during the alliance, how did you identify them, which measures did you adopt to meet them), and (c) finally concluded by the individual assessment of the alliance performance along predefined evaluation criteria (e.g. The alliance was characterized by a strong and harmonious relationship between the alliance partners.) and (d) their learnings (e.g. what did you/your firm learn? what would you do differently next time?). Due to these loosely framed interviews, I remained open throughout the data collection to aspects of the alliance management that my informants defined as important and valuable. Thereby, data were obtained on the alliance management processes between the involved entities and their development over time in order to (a) realize alliance goals and/or to (b) respond to

problematic situations they find themselves in. While the 20 interviews were the primary data source for this study, I studied archival data provided by newspapers, market reports as well as internal presentations and documents including written, corporate long-term plans concerning objectives and milestones of the ABC alliance. These sources proved useful to verify and provide context to the interviewee`s statements.

### **5.4.3 Data analysis and coding**

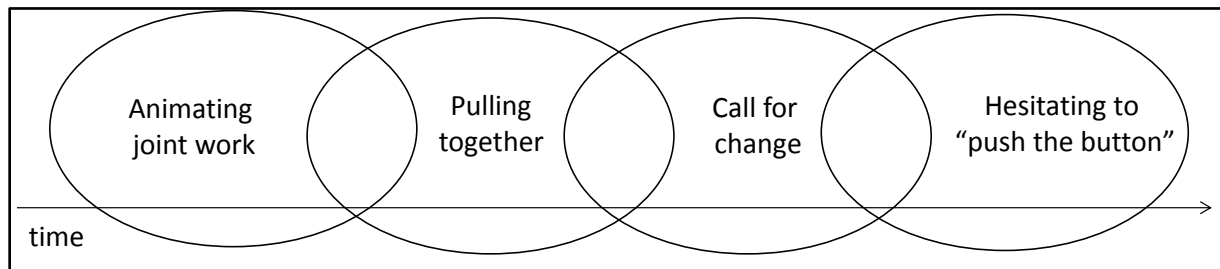
Following the overlapping, iterative processes of data collection, data analysis and conceptualization (Strauss and Corbin, 1998), I gained insights and findings from the data by identifying increasingly more abstract, conceptual categories through the comparative analysis of empirical data (Suddaby, 2006). As I focus on DAMC understood as process of continuous developing, reflecting and reconfiguring alliance management practices, processes and behavioral patterns in response to changes and/or to shape situations, I applied Strauss and Corbin`s (1998) procedure of process coding. I analyzed the data purposefully for alliance management processes between the involved entities - understood as "*a series of evolving sequences of action/interaction that occur over time*" (Strauss and Corbin, 1998, p. 165.) - and assigned them to an emergent open code scheme. This analysis was guided by constant comparative analysis (Browning et al., 1995; Strauss and Corbin, 1998) and asking questions, such as e.g. which alliance management processes are set in place, how and why are they changing or staying the same, and how do the consequences impact the alliance management processes in the following. In the end, I produced 228 open codes which were reduced subsequently into increasingly abstract categories through applying axial coding (Strauss and Corbin, 1998) resulting in 16 1<sup>st</sup> order concepts (see middle column in Table 10). Applying selective coding (Strauss and Corbin, 1998), I further consolidate the categories to yield the four core categories (see right column in Table 10).

