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The drivers and implications of business divestiture: an application and extension of prior findings

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The Drivers and Implications of Business Divestiture – An Application and Extension of Prior Findings

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**THE DRIVERS AND IMPLICATIONS OF BUSINESS DIVESTITURE –
AN APPLICATION AND EXTENSION OF PRIOR FINDINGS**

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ABSTRACT

The purpose of this study is to extend the current understanding of business divestiture by investigating its potential for triggering strategic reorientation. A divestiture involving strategic reorientation is here denoted as a strategic business exit, otherwise it is a status quo-preserving business exit. The motives for divestiture specified in prior studies are mainly associated with firm financial performance and corporate strategy. Most studies investigate their impact on divestiture separately though both may interact. This study contributes to research by, first, distinguishing divestiture types, and, second, empirically testing the influence of performance and strategy both separately and in conjunction on the choice between strategic and status quo-preserving business exit with secondary data on 213 divestitures during 1999-2004 which were undertaken by a cross-industry sample of 91 firms listed in the German CDAX. The findings mainly indicate that firm financial performance is a stronger predictor of strategic business exit than corporate strategy.

Key words: divestiture, exit, strategic reorientation, performance, strategy, diversification
JEL Classifications: G34, L11, L25, M10

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INTRODUCTION

Business divestiture means that a firm disposes a significant part of its assets, i.e. in diversified firms, whole business units or divisions (Duhaime & Grant, 1984; Burgelman, 1996) in terms of, e.g., sell-off or dissolution (Chang & Singh, 1999; Mitchell, 1994). The purpose of this study is to revise and extend prior empirical findings on the motives for divestiture by introducing different divestiture types associated with selected antecedents that, according to many studies from the prior three decades, predominantly trigger a multibusiness firm's decision to abandon a business unit.

As compared to other asset restructuring activities, divestitures aim at contracting firm boundaries, whereas, e.g., acquisitions are used to expand them (Bowman & Singh, 1990, 1993; Burgelman, 1996; Hurry, 1993; Schendel, 1993; Singh, 1993; Villalonga & McGahan, 2005). Scholarly attention to this topic can be traced back to the 1970s (e.g., Boddewyn, 1976; Gilmour, 1973; Porter, 1976) and the 1980s (e.g., Duhaime & Baird, 1987; Duhaime & Grant, 1984; Montgomery & Thomas, 1988; Montgomery et al., 1984). Many studies were published at the end of the 1980s and during the first half of the 1990s. The seminal articles by Duhaime and Grant (1984) and Hamilton and Chow (1993), for instance, represent two interrelated outcomes of research on this restructuring wave and milestones in the research on the motives for divestiture. Still, in awareness of the large number of divestitures that are undertaken each year, it should not be viewed as an outdated issue (Chen & Guo, 2005).

Up to now, as compared to acquisitions, divestitures attract the management researchers' attention to a lesser extent (Dixit & Chintagunta, 2007; Dranikoff et al., 2002). This lack of interest is comprehensible in awareness of the widely accepted assertion that acquisitions imply growth, i.e., success, whereas divestitures involve a reduction in size, i.e., organizational decline and failure (Whetten, 1980). In contrast to that viewpoint, especially recent empirical studies demonstrate that divestiture is as legitimate as any other strategic

action such as alliances or acquisitions (e.g., Karim, 2006; Villalonga & McGahan, 2005). Such a more optimistic perspective implies that divestiture might promote learning from prior strategic actions and trigger strategic reorientation (Kalnins et al., 2006; Kim & Miner, 2007). Under the assumption that business divestiture can be a vehicle for strategic reorientation, this study emphasizes the strategic implications of divestiture for multibusiness firms and accentuates a rather optimistic side of a transaction which is mainly negatively connoted.

