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IT Challenges in M&A Transactions – The IT Carve-Out View on Divestments

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IT CHALLENGES IN M&A TRANSACTIONS – THE IT CARVE-OUT VIEW ON DIVESTMENTS

Completed Research Paper

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Abstract

Carve-outs belong to the most disruptive events companies – especially IT departments – are subject to. Yet the impact of these events on the IT alignment of the involved business units is largely unknown. This paper utilizes an alignment model to analyze specific IT-related challenges of divesting a strategic business unit (SBU). Hereby it focuses on the functional alignment between business strategy and IT at SBU level as well as on the organizational alignment between corporate and SBU. Based on five in-depth case studies of carve-outs taken place between 2004 and 2008, IT related challenges could be identified due to interdependent SBU information systems, a lack of IT governance, changing strategic scopes and the inability to preserve competencies. Dynamic capabilities were discovered as possible determinants for carve-out success. Carve-out management teams can utilize the analytical framework to make a SBU carve-out ready, to guide IT due diligence and to prioritize IT issues.

Keywords: Business IT Alignment, IT Carve-Out, Divestiture, IT Strategy, Case Study

Introduction

Multi-business organizations use divestments of strategic business units (SBUs) as a common tool to accomplish their strategic objectives (Decker and Mellowigt 2007). In the 1990s the Fortune 100 companies conducted more than 1,600 divestments to adjust their corporate portfolio (Villalonga and McGahan 2005). Lee and Madhavan's (2010) recent meta-analysis of 94 empirical studies concerning value effects of divestments highlights the importance of the topic in strategic management practice and research. Despite the recent economic downturn, the number of divestitures remains high, growing globally by 3% in 2008 (Coury et al. 2009). Yet current research has treated divestments as a minor component of broader topics such as corporate restructuring or mergers and acquisitions (M&A) (Brauer 2006).

Every divestment of a strategic business unit (SBU), or as practitioners call it, a transaction, is supported by a carve-out project to separate the SBU from its parent organization (Buchta et al. 2009). This project establishes a carve-out object which can either operate as a legally independent standalone organization or be integrated into the buyer's organization (Boryd and Storch 2006). A well known example is IBM's carve-out of its personal computer business, which was sold to Lenovo. In that example, the extensive integration of the SBU with its parent was the source of significant challenges for the carve-out. Acklery and Larsson (2005, p. 5) quote a deal team member: "The carve-out of IBM PC is the most complex carve out ever attempted by a private equity firm".

Within a carve-out project, the IT component – referred to as 'IT carve-out' – is frequently challenging, putting the seller's organization and the carve-out object under high stress (Cascorbi 2003; Buchta et al. 2009). In part, this is due to the short time frame, typically between three and nine months, and the technological and organizational complexity of IT carve-outs. Therefore, IT often accounts for a significant proportion of the total costs of the transaction (Leimeister et al. 2008; Fähling et al. 2009). Specifically, separating the IT landscape is the key technical issue with critical implications for carve-out costs and success (Leimeister et al. 2008; Fähling et al. 2009; Fähling et al. 2010).

The extant literature has begun to research IT integration and IT alignment in the context of M&As (See, for example, Wijnhoven et al. 2006, Mehta and Hirschheim 2004). However, it has neglected IT carve-outs (Müller 2006). Issues, including cultural clashes or compatibility of IT architectures, that have been extensively discussed in the literature related to IT integration are also relevant for IT carve-outs. In addition a focus on divestitures raises several further issues, including, for example, migrating systems and data, renegotiating contracts with service providers and protecting the intellectual property of the involved parties (Leimeister et al. 2008; Buchta et al. 2009).

In one of the limited studies of IT carve-outs, Fähling et al. (2010) derive assumptions for a 'perfect world' in which IT carve-outs would not face challenges. These assumptions call for the carve-out object's ability to autonomously decide about its business strategy, low IT integration with the parent, sound IT governance and preservation of the carve-out object's competences during the project. They then identify the major departures from this ideal type world in a case study of a carve-out project. Drawing on their research, we investigate whether the challenges they identify occur in other cases and, then, explore the causes behind them. Our research is guided by the following two research questions:

- a) *What IT related challenges are companies confronted with during a carve-out?*
- b) *What are the sources of the IT related challenges in carve-outs?*

Studying the challenges, companies are confronted with during an IT carve-out and their underlying sources are essential for successfully managing carve-out projects. Thus we are investigating whether the challenges discovered by Fähling et al. (2010) reoccur in other cases, what causes these challenges and what other challenges and success factors can be identified.

Literature Review

Within the context of mergers and acquisitions, the term divestment refers to a particular form of a demerger, which results in generating liquid assets. A demerger is defined as the act of separating an organization into two or more stand alone assets (Cascorbi 2003). According to Cascorbi, the major characteristic of a demerger is the disintegration of an organization, where the term disintegration functions as a generic term that covers all legal, business, process and organizational related activities of a demerger. Disintegration can be considered as the

counterpart of the term integration during an M&A transaction. The term divestiture is often used interchangeably for divestment. In some cases, the term carve-out is also defined to include financial and legal aspects of a demerger (Michaely and Shaw 1995; Taub 2006).

In contrast to the above financially oriented definition, Broyd and Storch (2006) and Buchta et al. (2009) define a carve-out as the operational activities needed to conduct a demerger, in which the carve-out object is established either as a stand-alone organization or merged with another organization. A carve-out typically includes the actions required to de-integrate the IT systems of the carve-out object from its parent organization. Similarly, Leimeister et al. (2008) define the IT carve-out process to include the separation of all shared information and communication technology related activities.

In this paper, demerger is used as a general term for the overall process of separating a business unit from its parent organization. The term divestment or divestiture refers to the financial or corporate strategic aspects of a demerger. The term carve-out covers all operational activities needed to implement a demerger. Finally, the term IT carve-out refers to the activities needed to separate a carve-out object's IT assets from its parent.

The motivation for conducting a divestment are typically clustered in three areas: strategic focus, weak economic results, and need for capital (Cascorbi 2003). The objectives of IT carve-out projects include speed, costs, risk minimization and sustaining the competitive advantage contingent on the IT landscape. Carve-outs also vary in regard to the strategic intent of the prospective buyer. Buyers can be differentiated into strategic and financial investors (Michaely and Shaw 1995). The latter have recently increased their presence in the marketplace (Taub 2006).

Leimeister et al. (2008) differentiate three major types of IT carve-outs based on the future needs for integration: *stand-alone* (no integration necessary), *merger* (integration into buying organization), and *joint-venture* (adoption of dominant IT architecture or development of new IT architecture). They identify ten success factors for carrying out IT carve-out projects. The three highest ranked are communication and the involvement of IT at an early stage in due diligence, contract negotiation and carve-out planning. The importance of these factors increases when the carve-out object is deeply and extensively integrated into the parent organization.

Our analysis begins by exploring two dimensions – the IT carve-process or timeline, and a model of organizations in which carve-outs would be subject to few challenges. Then, drawing on Reynolds and Yetton (2009) and Henderson and Venkatraman (1993), we develop a protocol for identifying challenges to successful carve-outs due to violations of the normative.