**Table 10 Grounded theory analysis - Emergence of categories**

1st Order Concepts	2nd Order Themes	Aggregate Dimensions
<ul style="list-style-type: none"> <li>- Motivation of partners</li> <li>- Decision policies - Integrate decisions takers in BITS</li> <li>- Commitment of partners, e.g. decision for ABC between friendly related CEOs</li> <li>- Agreement on mutual goals - e.g. joint global network</li> <li>- Define goals and targets based on business case</li> <li>- Agreement on fundamental conditions, alliance type, name, approach, decision and reporting processes</li> </ul>	Agreeing on alliance type, goals and strategy	<b>ANIMATING FOR JOINT WORK</b>
<ul style="list-style-type: none"> <li>- Integration of decision takers and managers/experts of line functions in BITS</li> <li>- Recognition of top managements and partners commitment, e.g. resource allocation</li> <li>- Communicate to create awareness (intern and extern)</li> <li>- Top Management support, e.g. resource assignment, decision taking</li> <li>- Give responsibility to area managers</li> <li>- Incorporation of alliance goals in corporate governance mechanisms, like operative targets, reporting tools</li> </ul>	Winning the support of involved parties	
<ul style="list-style-type: none"> <li>- Assignment of experts of all partners</li> <li>- Kick-off Meeting as social event to create commitment and team spirit</li> <li>- Working atmosphere, intense, divers but focused discussions</li> <li>- Motivation through e.g. exclusivity and ABC as personal promotion</li> </ul>	Integration of accredited experts of alliance partners	<b>PULLING TOGETHER FOR ALLIANCE OPPORTUNITIES</b>
<ul style="list-style-type: none"> <li>- Intense search and development for alliance opportunities, inputs of individual experience/ Know how</li> <li>- Working atmosphere in BITS</li> <li>- Benchmark of partner's products and processes</li> <li>- Intense search and development for alliance opportunities, including full integration</li> <li>- Search and finding of consensus in BITS</li> <li>- Coordination of BITS and results</li> </ul>	Independent, but focused search and development of alliance opportunities	
<ul style="list-style-type: none"> <li>- Control of BIT's progress and alliance results (problem of measurement/KPIs)</li> <li>- Low alliance effects leads to shift of focus from revenues and sales to commercial issues</li> <li>- Personnel change and fluctuation</li> <li>- No significant customer vale creation lead to doubts or resistance of customers</li> </ul>	Identifying problems and rooms for improvements	<b>CALLING FOR CHANGE</b>
<ul style="list-style-type: none"> <li>- Escalate issues/topics BITS can not agree on to Integration Board</li> <li>- Escalation not successful as no decisions/top down orders</li> <li>- Escalate conflicts to Board, e.g. harmonization of network</li> <li>- Escalation, but lack of top down orders and implementation efforts</li> </ul>	Initiating change efforts	
<ul style="list-style-type: none"> <li>- Discussion in Integration Board</li> <li>- Discussion with line managers, e.g. round meetings</li> <li>- Call to continue search for consensus in BITS</li> <li>- Communication campaign to convince participants</li> <li>- Integration Board discussions on escalated problems/conflicts</li> <li>- Integration board fails due to missing regulations/governance mechanisms</li> <li>- Integration board fails due to emotionality and persistence on individual products/processes/systems</li> <li>- Top down orders to realize changes, e.g. harmonized product features, special rate agreement</li> </ul>	Searching for consensus to find mutual agreement for change efforts	<b>HESITATING TO "PUSH THE BUTTON"</b>
<ul style="list-style-type: none"> <li>- Give responsibility to line managers, e.g. development of joint sales organization in US</li> <li>- Analysis and discussion of problem solutions in Integration Board Einführung eines Bonus-Systems a la "Miles&amp;More" - Aber nicht weiterverfolgt</li> <li>- Call for further search and development of problem solutions / consensus based concepts in BITS</li> <li>- Focused communication campaign to demonstrate commitment, create unity and provide guidance</li> <li>- Alignment and establishment of incentive mechanisms</li> <li>- Alignment of corporate targets including alliance activities, e.g. ABC budget</li> <li>- Problem intervention through BITS, e.g. moderating between counterparts, using personal contacts, providing information, workshops</li> </ul>	Driving change efforts to impede frustration	



Using the conditional/consequential matrix (Strauss and Corbin, 1998, p.181-200), I related the identified processes to the situational context in order to trace the connectivity between processes and conditions over time (see Figure 11). This contextual analysis allowed me to conceptualize the process of DAMC in terms of shifts in the nature of the evolving sequences of alliance management processes explained in the following result section.



**Figure 11 DAMC process reflected in shifts of the nature of evolving sequences of alliance management processes**

Applying constant comparative method, I analyzed and summarized these sub processes, their evolution and consequences in form of evolving sequences of actions/interactions along a timeline. This method permitted me to compare data obtained from those participants involved in ABC early in its history with information available from later participants (Browning et al., 1995). To explore the DAMC routines reflected in the continuous development and modification of alliance management processes, I identified all alliance management processes implemented between the involved parties to track their development (changing or staying the same) over the course of the alliance. By elaborating how and why they changed or stayed the same, I drew conclusions on the constitutive routines of DAMC (see Table 11).

## 5.5 RESULTS

My analysis suggests that the commitment to change determined the process of continuous development, reflection and reconfiguration of alliance management practices, processes and

behavioral patterns in the case of ABC. Four sub processes (*Animating joint work, Pulling together, Calling for change and Hesitating to “Push the button”*) emerged from the data each explaining the evolution of ABC reflected in evolving sequences of actions/interactions and contributing to the process of DAMC. The shift in the nature of these sub processes, their interrelations and impact on the next sub process by becoming part of the conditions are illustrated in Figure 11.

### **5.5.1 Animating joint work**

Gulati (1998) and Kale, Dyer and Singh (2002) among others explain the realization of competitive advantages in alliances with the “*exchange, sharing, or codevelopment of products, technologies, or services*” (Gulati, 1998, p.293). In the case of ABC, the partners wanted to realize competitive advantages through the realization of a joint global seamless network providing more destinations and frequencies and synergy potentials (e.g. joint asset utilization, procurement). The first category *Animating joint work* consistent of two sub processes (*Agreeing on alliance type, goals and strategy; Winning the support of involved parties*) describes the way ALPHA allow for the implementation of alliance activities in the organization.

#### ***Agreeing on alliance type, goals and strategy***

Driven by positive experiences with multilateral alliances in related business fields, ALPHA’s corporate management and particularly its ABC responsible Sales President were ambitious to transfer this innovative idea of a multilateral alliance in their industry to become a market pioneer. The friendly related representatives of alliance partners, organized as Integration Board, agreed on ABC as a voluntary arrangement aiming to realize a win-win-win-situation for all partners and characterized by democratic, mutual decision processes. Furthermore, they decided on a strategy program striving for successive integration primary based on product harmonization to appear on the market as one company. Starting with process and standard

harmonization, they kept cross-owner shipments as further integration steps depending on the alliance's development. The integration was carried out along mutual defined goals, milestones and targets based on a time schedule (graphically presented as s-curve) and broken down into operative targets for affected business fields providing concrete guidelines for all involved parties. Based on its business plan, ALPHA's expected alliance effects of sales increases of 0,5 up to 0,75 per cent particularly through additional destinations in Asia and Australia and joint capacity management.

### ***Winning the support of involved parties***

To create the awareness in the organization for necessary changes accompanied with alliance implementation, ALPHA's top management pushed the alliance activities, integrated purposefully line managers into the alliance work and defined operative targets incorporating alliance goals. ALPHA's Top Management exemplified their commitment to the alliance idea through an extensive contribution of resources emphasizing ABC's strategic priority within the organization. The resource allocation consisted primarily of human resources assigned to the dedicated project team and further investments in its effectiveness (employee's payment, office facilities, travel budget). ALPHA's Sales President spent the majority of his time on ABC and a dedicated ABC project team of own experts (around nine people) working full time to realize a focused, professional and systematic search and development of alliance opportunities. Finally, the top management legitimated ABC in the line organization through sign posted decisions and their acceptance and accomplishment of ABC's suggestions resulting in process adaptations or product feature alignments.

Assuming that the personal integration in alliance activities increases ABC's acceptance in the line organization and thus supports its implementation, experts and decision takers were purposefully integrated in alliance activities, e.g. through assignment to focused working subgroups, target discussion with BITs, or bearing responsibility. Especially the area

managers were involved as they had the responsibility to realize ABC goals onsite independently with their counterparts. Encouraged through regional kick-off meetings held by Integration Board and BIT members and guided by a defined alliance framework as requirements for working together, e.g. network standards, harmonized product features, special rate agreements, the area managers identified and discussed independently with representatives from the partners possible fields to implement the alliance in their area.

The incentive to realize ABC goals was supported by incorporating alliance goals in operative targets, e.g. in personal objectives agreements and dedicated ABC revenue budget, and by the duty to perform regular reports to monitor the implementation process. However, as the ABC targets were only recognized indirectly in a second budget, the interests of the individual organization kept always priority. Additionally, BIT members used their personal contacts and networks to involve their colleagues and to open them for the idea of allying. Existing doubts and resistances in the line organization were proactively addressed, e.g. in round table meetings with BIT members.

### ***Summary***

The mutual agreement of ALPHA's, BETA's and GAMMA's top management (supported by their friendly relationships) on joint alliance goals, strategies, targets and resources defined the conditional framework for all alliance management processes and coordinate their systematic analysis, assessment and development. ALPHA's top management's commitment exemplified particularly in their comprehensive resource allocation (human resources and investments for the effectiveness of the dedicated alliance project team), and in the incorporation of alliance goals in the top down devices created awareness for the topic and for required changes of existing processes in the line organization for the pursuit of ABC.

Additional, ALPHA purposefully integrated leading managers and decision takers in the alliance activities (BITs) (a) to incorporate their valuable, practical knowledge and experiences in the analysis, and (b) to increase the willingness for changes through their personal participation. Besides, the top management incorporated alliance goals in internal steering mechanisms and addressed proactively employee's doubts, fears, and obstacles in a channeled way through round tables with BIT members and focused communication to mobilize the line organization and push the alliance activities in the line organization.

### **5.5.2 Pulling together for alliance opportunities**

Due to the interdependencies between partners, firms need to create commitment and mutuality between the involved parties to ensure that they pull together for the pursuit of the alliance goals. The second category including the processes of *Integration of accredited experts of alliance partners* and *Independent, intensive team work steered by predefined targets* presents how ALPHA proceeded to create commitment and feelings of mutuality among their employees and their respective counterparts to ensure that they all pull in the same direction.

#### ***Integration of accredited experts of alliance partners***

In order to allow a focused and systematic analysis of potential alliance cooperation fields, the ABC Integration Board agreed on the establishment of a dedicated alliance project team. Following Program Manager's suggestions, ALPHA's corporate management assigned experts characterized by specialized knowledge, cooperative competence, and good internal contacts and networks. The assigned BIT members were personally engaged to the alliance either through the professional challenge by contributing to a market innovation that would demonstrate their leader position in the industry, by personal chances for promotion or by the possibility to work autonomously providing space for individual creativity and learning.

### ***Independent, but focused search and development of alliance opportunities***

Steered by the Integration Board's devices, including goals, strategies, targets and time schedule, the experts (about 30 in total) were assigned to four Business Integration Teams (BITs) looking into the most important areas of logistics business: (1) product harmonization, (2) common handling processes and quality standards, (3) synchronization and development of IT solutions, and (4) seamless sales cooperation. Besides, the experts worked independently in themselves, only coordinated by the alliance program manager and the respective partner assignees. As most of the experts knew each other and were accustomed to different cultures from prior working experiences, the team functioned very well and harmonized. As the experts argued intensively about their individual opinions, but only in the matter of the alliance, a professional, open and target-orientated working atmosphere emerged. Additional, a clear communication structure was set in place, ensuring constant personal contact between project members through regular physical meetings, and communication technologies documented by reports and protocols.

Thus, the BITs provided a space for continuous, joint search and development of alliance opportunities, e.g. based on product and process benchmarks and/or individual expertise, and thus for purposeful and professional discussions of the partner's opinions. This very intense analytical phase in the first five to six months led quite fast to a big picture of what theoretically was possible ranging from "creating a joint IT-Platform", "sharing business fields" to even "merging into one company".