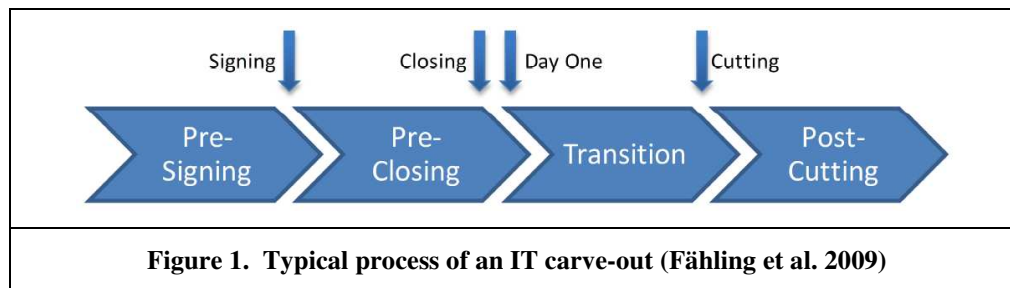
The IT Carve-out Process

The carve-out process can be organized into 4 phases. These begin with 'preSigning' and 'preClosing', which occur before the carve-out object is handed over to the new owner, and the subsequent phases of 'transition' and 'postCutting' (See Figure 1). The preSigning phase includes all preparations before a legally binding contract is finalized. The critical activity in this phase is the due diligence process. This is an audit in which the prospective buyers get access to interviewees and a data room to assess the target company (DePamphilis 2009). The data room is a physical or online document repository, which contains selected information made available to prospective buyers.

The separation of the carve-out object starts with the signing milestone. It may start earlier, if the seller is confident that the carve-out will be completed. In the preClosing phase, all separation tasks should be completed to be ready for Day One. At that time, the carve-out object becomes a legally independent entity, typically going into the property of the acquirer. This is, therefore, the most disruptive change to the parent's operations in the process. Typically, it is only possible to separate the most critical IT systems before this date (Buchta et al. 2009). Leimeister et al. (2008) distinguish between logical, step-wise and physical separation. Step-wise separation describes a gradual process that initially uses logical separation on the same hardware and is later completed by a complete physical separation. For the carve-out object's network, this process begins with establishing a carve-out firewall as the first level of logical separation.

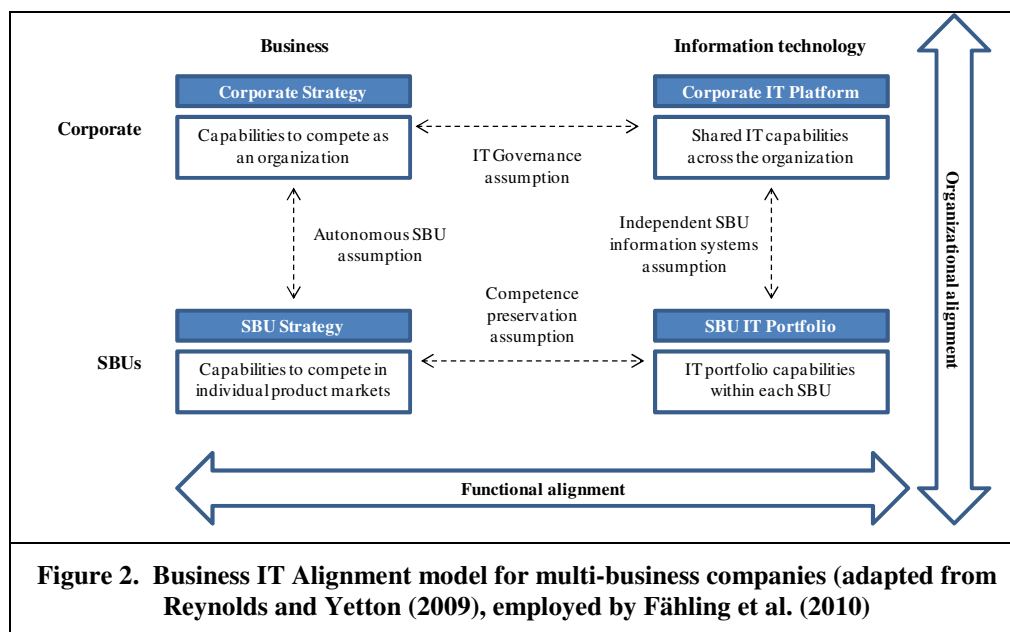
Transition is the longest phase during which most of the separation work takes place. With increasing time after Day One, the dependency of the carve-out object on its parent company is reduced. Until full separation is achieved, transitional service agreements (TSAs) are used to ensure and control the service provision by the parent organization to the carve-out object. For example, after Day One, the parent company could act as service provider

for the wide area network connections. It is important to note that in comparison to full separation, TSAs are a suboptimal, temporary solution (Coury et al. 2009). TSAs simply allow the involved parties to delay the actual separation. Where possible, these agreements are avoided because they constrain the strategic flexibility of both parties and the costs can be substantial (Buchta et al. 2009). Finally, with the cutting milestone, the carve-out object ceases to have any relationship with its former parent. Therefore, the overall success of an IT carve-out can be assessed by the achievement of the project's specific objectives and the degree of separation obtained at the cutting milestone. As a full separation of the IT Systems, in contrast to the other carve-out work streams, can often not be achieved until Cutting, TSAs and the final separation activities are continued in the postCutting phase.



Business IT Alignment

The second perspective, organizational structure, distinguishes between a corporate and SBU view. This is the key to the challenges faced by an IT carve-out in multi-business organizations. Reynolds and Yetton (2009) point out that existing alignment models are not suitable for analyzing multi-business companies because they only focus on one dimension of alignment, either the fit between business strategy and IT strategy or between IT centralization and decentralization (Ciborra, 1997; Reich and Benbasat, 2000; Chan and Reich, 2007). Henderson and Venkatraman's (1993) strategic alignment model represents the first dimension, and Broadbent and Weil (1997) or Ross et al. (2006) discuss the second dimension. To overcome these limitations, Reynolds and Yetton (2009) draw on the resource based view to propose an alignment model that combines these two perspectives (See, Figure 2).



Fähling et al. (2010) draw on Reynolds and Yetton (2009) to identify the characteristics of a ‘perfect world’, which is defined as the “hypothetical organization that is optimized for IT components of carve-outs as described by the model in Figure 2”. The authors derived four assumptions that constitute the ‘perfect world’ for IT carve-outs:

- (1) *Autonomous SBUs*: SBUs act autonomously, making decisions about how to compete in their product or service market without affecting other SBUs. Interdependences are limited to those between the corporate strategy and the individual strategies of each SBU.
- (2) *Independent SBU Information Systems*: Each SBU uses an enclosed set of business applications and data, where information is exchanged through well defined interfaces only.
- (3) *Corporate IT Governance*: Corporate standards are established and the systems, at both corporate and SBU level, are well documented to realize benefits from the corporate platform and ensure that all pre-requisites for interfaces, data, source codes, shared services, etc. can easily be achieved within the new IT environment of the carve-out object.
- (4) *Competence Preservation*: It is assumed that with the transfer of human assets, tacit knowledge and capabilities can be cloned to preserve them in the vendor organization and embed them in the carve-out object.

If these four assumptions were satisfied, carve-outs would not be a major IT challenge. An SBU could be easily decoupled from its parent organization, taking its information systems and data with it, and not be constrained by interdependences with other SBUs. The only issue would be the decoupling from the corporate IT platform to establish a similar environment for the carve-out object (Fähling et al., 2010).

Functional alignment inside the carve-out object

The functional alignment between the carve-out object’s strategy and its IT portfolio represents the classical understanding of IT alignment as postulated by Henderson and Venkatraman (1993) in their strategic alignment model (SAM). They distinguish between strategic fit and functional integration as the two components of IT alignment. In comparison to Figure 2, their strategic alignment model does not include the important distinction between corporate and SBU strategies. Implicitly, a functional organization structure is assumed (Chan and Reich 2007). From an analytical point of view, this dimension is unique among the four because it refers only to the carve-out object.