Special team building events were organized to commit all participants to the alliance, such as e.g. a central kick off meeting with all BIT members, additional social program at the regular BIT meetings, like safari tours, fishing boat trips and accommodation in all inclusive, first

class hotels. Through the intensive joint work, the members got to know each other and learnt to understand the partner's organizational processes, e.g. in terms of decision taking, improving the joint work, personal relations and thus, the overall team spirit.

### ***Summary***

The assignment of accredited experts from all partners to the dedicated alliance project teams (BITs) aiming to identify and conceptualize alliance opportunities with their counterparts, ensured a continuous, focused and highly qualified identification, analysis and development of alliance management processes benefitting from individual expertizes, experiences, and internal insights.

Despite, the BITs worked intensively for months, the developed concepts rose on one hand side concerns about partner integration due to personal consequences, e.g. such as job security, personal career, and showed on the other hand difficulties in their practical implementation as existing processes and systems, such as e.g. IT systems and handling processes, weren't able to incorporate the required alliance management processes. For example, due to missing revenue shared system the partners remained competitors in the market impeding the required neutrality of joint sales operations. In conclusion, the theoretical identification and development of alliance opportunities were realized, while ALPHA faced obstacles in their practical implementation and in the alignment of existing processes.

### **5.5.3 Calling for change**

As joint work is always associated with changes in working routines, risks of opportunistic behavior and uncertainties about organizational performance impacts and personal consequences, the willingness to change attitudes is obligatory, but accompanied with resistances and fears. Das and Teng (2001) conceptualize this ambiguity as interplay between

trust, risks and control (Das and Teng, 2001). The second core category consists of two sub processes (*Identifying problems and rooms for improvements; Initiating change efforts*) presenting how ABC dealt with the challenge to realize alliance activities in everyday business.

### ***Identifying problems and rooms for improvements***

ALPHA's top management established additional reporting processes between the involved parties (corporate management, integration board, BITs, and line functions) to monitor the implementation of alliance activities. Based on monthly sales reports, providing information on e.g. how much ABC volume was handled, the ABC development and its effects. The data collection served as base to identify areas for further investigation. But, as the sales targets were monitored manually, besides the general system, the ABC targets were always second priority. Additional, the assessment of alliance effects relied on general organizational key performance indicators questioning their adequacy. Besides these formal reporting processes, the BITs collected and documented continuously feedback of line managers allowing problem identification and communication of best practices. A comprehensive analysis of ABC's evolution and results was announced and conducted by the top management after two years to decide on the alliance further development (exit/further integration).

Based on the identification, problems and conflicts were escalated to and primarily addressed by the BITs. Problem interventions involved focused communication campaigns, discussions and workshops at all important hubs in the world aiming to moderate purposefully between counterparts, demonstrate commitment and to provide guidance, like e.g. related to antitrust or information management.

Due to their comprehensive alliance know how and their personal contacts, they usually succeeded in their problem interventions and convinced involved parties of the alliance.



However, the created alliance spirit evaporated by the first incident between the partners, and the BITs were not able to intervene in all these conflicts or problematic situations worldwide due to their limited resources. Therefore, the ABC integration board decided to give more responsibility of alliance implementation in the hand of the regional managers while the BITs role continuously changed from action driver to moderator. The transfer of alliance idea into the country organizations was carried out with mixed success. It depended heavily on the individual's openness and willingness and on the competitive situation between the partners onsite as steering mechanisms were limited.

Driven by internal feedback, problem escalation, and monitoring results the BITs worked continuously on the development of problem solutions and/or improvements. This work based on (a) pooled expertise, e.g. for the development of technical systems to replace the missing joint IT System and cashbox between the partners (e.g. extended reservation systems, Dynamic-Rate-System to exchange capacities dynamically), (b) systematic information and data collection, like e.g. in the case of IT-solutions for failed messages identified through specific reports and (c) on individual experiences and creativity, as e.g. in the case of the identified need for an additional Net Access BIT addressing purposefully problems in network and capacity management between partners.

### ***Initiating change efforts***

The BIT reported situations, conflicts or problems they could not solve and topics they did not agree on to the Integration Board functioning as last escalation committee and asked for their decisions. The board members discussed intensively these concerns in their regular meetings trying to solve the situation. But, usually no agreement was found and could not be forced due to the lack of formal obligation, impeding the expected decision and top-down guidelines. Instead the board called the BITs for further analysis and discussions to find consensus. As the BIT members had to follow the same organizational restrictions or guidance as their

bosses, some topics were discussed over months without any progress, like e.g. the question of network harmonization.

The lack of top down devices and thus, the missing recognition of top management commitment's in the organization weakened the mandate of the alliance. Thereby, awareness creation pursuit by the BIT members got even more difficult as line manager's resistance to align themselves with the alliance requirements increased. This resistance based on the lack of understanding the need to change approved processes, coupled with uncertainties about performance effects and personal consequences. In consequence, the BIT members asked for a stronger corporate management commitment including the level of seniority exemplified through clear top down decisions and orders allowing the BITs to realize alliance activities. Like, e.g. ALPHA accepted the suggestions of favorable rate agreements to increase partner's trust in ABC and ordered their implementation against resistance of senior managers. However, the ABC realization remained predominantly limited to the employee's individual commitment and personal contacts between BIT members and line managers allowing discussion and implementation of alliance activities.

### ***SUMMARY***

The alliance implementation lost drive as operational obstacles arise, including the lack of antitrust immunity, joint cashbox and IT solutions, and expected top management decisions hold off. Furthermore, the established steering and control mechanisms were too weak to enforce alliance activities against these obstacles and allowed resistances to emerge in the organization. Driven by these problems and conflicts, the BITs continued to develop intensively solutions to improve the alliance implementation. However, their findings could not be enforced due to lack of mutual agreement between the partners, and the low alliance mandate in the line organization leaving the alliance implementation to individual commitment. Therefore, expected alliance benefits in terms of revenue increases failed to

appear by 2002. As no mutual agreement could be found or forced for the required changes, the alliance goals were aligned and shifted more towards (a) cost reduction and synergies realization, e.g. through joint asset utilization, and procurement, and (b) commercial opportunities addressed by an additional Net Access BIT.

#### **5.5.4 Hesitating to “Push the button”**

As alliances are “[v]oluntary interfirm cooperative agreements, often characterized by inherent instability arising from uncertainty regarding a partner’s future behavior and the absence of a higher authority to ensure compliance” (Parkhe, 1993) they are always accompanied by risks. Das and Teng (1998) identify relational (grounded on partner’s opportunistic behavior) and performance risk threatening the partner’s financial, technological, physical and managerial resources. Therefore, firms have to balance the risk with the development of confidence in partners based on trust and control (Das and Teng, 1998). The third category comprising two sub processes (*Finding mutual agreement for change efforts; Continuous consensus searching lead to frustration*) demonstrate the challenge for ABC to implement alliance activities due to accompanied risks and consequences.

#### ***Finding mutual agreement for change efforts***

Despite the knowledge on unsatisfying alliance results, escalated problems of the line organization, and identified obstacles and requirements by the BITs, the top management was not able to agree on asked decisions and/or investments to improve the situation. Particularly, the lack of a joint cashbox and antitrust immunity impeded the execution of alliance activities, like e.g. a joint capacity management for the benefit of the alliance.

But, as the alliance was not binding at all, ALPHA could not force the required mutual agreements on decision and investments neither it was able to sanction misbehavior. Therefore, there was nothing else for the integration board but to follow their strategy of

incremental integration striving for continuous convincing and consensus finding with the partners.

***Continuous consensus searching lead to frustration***

Over time, the involved parties got frustrated as the alliance implementation progress did not succeed as expected. Especially BITs members were disappointed that their intensive, full time work of more than three years on alliance opportunities and problem solutions failed to realize the expected alliance effects. Their personal commitment and belief in the alliance faded away, as their conceptualizations, recommendations and calls for decisions were repeatedly denied, down-scaled and turned back to them for further analysis and consensus finding by the integration board.

The lack of required top down decisions and changes and the increasing resistance of line managers both hampered the implementation of alliance activities allowing only realizing the low hanging fruits of the alliance not justifying the comprehensive investments made by ALPHA in the meantime.

In order not to let the disappointment turned into frustration, rather radical innovation, were conceptualized and presented to the integration board aiming to pull the lever of the alliance. For example, the possibility of joining partner's sales organizations into one entity in the US market was analyzed based on the initiation of the local ABC Steering Board consisting of all partner's senior sales managers (excluded DELTA). Anticipating that this would function as a role model for further roll-out upon successful completion, a dedicated project team worked this opportunity out for its presentation in Integration Board. Despite the commitment of the local managers to set up a joint sales organization, the Integration Board dismissed the concept in summer 2004. Unofficially, this refusal was recognized as sign post decision for ALPHA's engagement in ABC alliance.

## ***SUMMARY***

Over the time, the commitment of the involved parties turned into frustration as the implementation of alliance activities did not succeed as expected impeding tangible benefits. Escalated problems, identified obstacles and requirements were discussed in the Integration Board. But, usually no mutual agreement on change initiatives could be reached or forced by the decision takers due to missing regulations. Therefore, the BITs were asked to continue in their analytical work to find consensus, resulting in endless discussions in the BITs and ongoing downscaling of initial alliance goals.

Despite comprehensive efforts, the alliance implementation progressed only slowly (due to the lack of mutual agreement on signposting decisions) providing no tangible benefits for ALPHA. Acknowledging that the alliance goals are not feasible without additional investments and believing that they have pushed the alliance long enough, ALPHA passed the responsibility for the alliance to BETA as its second two-year term of chairman ended in late summer 2004. *“We have pushed it four years long, invested capacities and our bests people – now its your turn to see how you get along. ... That was done knowingly that no significant progress will be made in the next years.”* (Integration Board Member) In the following, ALPHA’s commitment for ABC weakened and finally faded away as market changes led the partners to refocus on their own bottom line and new priorities emerged. In September 2004, ALPHA disintegrated the dedicated ABC project team within an internal restructuring program of process and service improvement. Alliance activities and investments were continuously downscaled up to the last ABC meeting in December 2004. ALPHA officially completed the alliance in 2009.