Relating this to the questions of what a ‘perfect world’ for an IT carve-out should look like, three impact factors can be derived from the components of the SAM. First, depending on the strategic rationale, the carve-out could result in a changed business strategy for the SBU (Cascorbi 2003; Böllhoff 2009). Apart from simple changes to the scale and scope of operations, a changed competitive environment could make a strategic reorientation necessary. Sabherwal and Chan (2001) show that for different classifications of business strategies, different perspectives of IT alignment are important. This puts a heavy strain upon the other components of the SAM, as major adaptations to the IT strategy, internal organization and IT infrastructure are likely. Sledgianowski and Luftman (2005) outline the challenges that a big chemical manufacturer faced when executing the ‘Aligning for One’ initiative as a response to a changed business strategy.

Second, in a ‘perfect world’, the carve-out object enjoys an IT strategy that is flexible enough to either be adapted to the changed conditions faced post-deal or the IT strategy already adequately covers these conditions. The strategic alignment model identifies the interaction of technology scope, systemic competencies and IT governance as potential sources for deviations. As for the business strategy, the IT strategy cannot be understood independent of the influence of the parent. While the carve-out object is integrated with the corporate IT Platform, it will in most cases be influenced significantly (Silvius 2007).

Third, Fähling et al. (2010) address the impact factor of SAM’s internal organization and IT infrastructure by their assumption of competence preservation. A carve-out is an exercise of separating parts of an established organization, typically resulting in changes to the portfolio of skills, processes and IT architecture available to the carve-out object. The following evidence from the carve-out and M&A context reports that many operative issues faced in transactions are related to this third impact factor. The case study of Fähling et al. (2010) shows that human resources were a critical issue because key personnel can be deterred by the changes and leave the company. This effect is also widely discussed in M&A literature (Schuler and Jackson 2001). In a ‘perfect world’ not only the necessary skills should be retained, but also the processes required for smooth operations. Anderson (1999) criticizes

M&A planning as incomplete, neglecting important processes and organizational structures. The planning process for a carve-out is carried out under similar circumstances. Therefore, Anderson's probably holds for carve-outs. Finally, the IT architecture – as the most technical issue – can have a significant impact on the success of a carve-out. Fählng et al. (2010) present a carve-out issue related to a charging system that was used by multiple SBUs and hence contained interlinked data. The following statement from Larsen's (2005, p. 1154) case study of the Nordea Group, a merger of two Scandinavian banks, highlights that the IT architecture can be a critical issue in M&A transactions: "[D]ue to the many mergers, and a very business oriented IT-strategy, the architecture was extraordinary complex. Nordea had any type of software and operating system found in any bank in the Nordic region". In the carve-out context this is also acknowledged by Leimeister et al. (2008) and Buchta et al. (2009). They stress the complexity of the enterprise architecture caused by the interdependency of IT systems like SAP.

Summarizing, in a 'perfect world' the carve-out object would be capable of adjusting to the changes triggered by the transaction and sustain a high strategic fit as well as functional integration. This suggests that the adaptability of the carve-out object depends on the disruptiveness of the transaction.

Organizational strategic alignment

Corporate parenting theory is used to examine organizational strategic alignment between the carve-out object and the pre-deal parent. Goold et al. (1998) define the parent as all levels of management which are not part of the SBUs that interact with the customer. These layers inherently create costs, by adding overhead and sometimes detrimental influence on the SBU. Corporate parenting theory challenges whether these costs are outweighed by the value the parent adds (Goold et al. 1998; Goold and Campbell 2002). In the context of carve-out and M&A transactions, the questions are whether this parenting advantage justifies not operating the SBU as a standalone business, and whether it outperforms the value that rival parents could add. If not, both of these cases would identify the SBU as a potential carve-out object.

The role model postulated by Goold et al. (2001) distinguishes between three levels of corporate parenting, based on the degree of integration. In a minimum parenting role, the responsibilities are restricted to regulatory requirements like accounting and tax declarations. Furthermore, the parent's involvement is restricted to basic corporate governance. In this role, the costs as well as value-added are minimized. Value-added parenting increases the scope towards providing strategic guidance and leveraging corporate-wide resources to create synergies. Finally, in the role of shared services, the parent assumes responsibility for various operative processes of the SBUs and tries to improve efficiency by centralizing them. As the difficulty of adding parent value raises with increased integration, the difficulty of separating a carve-out object is also tremendously increased.

The concept of corporate parenting provides a versatile tool to assess the level of organizational strategic alignment. In this study, it is used to explore how different parenting styles impact upon the execution of a carve-out. Fählng et al. (2010) call for establishing an autonomous carve-out object. This assumption encompasses the requirement that the carve-out object can decide independently about its business strategy and how it competes in its respective markets. Linking this assumption to the parenting roles, it is very close to the minimal parenting role. It goes even one step further by postulating that SBUs should also be independent of each other. Therefore, establishing a 'perfect world' for a successful IT carve-out, in regard to the organizational strategic alignment, means that the carve-out object is capable of disbanding the parenting relationship without a detrimental impact. This can either be realized by establishing a quite autonomous carve-out object or by employing a parenting style for which the value contribution can be easily replaced.

Organizational IT alignment

Drawing on the argument of Silvius (2007), the parenting theory can also be applied to the dimension of organizational IT alignment between the corporate IT platform and the carve-out object's IT portfolio. Theoretically, this dimension is founded on the trade-off between strategic flexibility and synergy realization (Weil et al. 2002; Thorogood and Yetton, 2005). By setting up a completely integrated information system (including infrastructure, applications, services and data) that encompasses all SBUs and their IT needs, significant economies of scale and scope can be obtained by the corporate unit (Mehta and Hirschheim 2004). Furthermore, such an integrated corporate IT platform can leverage IT artifacts that create a competitive advantage and transfer it to the whole enterprise (Miczka and Größler 2004; Piccoli and Ives 2005).

Wijnhoven et al. (2006) have identified three integration strategies in the M&A context, classifying the degree of integration between a SBU and its parent. In the case of a ‘complete integration’, the carve-out object relies on the parent for almost all components of its IT portfolio, whereas in a ‘partial integration’, only selected systems and parts of the IT infrastructure are sourced from the parent. In the case of ‘co-existence’, only absolutely necessary links for financial consolidation are provided by the parent. Combining these integration strategies with their itemization of IT into applications, IT infrastructure and IT policies (Broadbent and Weill 1997), a classification matrix for this dimension can be defined. Taking Fähling et al.’s (2010) finding into account that human resources are a critical issue in IT carve-outs, they are added as a further category. Similarly Bharadwaj (2000) mentions human IT resources as an IT capability, together with IT infrastructure and IT enabled intangibles. These capabilities discussed here are distinguished from competencies in the functional alignment dimension by the fact that they are provided by the corporate center.

Fähling et al. (2010) postulate that, in a ‘perfect world’, the SBU’s information systems are independent of the corporate IT platform, as well as of each other. This assumption covers all elements of the IT as defined above and comes therefore close to Wijnhoven et al.’s (2006) integration strategy of co-existence. Violations of this assumption lead to additional challenges in the separation of the carve-out object, such as data separation as depicted in the case study of Fähling et al. (2010). When interdependencies occur between SBUs, this can provide another hurdle in the carve-out process (Mehta and Hirscheim 2004; Tanriverdi and Du 2009; Fähling et al. 2010). As for the IT resources and capabilities sourced from the corporate IT platform, these must be separated and replaced during the carve-out. When the SBU – as in the case study of Fähling et al. (2010) – does also provide IT resources and capabilities to other SBUs, the transaction affects them as well. In a ‘perfect world’ SBUs’ IT must not be mutually dependent.