The case shows that despite continuous and high professional analysis and development of alliance opportunities, alliance implementation depends on top management commitment. It determines the way how involved parties are mobilized, integrated and maintained to support

alliance activities. Top management commitment for an alliance needs to be reflected in concrete top down decisions and sanctions of misbehavior allowing the required changes to be made in a moderate time horizon. In the case of ABC, the alliance project team got lost in details, raising doubts about the top management's willingness to truly realize partner's integration with all consequences, including particularly giving up the own identity and taking high (financial, reputational, personal) risks. A member of the integration board made the point: *"... as long as you have your own bottom line your fairly safe; if you start giving up on that, you take a huge step - if you can't balance that risk by having a very solid business case, than you will never be allowed by your own owners, your shareholders."*

## **5.6 DISCUSSION**

The results of the conducted grounded theorizing analysis represent the DAMC process in the case of ALPHA by exploring how alliance management practices, processes and behavioral patterns were developed and modified over time in response to changes and problems and/or to realize alliance opportunities. Four constitutive routines of DAMC reflected in this processes emerged from this data: *Coordination, Mobilization, Proactiveness, and Transformation* (see Table 11 for an overview). To elaborate and add to the existing knowledge on the constitutive routines of DAMC, I explain these routines in the following and compare my findings with existing literature in the field of strategic alliance management, dynamic capability and change management emerged as relevant theory background.

**Table 11 Alliance evolution and constitutive DAMC routines**

	<b>Proactiveness</b> Routine to ensure continuous identify and development of alliance opportunities and problem solutions	<b>Coordination</b> Routine to steer and synchronize alliance activities between independent partners	<b>Mobilization</b> Routine to win the support of participants and create mutuality among them	<b>Transformation</b> Routine to identify, initiate and drive change efforts
<b>Animating joint work</b> - Agreeing on alliance type, goals and strategy - Winning the support of involved parties	Identification and assessment of alliance opportunities with respect to the specific context	- Definition of alliance governance mechanisms, e.g. decision policies - Alignment of internal steering mechanisms, e.g. operative targets	- Integration of involved parties - Assignment of resources and responsibilities	
<b>Pulling together</b> - Integration of accredited experts of alliance partners - Independent, intensive team work steered by predefined targets	Intense, full time search and development of alliance opportunities based on pooled expertise, systematic data collection and analysis Independent work focused on predefined areas	Communication process to ensure intense work and personal contact	- Intense work with partners, coupled with social events - Intrinsic motivation through accreditation, attractive job description and working atmosphere, exclusivity	
<b>Calling for change</b> - Identifying problems and rooms of improvements - Initiating change efforts	Search for and development of improvements and problem solutions	- Alignment of reporting and monitoring processes, including feedback loops - Alignment of steering mechanisms to support change efforts	Escalation of problems, conflicts and/or room for improvements	- Systematic collection, analysis and interpretation of data gained through monitoring and reporting processes and informal feedback - Define adequate evaluation criteria - Escalate problems to decision takers
<b>Hesitating to “Push the Button”</b> - Finding mutual agreements for change efforts - Continuous consensus searching lead to frustration	- Innovate to change the status quo Consensus-oriented development of alliance opportunities		- Consensus finding - Mutual agreement on change efforts - Trust in each other’s commitment - Pulling together for the alliance - Acceptance of change efforts	Drive change efforts

### 5.6.1 Coordination

Given the importance to coordinate the interdependencies between alliance partners, DAMC involves coordination routines to steer and synchronize alliance activities between partners for the pursuit of joint alliance goals. In line with scholars of dynamic alliance management capability, coordination consists of the mutual agreement on alliance type, goals, strategies, and targets, the assignment of responsibilities, tasks, rules, and the definition of governance mechanisms, resource, including decision policies and steering mechanisms allowing to force decisions and penalize misbehavior among partners (Schilke and Goerzen, 2010; Sarkar et al., 2009; Brekalo et al., 2013). Additional, coordination routine comprises the realization and maintenance of efficient communication processes. Efficient communication is the timely, accurate, and complete knowledge and information sharing processes (including formal and informal information) between independent partners required to synchronize each other's activities (Schreiner et al., 2009). Therefore, firms need to have knowledge and skills on selection and establishment of adequate communication systems and modes, such as e.g. IT systems and software, and common rules and standards, such as e.g. minutes and protocols of meetings and regular status reports, and interpretation of messages. Scholars among Kale et al. (2002) argue that the formation of a dedicated alliance team, as in the case of ABC, allow organizations to “*capture, integrate, and disseminate alliance-management know-how*” allowing for learning effects (Kale et al., 2002, p.750) in the alliance management. This learning curve could be identified, but was limited to the BITs in ABC. Due to the importance of coordination in the context of alliance and in line with existing alliance management capability literature (Dyer, 1998; Sarkar et al., 2009; Schreiner et al., 2009; Schilke and Goerzen, 2010), I suggest coordination routine as one of the constitutive routines of DAMC.



### **5.6.2 Proactiveness**

The purpose of alliances is the implementation of alliance opportunities aiming to realize competitive advantages. Therefore, DAMC consists of a proactive routine ensuring continuous identification and development of alliance opportunities, obstacles and rooms for improvements for the pursuit of alliance implementation. Scholars refer to this ability as alliance or partnering proactiveness (Gulati, 1999; Sarkar et al., 2009; Schilke and Goerzen, 2010) as “*a firm’s engagement in discovering and acting on new partnering opportunities ahead of competitors*” (Sakar et al., 2009, p.587). The ongoing development of alliance opportunities and problem solutions requires comprehensive expertise and resources, such as personnel and time resources. In the case of ABC, this proactiveness was ensured through the formation of a dedicated alliance team of experts striving for ongoing, mutual and target-oriented development of alliance opportunities and problem solutions based on pooled expertise and systematic data collection and analysis.

### **5.6.3 Mobilization**

As alliance implementation is accompanied by the alignment of existing and approved organizational processes and business logic, DAMC comprises a mobilization routine to win the commitment of involved parties and to create feelings of mutuality among them allowing for sustainable alliance implementation. To mobilize employees in the organization for the pursuit of alliance goals, they need to be aware and convinced of the alliance through (a) an effective communication process (Why? What it is in it for us and you? How? When? What are the consequences?) and (b) the recognition of top management’s commitment reflected in formal coordination and steering mechanisms, rules and resources assignments. Additional, firms have to create mutuality allowing for the alignment of partner’s individual interests to ensure that they act in concert for the joint alliance goals.

As individuals get psychologically linked to each other through processes of social integration (Harrison et al., 1998), firms need to integrate individuals, particularly decision takers, in alliance activities. Through intensive and frequent personal contacts based e.g. on scheduled physical meetings, coupled with social events, interpersonal linkages between counterparts emerge allowing to create strong personal contacts. Commitment and strong personal bonds relieve the search for consensus and mutual agreements between partners and thereby the alliance implementation.

#### **5.6.4 Transformation**

Given changes in economy and alliance conditions, arising problems or identified rooms for improvements, DAMC comprises a transformation routine to identify the need for modification and to drive the identified change efforts striving for a perfect fit between partners over time. Alliance transformation includes contract amendments, fluctuations in alliance-related personnel, or changes in alliance-related governance mechanisms (Reuer and Zollo, 2000; Schilke and Goerzen, 2010). Firms need to continuously monitor alliance activities and effects through systematically data collection and interpretation based on formal and informal reporting processes in order to identify problems in the alliance implementation as well as rooms for improvements. Thereby, firms are able to escalate the identified problems and inefficiencies to decision takers in order to initiate change efforts.

#### **5.6.5 Summary**

Based on the presented results, I provide an initial conceptualization of DAMC in the context of single alliance management including four constitutive routines: *coordination*, *mobilization*, *proactiveness*, and *transformation*. By exploring and explaining the constitutive

routines of DAMC reflected in the continuous development and modification of alliance management practices, processes and behavioral patterns in response to changes and/or to shape situations the firms find themselves in, I add knowledge to the existing literature on DAMC. The empirical results add to the knowledge on the existing findings on DAMC routines of coordination (Schilke and Goerzen, 2010; Sarkar et al., 2009), proactiveness and transformation (Schilke and Goerzen, 2010), and provide new insights on the yet not considered DAMC dimension of mobilization. Interestingly, learning did not emerge from the data as constitutive DAMC routine even it is acknowledge as determinant of alliance capability in the literature. This leads to the assumption that learning in the case of ABC may be limited to the dedicated alliance team and thereby incorporated in their continuous search and development for alliance opportunities. Additional, the importance of personal commitment for alliance implementation emerged from the empirical data, highlighting the specific role of partner's corporate management as driver of the alliance. The provided initial conceptualization of DAMC understood as multidimensional construct of four constitutive routines provides insight on the constitutive routines, their design and coherent interplay shedding light into a firm's process of continuous development and modification of alliance management processes and thus, the alliance success of an organization over time.

## **5.7 CONCLUSION**

As some firms are more successful than others in their ability to create value from alliances (Anand and Khanna, 2000), the study aims to unpack this alliance capability and thus, to add to existing knowledge on alliance capability. I define alliance capability as a specific *"type of dynamic capability with the capacity to purposefully create, extent, or modify the firm's resource base, augmented to include the resources of its alliance partners"* (Helfat et al.,

2007, p.66) reflected in the continuous reflection, development, and reconfiguration of firm's alliance management practices, processes and behavioral patterns in response to changes in context and conditions and/or to shape situations in which the firm finds itself in. Based on the results of grounded theorizing analysis of interview and archival data collected by a longitudinal case study of ABC, a multilateral alliance between Logistics Service Providers, I explore the DAMC process to identify and explain the constitutive routines of DAMC. Based on my results, I provide an initial conceptualization of DAMC understood as complex, structured, multidimensional (Winter, 2003) construct of four constitutive routines: Coordination, proactiveness, mobilization and transformation.

In consideration of the limited external validity of my findings by focusing on a single case study within a specific context, the study aims to add on existing knowledge and to gain new insights useful for theory building in the young research field of dynamic capabilities, and in particular of dynamic alliance management capabilities. Thereby, the findings provide empirical support for some of the DAMC routines discussed in existing research. However, they also indicate that the existing conceptualizations of DAMC are not yet comprehensive. Elaborating on how firms develop and modify continuously their alliance management practices, processes and behavioral patterns, the study contributes to the existing research on DAMC by providing an initial conceptualization of DAMC, unpacking its constitutive routines and shedding light on the "Black box" of DAMC processes. Furthermore, this study contributes to future research on DAMC as the provided conceptualization may serve as initial point for further elaboration on the identified routines, their design and interplay, e.g. by investigating and compare different contexts (such as mergers and acquisition; research and development).