Thus far, the discussion has only covered how IT capabilities are provided, but not if they fulfill the needs of the SBU. The quality of the organizational alignment between the corporate IT platform and the SBU IT portfolio can only be assessed by comparing if the IT capabilities provided by the central platform provide a competitive advantage to the SBU. Silvius (2007) draws on corporate parenting to identify the parenting advantage of a corporate IT platform and whether it outweighs the disadvantages of such a centralized structure. Similarly Tanriverdi (2006) claims that multi business organizations have the opportunity to exploit IT synergies by applying their IT resources and management processes across multiple SBUs. In the context of M&A, this can also be illustrated by employing Johnston and Yetton’s (1996) theory of compatibility of IT configurations. They use the IT strategy, IT structure, IT systems, IT management processes and IT roles/skills as criteria to assess the ‘fit’ in a merger of two Australian banks. This can be transferred to the relationship between corporate and SBU, where the parent only adds value if its IT capabilities are complementary to those of the SBU. This is also in accordance with Reynold and Yetton’s (2009) alignment model presented in Figure 2. Fähling et al. (2010, p. 5) consider this by postulating the assumption of corporate IT governance, which demands that “the corporate platform is beneficial to all SBUs” and that well-documented standards govern this relationship. Summarizing, in a ‘perfect world’ it is possible to disband the organizational IT alignment between the corporate IT platform and SBU IT portfolio without a detrimental impact on the seller organization or the carve-out object.

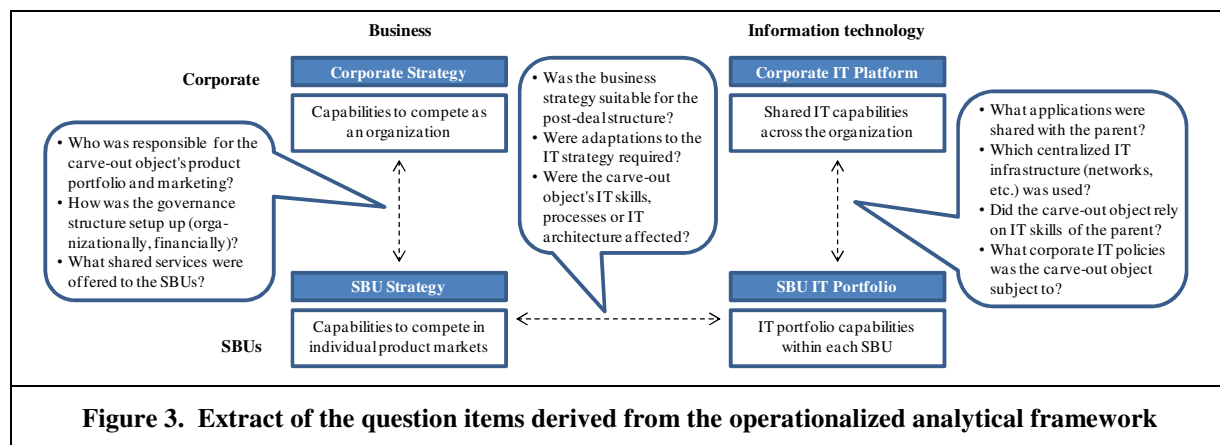
Research methodology

Adopting a positivist perspective, we conducted a multi case study to answer the two research questions of what IT related challenges are faced within carve-outs and what causes them. As such, the unit of analysis is the IT carve-out project. Since IT carve-outs are a novel area of research, case study research is an appropriate methodology to develop new theory (Yin 2008, p.54). The analytical framework proposed by Fähling et al. (2010) provides a rich, theoretical framework to guide our research. In addition, the fact that the research explores contemporary events and no control over the behavioral events is necessary, also supports the use of case studies in this research (Yin 2008). To guide our research process we utilized Eisenhardt’s (1989) and Yin’s (2008) suggestions for conducting case study research. For the data analysis we additionally followed Mayring (2008).

Following Eisenhardt (1989), we choose a theoretical sampling frame, based on the two dimensions defined above: Pre-deal integration of the carve-out object into the parent organization and the need for post-deal integration into the buyer organization. These two dimensions are of theoretical importance. It is assumed that less integrated business units pre-deal are subject to fewer challenges. It is also assumed that the need post-deal to integrate the carve-out object into another organization adds additional challenges to align seller and buyer activities. The need for integration is typically the case for strategic investments in contrast to financial investments.

Case studies were selected with the goal to cover all major transaction scenarios. In case studies 1 and 2, the pre-deal IT integration with the parent was low and no integration into the buyer was required post-deal. In cases 3 and 4, pre-deal integration of the SBU with its parent was high and no post-deal integration was required. In case 5, the need for integration both pre- and post-deal was low. The fourth combination, the need for both pre- and post-deal high integration was omitted from our investigation. This combination is examined in Fähling et al. (2010).

The data collection for the case studies relied on a triangulation of interviews with documents and public sources. The research was preceded by two research projects in the area of IT carve-outs which consisted of seven and eleven interviews each, forming the basis for our analysis. The evidence for the cases was then complemented by six interviews which were specifically conducted for this study, concerning the topic of IT alignment in carve-outs. In sum, each case study is based on two to five interviews. The Interviewees had extensive knowledge of the transaction and were involved in either the IT or business carve-out. For each case study, at least one interviewee had a leadership role in the carve-out execution (typically the project manager or leader of the IT work stream), ensuring a high level management view. For most cases we interviewed both internal project members and external consultants to get different perspectives on the case. The interviews were preferably conducted on-site or alternatively via telephone. Figure 3 summarizes the question items, derived from the analytical framework that formed the semi-structured interview guide. Due to the nature and novelty of the research topic, we followed a semi-structured interview approach to exploratively study IT challenges in carve-outs. The carve-outs described in the case studies took place between 2004 and 2008 and were studied retrospectively.



As a rich theoretical framework was already available, the data was analyzed using a category coding-based, content analysis technique (Mayring 2008). The coding categories were derived from the alignment dimensions comprising the analytical framework of a 'perfect world' for IT carve-outs presented in Figure 2. Among others, coding categories were for example 'Functional Alignment', 'Organizational Alignment (Business)', 'Organizational Alignment (IT)' and 'Assessment of Carve-Out Success'. To enhance the reliability, each interview was coded independently by two researchers. The unit of analysis was defined – with reference to Mayring (2008) – as a statement of the interviewees that contained impressions, experiences or judgments related to the coding categories. Based on the literature review, the findings of the coding process were related to the theoretical concepts that underpin each category. This analysis enabled us to derive the characteristics of the 'perfect world' for the IT carve-out object in each case study and the deviations from that profile that were observed in practice. Table 1 summarizes the validity and reliability actions that were undertaken in this study, to ensure valid findings.

Table 1. Validity and reliability of the chosen research methodology (adapted from Yin (2008))	
Construct validity	<ul style="list-style-type: none"> • Triangulation through the use of multiple data sources (project documentation, interviews with internal and external project members on different hierarchical levels) • Interviewees reviewed the interview transcripts for correctness
Internal validity	<ul style="list-style-type: none"> • Findings have been related to the existing evidence identified in the literature review
External validity	<ul style="list-style-type: none"> • Replicating findings of Fähling et al. (2010) in similar but distinct cases
Reliability	<ul style="list-style-type: none"> • Interviews have been taped, transcribed and coded. • Satisfactory inter-coder reliability (Cohen's $\kappa = 0.89$, Krippendorff's $\alpha = 0.88$)

Results

Case study 1 – ‘Picture-perfect’:

To finance a large investment and adjust its portfolio, BigCorpA put SmallCorp, a subsidiary, on the market. Therefore it started an open bidding process. BigCorpA is a global corporation with more than 100,000 employees and revenues exceeding 25bn Euros a year. Before the carve-out, SmallCorp had revenues exceeding 1bn Euros and employed 3,000 employees. It had operations, including production sites and sales offices, in several countries. The successful bidder, FinInvestorA, announced that SmallCorp would become an independent, standalone business entity.

Organizational alignment (Business): BigCorpA was organized as a holding company with several divisions. Each division contained one or more businesses that served a particular market. While the carve-out object SmallCorp formally belonged to one of these divisions, its products did not fit with the other businesses in its division. From an organizational and IT integrational perspective, there was no connection with other businesses in the division. In addition, BigCorpA acted out a minimal parenting role, with the exception of the sales function. This consisted of a global set of country-based businesses that sold its products. This function was highly integrated into the parent with only a few employees specializing in SmallCorp's products. Summarizing, this case satisfies the assumptions of an autonomous SBU with a shared sales function.

Organizational alignment (IT): SmallCorp relied for its provision of IT services on BigCorpA's shared services unit. Its WAN, data centers and other infrastructure services, including, for example, messaging, identity management, data storage and printing, were provided by its parent. During the carve-out, the WAN was transferred to an external service provider. Responsibility for the other infrastructure services was transferred to SmallCorp's IT department. The application landscape, that contained, for example, several SAP systems, could be treated as logically separated since they were independent from other SBUs, while hosted and managed in the data centers of the parent's shared services unit. As an interviewee put it, “you have to differentiate who owns the application and who hosts it”. Thus, it was only necessary to consolidate the platforms and transfer them to servers controlled by SmallCorp.

The high integration of the sales offices with the parent's sales function required a new organization and IT landscape. Each country sales function was moved to new offices and serviced by SmallCorp's new IT infrastructure. As SmallCorp did not have its own IT sales support staff, the new sales offices were supported by a mix of local service providers and SmallCorp's own central IT department

Functional alignment (SBU-Level): As outlined above, support for sales had been sourced from the parent's shared services center. For SmallCorp's new sales operation, a complete reorganization was necessary. This required a revised business and IT strategy. With that exception, there were no other significant deviations to the ‘perfect world’. Since the carve-out object was already an independent SBU, the other dimensions of its business and IT strategies were suitable for operating post-deal as standalone business. SmallCorp had two capable IT departments that served its major geographic markets.

Analysis: Deviations from a ‘perfect world’: The interviewees reported that this carve-out was “picture-perfect” and if they could, they “would not change much”. The transaction is considered to be successful. The critical question is why the high integration of SmallCorp's ex-ante sales and IT sales support functions with the parent did not impact negatively on the IT carve-out project performance? The explanation lies in SmallCorp's high

adaptability. All its shared IT resources were sourced from a corporate shared services center that was setup as a profit center. Essentially, SmallCorp had outsourced parts of its IT landscape, which were now partially insourced and partially outsourced to other local providers. This allowed the carve-out team to focus on the separation of the sales offices. This case study is the only one in which the window of opportunity, that the carve-out process offers, was utilized to implement significant improvements, including establishing a new service management model and roll-out a customer relationship management application, financial planning system and reporting suite. This has been highlighted by an interviewee: “in a typical transaction you stick to the motto 'Keep it simple', since you have only limited time. Contrary in this case we built for example a new helpdesk.”

Case study 2 – ‘BigCorpB’s Demerger’

This carve-out was the largest and most complex in this study. A large number of organizational units were involved. BigCorpB was a global corporation that had merged with BigCorpC a few years before. Both companies operated in the same industry and had merged with the goal of achieving synergies by providing customers with an integrated product portfolio. At the time of the carve-out, the merged organization had more than 300,000 employees and revenues that exceeded 100bn Euros. BigCorpC managed about one third of the organization’s activities. Due to financial losses and pressure from shareholders, BigCorpB’s management decided to divest BigCorpC, unwinding the merger. At the outset of the carve-out, the buyer’s intentions were not known. Eventually, after the deal was concluded with the financial investor FinInvestorB, BigCorpC was established as a standalone entity.

Organizational alignment (Business): After their merger BigCorpB and BigCorpC were never fully integrated into one organization with a single corporate center. Instead, the pre-merger organizations remained largely unchanged. Integration was limited to a partly shared supply chain. Their product offerings and production infrastructure remained independent, satisfying the autonomous SBU assumption of the ‘perfect world’. Effectively, BigCorpB acted as a minimum corporate parent, restricting its influence to financial reporting, regulatory control and supply chain management. Essentially BigCorpB and BigCorpC were acting as corporate parents for their respective parts of the organization.

Organizational alignment (IT): BigCorpB’s and BigCorpC’s IT were also not fully integrated. There was some IT integration present in the IT infrastructure domain. Due to the distinctive geographic focus of BigCorpB and BigCorpC, each provided parts of the global infrastructure, including, for example, WAN and LAN networks, directory services and messaging. These had been integrated into a global infrastructure, with access to each other’s applications. An interviewee explained, “I could go with my laptop, as a BigCorpB employee, to any location and login”. Each headquarter had its own IT department supporting its components of the IT landscape. Therefore, ex-post, BigCorpC lacked the IT infrastructure in the geographic areas where it had historically not had a presence. Due to the complexity of establishing an own infrastructure in those areas, the new infrastructure could not be built before closing. So, BigCorpC had to rely on TSAs to continue using BigCorpB’s infrastructure.

The separation of the SAP system was the greatest challenge. This required as much effort as the separation of all other applications together. After their merger, both companies had launched a best-of-breed initiative to identify excellent IT applications to implement them organization-wide. Due to the large number of systems, many of which were not fully documented, the separation was prolonged considerably, and only the most important financial planning and reporting systems were physically separated before closing. Reporting on his experience an interviewee stated: “What we experienced was that people were unfamiliar with a lot of what IT does or had done. So in the planning stage, even though they planned for IT, they still forgot a lot of things [...]. They just did not know about it.” For other applications, TSAs, lasting six months or longer, were required to ensure BigCorpC’s access.

Functional alignment (SBU-Level): Due to the specific organizational setup, with two independent business units, this carve-out came very close to the vision of competence preservation. Neither was it necessary that BigCorpC altered its business strategy to become a standalone entity, nor were major changes to the IT strategy necessary. Furthermore, BigCorpC already possessed a fully established internal organization and IT infrastructure that were capable of supporting the businesses’ requirements.

Analysis: Deviations from a ‘perfect world’: The extended usage of TSAs and a low degree of separation obtained at the time of closing highlight that this carve-out faced major IT challenges. Surprisingly, organizational alignment between the corporate strategy and SBU strategy and, the functional alignment of the carve-out object were high. No

mentionable deviations from a 'perfect world' were encountered in these two domains. However, significant deviations were encountered in the organizational alignment between the corporate IT platform and the carve-out object's IT portfolio. BigCorpC was dependent on BigCorpB for the provision of shared applications and infrastructure in specific geographic areas. The independent information systems assumption of the 'perfect world' was violated. The heterogeneous IT landscape, undocumented systems and the difficulty of identifying applications that needed to be separated were major challenges for the IT carve-out project. This case highlights the importance of adaptability as a major factor in IT carve-out success. In contrast to the 'Picture-perfect' case – where adaptability was the reason why, despite violations of assumptions, a very successful carve-out was carried out – this case shows how the complexity of the IT landscape and organization size decreased the ability of BigCorpC to cope with the challenges. Finally, it also must be noted that this case pushed the analytical capabilities of the framework to its limits because a dedicated parent entity was only virtually present.

Case study 3 – 'Financial Services'

To support a major reorganization, the financial services provider, GlobalFinServicesCorp, carved out the business FinServicesCorp and sold it to the financial investor FinInvestorC. Again, at the outset of the carve-out, the prospective buyer and its intentions were not known. When the contract was concluded with FinInvestorC, it announced that the goal was to establish FinServicesCorp as a standalone entity. Pre-deal, GlobalFinServicesCorp had 10,000 employees and its revenues exceeded 17bn Euros per year. It was organized into three geographic business units. Together, these units provided a global financial services offering. With about 3,500 employees and revenues of more than 8bn Euros per year, FinServicesCorp constituted three quarters of one of GlobalFinServicesCorp's three business units.