The study contributes also for the development of managerial implications, as the conceptualization provides useful insights on the underlying processes of DAMC routines and thus on potential levers for developing and deploying a firm's alliance management capability. In particular, the creation of personal commitment was identified as crucial determinant of the DAMC process ensuring the proactive identification and development of alliance opportunities and support for their implementation. In conclusion, the study unpacks DAMC by providing new insights into the "Black box" of the DAMC process and an initial conceptualization of DAMC useful for further research and development of managerial implications.

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## CURRICULUM VITAE

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### PERSONAL DATA

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### EXPERIENCE

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- 04/2015 – 10/2015     **Consultant**, Lufthansa Cargo AG, Strategy, Subsidiaries & Business Development, Frankfurt, Germany
- Internal audit of an international cooperation by analyzing and assessing the cooperation's organizational setup, management and joint operations
  - Identification and development of improvements/new potentials presented to the Senior Vice President Strategy, Subsidiaries & Business Development
  - Follow-up project of a former consulting project (June 2011 to Nov. 2012): Based on expert interviews impediments of air cargo alliances were identified, analyzed and structurally presented to the Senior Management of Lufthansa Cargo AG
- 04/2008 – 05/2015     **Research Assistant**, Department of Business Policy and Logistics (Prof. Dr. Dr. h. c. Werner Delfmann), University of Cologne, Cologne, Germany
- Holding lectures and teaching theoretical concepts in "Management of Logistics Service Providers", "Logistics Management", "Strategic Management" and "Strategic Alliances and Networks" with an audience of 30 up to more than 100 students
  - Conceptualize, develop and revise the department's courses, teaching methods and tools in close coordination with the team and the Professor
- 05/2008 – 04/2012     **Project Manager of Student Business Projects**, Department of Business Policy and Logistics (Prof. Dr. Dr. h. c. Werner Delfmann), University of Cologne, Cologne, Germany
- Planning, conceptualizing and managing student business projects & workshops in close cooperation with international companies and the department of Business Policies and Logistics
  - Analysis of real-life business cases to develop concrete problem solutions and/or business potentials, e.g. DP DHL Inhouse Consulting, Bonn, Germany (Oct. 2011 to April 2012): Community of European Management Schools (CEMS) Business Project "Development strategies for DHL Freight in Africa" to analyze market potentials in African countries to develop market entry and penetration strategies for DHL Freight presented to the Managing Director of DP DHL Inhouse Consulting
- 09/2007 – 02/2008     **Graduate**, Henkel AG & Co. KGaA, Secretariat of the Management Board, Düsseldorf, Germany
- Internal audit of the corporate innovation strategy based on expert interviews to analyze and assess innovation initiatives and their impacts on the corporate culture; results were presented to the Corporate Vice President Board Office
  - Follow-up project of a student consultancy project on "Increase Profitability by Open Innovation" (April 2007 to July 2007): Development of an innovation strategy for Henkel (corporate) to create new business potentials and to strengthen its market position and reputation as innovation leader presented to the Managing Board of Henkel AG & Co. KGaA
- 09/2004– 02/2005     **Supply Chain Analyst**, FORD Motor Company GmbH, Cologne, Germany
- Responsibility for releasing, scheduling and control of supplier changes, shipments and shortages to initiate material allocation and prevent production shutdowns
  - Analysis of the catalysts' supply chain to identify costs saving potentials as part of Ford's European strategy of cost reduction presented to the Board of Managers of Ford Europe

## PUBLICATIONS AND CONFERENCES

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- Publications** In one of the top ranked international Logistics Journals: International Journal of Physical Distribution & Logistics Management (SSCI 5Year Impact Factor of 2.874)
- Brekalo, Albers, Delfmann (2013): Logistics alliance management Capabilities: where are they?" in: International Journal of Physical Distribution & Logistics Management, Vol. 43 No. 7, 2013, pp. 529-543.
  - Brekalo, Albers (2015): "Effective Logistics Alliance Design and Management" in: International Journal of Physical Distribution & Logistics Management, Vol:46, Issue 2, 2015
- Conferences** Invitations to the top one of the international conferences in the scholarly management and organization field "Academy of Management Annual Meeting" with more than 10,000 students, academics, scholars, and professionals
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## EDUCATION

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- 04/2008 – 01/2016 **Ph. D. Student**, Department of Business Policy and Logistics (Prof. Dr. Dr. h. c. Werner Delfmann), University of Cologne, Cologne, Germany
- Submitted Ph.D. Thesis "The Management of Strategic Alliances – Performance Impact Factors and Alliance Management Capabilities in the Context of Logistics Alliances" providing a solid knowledge basis on performance levers and impediments to success of joint logistics networks between allied LSPs
- 10/2002 – 03/2008 **Diploma of Business Administration**, University of Cologne, Cologne, Germany
- Diplom-Kauffrau (German Master degree) graduated with honors
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