Organizational alignment (Business): From the perspective of the organizational alignment between the corporate strategy and the carve-out object's strategy, the configuration in which FinServicesCorp formed the major part of one of the three largely independent geographic SBUs came very close to the assumption of an autonomous SBU. In its own geographic area, FinServicesCorp acted independently in regard to the product offerings and marketing strategy. GlobalFinServicesCorp played a minimal parenting role, focusing on financial control and refinancing. While there was limited integration with the parent, FinServicesCorp was highly integrated with the parts of the business unit to which it had belonged and which were retained by GlobalServicesCorp.

Organizational alignment (IT): In general, the low degree of integration with the parent resulted in minor barriers to separate the corporate IT platform and FinServicesCorp's IT portfolio. However, in the area of IT infrastructure, FinServicesCorp relied on the centrally provided WAN infrastructure to connect with the retailers selling its products. Otherwise, the IT integration could be classified in accordance with Winjnhoven et al. (2006) as one of co-existence, with the exception of some financial reporting and administrative systems that were shared with the parent. It was possible to separate these applications during the carve-out. However, the complexity of building a new WAN network made TSAs necessary to ensure FinServicesCorp's continued access. Therefore, with the exception of the WAN network, FinServicesCorp largely satisfied the assumption of independent SBU information systems.

Functional alignment (SBU-Level): This dimension is critical to the understanding of this case. It generated the most serious separation barriers. The business unit, to which FinServices Corp had belonged, had just completed several years of painstakingly integrating its IT landscape of 120 applications. As one interviewee commented, "This integration had been really well done". Only two proprietary applications remained to be integrated. This excellent alignment was recognized by the industry in which the business unit was the cost-leader. Now faced with the carve-out, this integrated IT landscape presented the most significant separation barrier because, due to its historical development, it was extremely heterogeneous and mostly proprietary. An interviewee gave an example of an accounting process: "To generate their general ledger they had to use 17 different applications." This meant that a separation could only be achieved by completely duplicating the IT landscape and splitting the IT department. It is important to note that the carve-out did not change the focus of the business strategy, but reduced the scope to 75% of the former volume, leading to a large unused capacity and a significantly higher cost structure. An accompanying consultant summarized: "the problem they had is that the fixed costs are so high. So now that the volume had gone down by 25%, the operating ratio has gone up [...] But I think unless you either use some form of cloud computing or you outsource on a transaction basis for costing, then how do you get variable costs into that sort of IT environment?"

Analysis: Deviations from a ‘perfect world’: The deviations present in this case study can be traced to the functional alignment inside the carve-out object. Neither organizational alignment (Business), with the exception of the WAN network, nor organizational alignment (IT) generated major carve-out barriers. The minimal parenting role by GlobalFinServices resulted in the autonomous SBU and independent SBU information systems assumptions being satisfied. As in Larsen’s (2005) case study of the Nordea Group, the IT architecture was critical to the challenges faced.

Substantial carve-out barriers resulted from the misalignment in functional alignment. FinServicesCorp’s IT performance had been disruptively changed by a reduction in scope, combined with the insight that, due to the heterogeneous, highly integrated IT landscape, an adaptation to this changed situation was not possible. This resulted in a situation in which a pre-deal industry cost-leader was faced with a high cost position post-deal, due to the high fixed costs of its IT landscape. Of course, this issue was even more serious for the part of the business unit retained by GlobalFinServicesCorp, because their IT landscape was now sized for four times their post-deal transaction volume. In addition, the assumption of competence preservation was violated. A restructured and reduced IT department was faced with the challenge of supporting an unchanged IT landscape.

Case study 4 – ‘No separation achieved’

The global sales and distribution organization, GlobalResellerCorp, was organized into 120 country businesses. These provided a global retailing network for its two major brands. Thirty of these country businesses were to be carved out as a standalone business and sold to the financial investor, FinInvestorD. The critical challenge was that each of these country-based businesses needed to be split, because the carve-out object, ResellerCorp, was to be formed exclusively from the parts of GlobalResellerCorp that supported one of the brands. Pre-deal, GlobalResellerCorp employed about 4,000 employees, of which 1,500 worked in the 30 businesses affected by the carve-out.

Organizational alignment (Business): The country-based businesses operated independently of each other. Each had its own support functions and Board of Directors. These businesses varied in size from 10 to 200 employees. Therefore, the extent to which the specific functions were represented also varied. The parent adopted a minimal parenting role, restricting itself to providing global standards concerning the marketing of the two brands. Otherwise, each country-based business operated independently, deciding how to compete in its own geographic market. Therefore, each business came close to satisfying the ideal of an autonomous SBU.

Organizational alignment (IT): The similar structures of the country-based businesses, and the fact that many of them were quite small and had no dedicated IT department, lead to a high degree of IT integration with the parent. To support the larger businesses, a standard set of applications were provided. In addition to these shared applications, a global IT infrastructure network was provided. This was a business critical system because it included a WAN to connect the businesses with their local retailers. In the carve-out, this provided great obstacles because the post-deal standalone entity lacked the pre-deal parent’s IT capabilities to support the WAN. An interviewee commented: “When the transaction took place, they lost a lot of things and we were no longer able to access certain systems.” For the carve-out process, this meant that extensive TSAs were required, but, as the statement highlights, there was a detrimental impact on the carve-out object. This violation of the independent SBU information systems assumption is illustrated by the example of a corporate employee portal. This portal bundled links to certain applications and, as the interviewees expressed it, “a lot of very good information”. After the carve-out, ResellerCorp’s employees could no longer use this portal because it was economically not feasible to build and operate its own solution.

Functional alignment (SBU-Level): The necessity to split all 30 affected country businesses into two independent units that served their respective brands required the setup of two separate IT landscapes and a division of the IT staff. Only a few larger businesses possessed an IT department. Most of the others had one or two employees supporting the local systems. The carve-out, therefore, resulted in a significant loss of competences. The divided units post-deal lacked the IT capabilities to support their IT landscape. The loss of support from the central IT department compounded the problem.

Analysis: Deviations from a ‘perfect world’: This case study describes a carve-out that faced serious challenges due to its deviations from a ‘perfect world’. Despite the fact that the autonomous SBU assumption was fulfilled, significant deviations were encountered in the domains of organizational IT alignment and functional alignment. The violation of the competence preservation assumption and independent SBU information systems assumption

resulted in that, at closing, large parts of the organization were not separated. In fact, they remained in that state for a considerable time period; in some cases resources were still shared after more than twelve months. An interviewee concluded, “they underestimated the complexity and overestimated the capability of the people in the countries”. The detrimental effects of long-term TSAs described by Buchta et al. (2009) explain the negative consequences. An important observation is that, when the pre-deal carve-out target is not already established as a quasi-business unit, the difficulty of the carve-out project is materially increased. This goes beyond the autonomous SBU assumption which calls for independence, assuming that an organizationally well-defined unit already exists. Finally, this case raises the question of whether separation of many small organizational units as part of a single carve-out object is especially challenging.

Case study 5 – ‘Fully Separated at Closing’

Responding to a consolidation trend in the carve out-object’s market, BigCorpD divested the carve-out object, DicephalusCorp. BigCorpD was a global corporation and one of the technology leaders in its industry. With 50,000 employees around the globe, it generated revenues of more than 12bn Euros annually. The two SBUs, which made up the carve-out object accounted for 0.5bn Euros and had 2,000 employees in Europe and North America. To find a buyer, the bidding process was led by an investment bank. Initially, the two SBUs were offered for sale separately. However, the winning bidder, StrategicInvestorA, acquired both. The unusual carve-out design, in which both SBUs were carved out as standalone entities, is explained by the seller’s rationale to maximize the selling price. StrategicInvestorA’s motive beyond this acquisition was a strategic expansion in this market. With more than 150,000 employees and revenues of 50bn Euros, StrategicInvestorA operated SBUs in several related industries.

Organizational alignment (Business): An interviewee commented that the organizational structure of BigCorpD, was “quite decentralized”. Historically, the two SBUs, which formed the carve-out object, were weakly integrated into BigCorpD. They had been acquired about a decade earlier and targeted market segments quite different to those of the other SBUs. Therefore, only a minimal parenting role was present and they were largely autonomous in their strategic decisions. Therefore, with the minor exception of some parts of the sales organization that were integrated into the parent’s global sales organization, only minimal deviations from the ‘perfect world’ were encountered in this domain.

Organizational alignment (IT): The degree of IT integration with the parent varied between the different areas of IT. As an interviewee put it, “with regard to the IT infrastructure, BigCorpD was organized as an integrated, single enterprise.” In comparison, there was only minor integration in the other areas. DicephalusCorp relied on BigCorpD’s global WAN to control its local operations. These were spread across 25 countries. During the carve-out, the WAN presented the greatest separation challenge. However, it was possible to replace the connections at all sites, establishing an independent WAN for each of the two SBUs. In the area of applications, DicephalusCorp used a corporate SAP system for financial reporting. Due to their historically low overall integration, the other about ten ERP systems in use were restricted to one of the SBUs and had not been integrated beyond their organizational boundaries. However, some were hosted and managed by the parent’s IT shared services unit. During the carve-out process, it was possible to establish logically separated instances of the shared SAP systems for each of the SBUs. Then, the ERP systems previously hosted by the shared services unit were outsourced to an external service provider.

Functional alignment (SBU-Level): This carve-out did not require major changes to either the business or IT strategies of the two SBUs. The two SBU’s business strategies differed considerably in regard to the product portfolio. However, because they were already acting independently, their strategies were suitable for operating as a standalone entity. In DicephalusCorp’s industry, IT was typically employed for administrative purposes and the only business critical issue was the protection of intellectual property in the form of formulas and recipes, which were critical for the production processes. The interviewees described high functional alignment in both SBUs. This is consistent with their IT operating ratios of 2.4% and 5%, which are slightly above the industry averages. Both SBUs possessed capable IT departments, strong applications and a well designed IT infrastructure. The carve-out required only minor changes to those systems. In addition, no IT capabilities were lost. The only exception was the partial reliance on specialists from the parent’s shared services, which were no longer available post-deal.

Analysis: Deviations from a ‘perfect world: In this carve-out, the only deviation encountered was the violation of the independent SBU information systems assumption due to the SBUs’ reliance on the parent’s IT infrastructure and, in particular, the provision of the WAN. Despite this violation, the interviewees judged the carve-out as a

“completely successful project” and a “good case”. This can be traced to the fact that this carve-out process was extraordinary well planned and had – with nine months for the whole process – a comparatively long timeframe. Achieving full separation at closing without resorting to TSAs was an outstanding performance.

As in the ‘Picture-perfect’ case, the key to this success was the carve-out team’s capability of mitigating the violated assumptions. Another factor was the support given to the IT carve-out team. To maximize the selling price, the seller spent a lot of effort on mitigating any IT issues that might be raised during the negotiations and the transaction. In addition, the protection of intellectual property was emphasized because it is critical in this industry. Starting with the due diligence, where even the CIO of the buyer was part of the team, IT received significant management attention. Asked about the due diligence an interviewee reported that “the buyer scrutinized what they will get from the IT carve-out in regard to assets and licenses. What are they worth? Special emphasize was also put on the risks resulting from existing outsourcing agreements”. These findings are consistent with Leimeister et al. (2008), who identify early involvement of IT and a sound IT due diligence as success factors for IT carve-outs. In addition, the available window of opportunity was used to outsource certain ERP systems to external service providers, which improved both the cost efficiency and the level of data protection.

Summary

Table 2 provides an overview on the governance structure before the carve-out and which types of data and business applications have been affected. Only cases 2 and 3 had a fully centralized IT management on the level of the parent organization. In the other cases the extent of the autonomy of the carve-out object’s IT management varied. In regard to data and applications it becomes obvious that in all cases administrative applications – and the data managed by them – are affected. Cases 3 and 4 stick out, because there, the carve-out affected the whole landscape of business applications.

Table 2. Governance approach as well as data and applications affected in the case studies.			
	Governance approach (pre-deal)	Affected types of data	Affected business applications
Case 1	Mostly centralized IT management (SBUs had a moderate influence)	<ul style="list-style-type: none"> • Administrative data • Highly valuable intellectual property • Customer and order data 	<ul style="list-style-type: none"> • Administrative applications (ERP, HR, ...) • CRM and order management applications
Case 2	Centralized IT management	<ul style="list-style-type: none"> • Administrative data • Parts database • Inventory data 	<ul style="list-style-type: none"> • Administrative applications (ERP, HR, ...) • Certain production applications
Case 3	Centralized IT management	<ul style="list-style-type: none"> • Administrative data • Client transaction data 	All applications (~120) <ul style="list-style-type: none"> • Administrative applications (ERP, HR, ...) • Financial reporting
Case 4	Decentralized IT management (each SBU had its own CIO)	<ul style="list-style-type: none"> • Administrative data • Customer and order data 	All applications of the country businesses <ul style="list-style-type: none"> • Administrative applications (ERP, HR, ...) • Marketing, CRM, order management
Case 5	Mostly decentralized IT management (Parent had a centralized IT management for governance purposes but large parts of IT were managed decentralized; each SBU had also its own CIO)	<ul style="list-style-type: none"> • Administrative data • Essential intellectual property (formulas and recipes) 	<ul style="list-style-type: none"> • Administrative applications (only ERP and financial reporting)

Table 3 reports the summary findings of the study. These findings include that some assumptions of the ‘perfect world’ are frequently violated and others are not. In particular, the independent SBU information systems assumption is frequently violated. In contrast, the autonomous SBU assumption was not violated in any case in this study. These and other insights are used to examine the implications for theory and practice.

Table 3. Summarized IT challenges and causes of the case studies		
	IT Challenges faced in the carve-out	Assumption violation that caused the challenge
Case 1 <i>'Picture-perfect'</i>	Replacement of the global WAN and migration of infrastructure services (e.g. data centers) to the responsibility of SmallCorp's IT department	Independent SBU information systems
	Physical separation of applications hosted and managed by the shared services center	Independent SBU information systems
	Loss of access to specialists from the shared services center	Competence preservation
	Completely rebuilt IT landscape and support for the sales offices	Independent SBU information systems
Case 2 <i>'BigCorpBs Demerger'</i>	Setup of two independent sets of IT infrastructure, which provide global coverage for BigCorpB and BigCorpC	Independent SBU information systems
	Separation of shared applications used for administrative and productive purposes	Independent SBU information systems
	Lack of documentation, heterogeneity and high number of systems strongly constrained the separation	IT Governance
Case 3 <i>'Financial Services'</i>	Replacement of WAN connecting FinServicesCorp to its retailers	Independent SBU information systems
	Physical separation of financial reporting/administration applications	Independent SBU information systems
	Split of IT departments resulted in a lack of IT skills	Competence preservation
	The carve-out caused a strong decline in business volume, yet the capacity of the IT landscape could not be adapted, because full duplication was the only possible way of separation	Strategic stability (<i>new assumption</i>)
Case 4 <i>'No separation achieved'</i>	Replacement of IT infrastructure in the 30 country-companies	Independent SBU information systems
	Parent provided template set of applications and several applications operated by the parent were not available post-deal	Independent SBU information systems
	Loss of the support capabilities of the central IT department	Independent SBU information systems
	Due to the split the affected country-companies lacked IT skills	Competence preservation
Case 5 <i>'Fully Separated at Closing'</i>	Setup of two independent WAN covering 25 countries	Independent SBU information systems
	Separate shared ERP applications for both SBUs	Independent SBU information systems
	Migrate applications hosted by the shared services unit	Independent SBU information systems
	Loss of access to specialists of the shared services unit	Competence preservation

Discussion

Theoretical implications

Responding to our first research question, what IT related challenges companies are confronted with in carve-outs, Table 3 reports that in each of the case studies several challenges were faced. In each of the carve-outs, challenges regarding the separation of the IT infrastructure formerly provided by the parent were encountered, including WAN, data centers, messaging and identity management issues. Frequently, challenges to separate applications and the associated data shared with the pre-deal parent were identified. In addition, Table 3 shows that the other challenges were case-specific.

Where the parent operates a shared services center, as in case studies 1 and 5, the carve-out object had to accommodate with being no longer able to rely on its specialists and take responsibility for the applications hosted there. In case 3, challenges were triggered because the complexity of the IT landscape made full duplication the only possible way of separation. Since the carve-out resulted in a significant decline of business volume, this meant that the IT landscape could not be adequately resized. In addition, because the IT department was split technical capabilities could not be sustained. Finally, cases 1 and 4 show challenges specific to carve-outs when a part of the carve-out object was highly fragmented and small. Therefore, they faced the challenge of completely rebuilding the IT landscape in those areas of the organization.

The second research question asks what caused these IT challenges. In all five case studies, the proposed assumptions, derived from the analytical framework, have high explanatory power in explaining the IT challenges faced. This framework is a versatile tool to answer the second research question. Table 3 illustrates that the challenges faced could be attributed to assumptions violated. For example, in the ‘BigCorpB’s Demerger’, which showed difficulties in separating the applications and networks, the difficulties were caused by the high level of integration with the parent pre-deal and the complexity caused by poor IT governance.

In each of the case studies, at least one of the assumptions of a ‘perfect world’ was violated. The most numerous and significant challenges resulted from the independent SBU information systems assumption. The second most frequent source of challenges was the violation of the competence preservation assumption. All the carve-out objects sourced some IT capabilities from the pre-deal corporate IT platform.

In contrast, the autonomous SBU assumption was not violated in any case of this study. This can be attributed to the fact that strategically less closely aligned SBUs are more likely to be divested because when the SBU is autonomous and does not leverage the corporate platform, no parenting advantage can be achieved and the carve-out will be less expensive and disruptive to the parent (Cascorbi 2003; Coury et al. 2009). This is consistent with the data from this study. In all cases, the carve-out was triggered by the dimension of organizational strategic alignment. Specifically in cases 1 and 5, the parent conducted the divestments to increase its focus on core competencies. In addition, no correlations were observed among the assumptions. However, because the autonomous SBU assumption was not violated, the hypothesis that this would also trigger a violation of the independent SBU information systems assumption could not be investigated.

In comparison to the single case reported by Fählng et al. (2010), Table 3 shows that only one or two assumptions were violated in the cases analyzed here. This can be attributed to the sampling frame adopted here and the single case analyzed by Fählng et al. (Yin 2008).

The analysis of the case studies suggests that to fully answer the second research question, the analytical framework should be extended by introducing an additional assumption. The ‘FinancialServices’ case highlighted the fact that significant IT challenges can be caused if the transaction results in a disruptive change to the business strategy’s scope or focus. In this example, the heterogeneous proprietary IT landscape made full duplication the only possible way of separation. This caused serious cost issues to the former industry cost-leader because post-deal, the reduced strategic scope resulted in a 25% lower business volume. Therefore, an additional assumption should be included which calls for strategic stability in regard to the focus and scope of the carve-out object’s business model.

In the ‘Picture-perfect’ case, success is attributed to the fact that almost all integrated IT capabilities were sourced via a shared services center that operated like an external service provider. As the example of the applications shows, these could therefore be considered as already logically separated. Essentially, the carve-out object was agile in its sourcing of IT capabilities. Similarly, case 5 is an example where favorable conditions for the execution of the carve-out and the carve-out objects adaptability contributed to the success of the carve-out.

When comparing the successful cases 1 and 5 to the less successful cases, we observed that the success of a carve-out depends on the ability of the carve-out object to adjust to the new environment. This led to the conclusion that their dynamic capabilities, defined as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al. 1997, p. 516), were higher than those of the less successful cases. While Teece et al. (1997) take a corporate perspective on dynamic capabilities; we propose that also the dynamic capabilities of the carve-out object at the SBU level are important for carve-out success.

Practical implications

The extended analytical framework provides an artifact to support practitioners in the different phases of the carve-out process. In the preSigning phase, it can be applied to guide the IT due diligence. First, it helps prospective buyers to identify which data should be gathered about the target company by utilizing the data room and later on interviews. Second, the framework provides them with a tool to analyze this data and draw conclusions about the possible carve-out execution and buying price. If assumptions are violated, this could either be compensated by an adapted approach to conduct the carve-out or a discount to the buying price. In the case of a vendor due diligence – a prospectus prepared to inform prospective buyers about the carve-out object – this could be anticipated to increase the speed and possible revenues. Sellers could use the indicators to mitigate assumption violations pre-deal and, as such, minimize IT related risks and impacts on the buying price.

After the signing milestone, carve-out project management can utilize the artifact to structure and prioritize the encountered IT issues. The emphasis should be put on assumption violations that cannot be mitigated during the carve-out due to an insufficient adaptability. Depending on their criticality for the overall proceedings of the transaction, additional investments should be made.

Apart from direct support of the carve-out process, the framework can also be utilized in a strategic manner to optimize SBUs for future carve-outs, also referred to as carve-out readiness. As outlined in the introduction, a significant number of companies frequently conduct divestments of SBUs. These companies could benefit by aligning their corporate entities according to Reynolds and Yetton's (2009) alignment model, keeping possible challenges of future carve-outs in mind. However, it needs to be critically pointed out that a 'perfect world' for IT carve-outs is not necessarily optimized for operational efficiency (Fähling et al. 2010). As the discussion of the parenting theory has shown, practitioners face a discrepancy between maximizing the parenting advantage and the separability of its SBUs.

Limitations and future research

This research has grounded the findings of Fähling et al. (2010) on a broader empirical base. However, the number of cases and interviews are limited. The next step would be to validate the findings on a large scale quantitative base and conduct cross-case comparisons of successful/unsuccessful carve-outs. A large scale study could provide further insights into how the specific conditions for execution of a carve-out and organizational circumstances impact upon the success of a carve-out. In that regard other potential influence factors such as the intended integration strategy, the size of the stakeholders or cultural differences should be taken into account. A quantitative study would also provide the foundation to further operationalize the analytical framework for the application as a tool in the IT due diligence and carve-out project management.

The second limitation results from the analytical framework adopted by Fähling et al. (2010) and the underlying IT alignment model of Reynolds and Yetton (2009). Further research should critically challenge these artifacts in regard to their appropriateness and underlying theoretical assumptions. From the perspective of executing an IT carve-out, one of the most pressing issues is how violated assumptions can be mitigated. Subsequent research should therefore analyze which organizational and technological approaches could assist in this task. A promising lead to solve the discrepancy between separability and operational efficiency could be service oriented architectures.

Yet another research area are dynamic capabilities in the context of carve-outs. As our case analysis has shown, some companies can cope better than others with the disruptions caused by a carve-out. Future research on carve-outs should take a dynamic capabilities perspective to investigate which capabilities affect the success of a carve-out and how these capabilities can be built.

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