Although prior interest in the antecedents and outcomes of business divestiture has revealed a significant number of motives and results, the broad literature hardly pays attention to the strategic implications of divestiture. While different theories, such as agency theory (e.g., Bethel & Liebeskind, 1993; Gibbs, 1993; Lang et al., 1995; Seward & Walsh, 1996; Steiner, 1997; Stienemann, 2003; Wright & Ferris, 1997), transaction cost theory (e.g., Bergh & Lawless, 1998; Hoskisson & Turk, 1990; Makhija, 2004), the resource-based view (e.g., Bergh, 1995, 1998; Chang & Singh, 1999; Morrow et al., 2007; Villalonga & McGahan, 2005), population ecology (e.g., Burgelman, 1994, 1996; Chang, 1996; Delios & Beamish, 2001; Kalnins et al., 2006), or the upper echelons perspective (e.g., Bigley & Wiersema, 2002; Wiersema, 1992, 1995) have been used to explain why multibusiness firms divest, the need for a simultaneously pursued strategic reorientation has largely been ignored.

This study aims at extending our current understanding of divestiture by investigating its potential for triggering strategic reorientation in multibusiness firms. In doing so, it differentiates between two types of divestiture. A divestiture of a business unit that involves strategic reorientation is denoted as a *strategic business exit*, while its counterpart, namely the divestiture of a business unit without changing a parent firm's prior strategic trajectory, is considered as a *status quo-preserving business exit*.

The various motives that can be extracted from prior studies permit the assumption that they are mainly associated with firm financial performance and corporate strategy (e.g., Duhaime

& Grant, 1984; Hamilton & Chow, 1993; Kaiser & Stouraitis, 2001; Markides, 1995). That is, on the one hand, they concentrate on organizational health and, on the other hand, on the question of which businesses should be unified under a single corporate umbrella, i.e., a firm's diversification level (Rumelt et al., 1994). However, it is still not clear yet whether firm performance or corporate strategy has a stronger impact or whether both are interrelated and reinforce each other. Therefore, this study asks how firm financial performance and corporate strategy influence the choice between strategic and status quo-preserving business exit. In so doing, it aims at investigating their effects both directly in isolation and as interaction effects. It thus contributes to management research by enhancing our knowledge on divestiture with, first, a distinction of divestiture types, and, second, an empirical test of the importance and interrelationship of firm performance, corporate strategy and divestiture types with secondary data on 213 divestitures during the 1999-2004 time period which were undertaken by a cross-industry sample of 91 firms listed in the German CDAX.

The paper is organized as follows. An overview on the antecedents and consequences of divestiture are presented in the following section with special reference to firm financial performance and corporate strategy as antecedents of business divestiture. A conceptual framework is developed that applies the findings of prior studies from different but related strands of literature and extends them by focusing on both the direct and interaction effects of firm financial performance and corporate strategy on the likelihood of strategic versus status quo-preserving business exit. It consists of three hypotheses. Methods and findings of the empirical investigation are outlined in subsequent sections. The results and contributions of this study as well as its limitations and implications for future research are discussed at the end of this paper.

THE ANTECEDENTS AND IMPLICATIONS OF DIVESTITURE

Firm characteristics such as financial performance and corporate strategy are frequently cited antecedents of business divestiture (e.g., Bergh, 1995; Hanson & Song, 2003; Hoskisson et al., 1994; Steiner, 1997). Especially performance problems and the diversification level prior to divestiture have been attracting the researchers' attention for many years (for an overview see, e.g., Brauer, 2006, or Decker & Mellewigt, 2007). Underperformance at the firm level may be the most important motive to pursue business divestiture because the abandonment "of any unit is unlikely when firms are experiencing average or superior performance in their primary businesses" (Montgomery & Thomas, 1988: 95). In addition, some diversified firms decide to divest businesses due to their misfit with corporate strategy or with the firm's operations that it is simultaneously engaged in. Businesses may be too diverse and therefore impede effective interunit communication and cooperation as well as corporate managers' monitoring and control actions (Kaiser & Stouraitis, 2001). Units that are characterized by rather low interdependency with other businesses are more likely to be divested than those that have closer relationships with peer and subordinate units (Duhaime & Grant, 1984).

Both antecedents of business divestiture seem to be intertwined. In fact, Bowman et al. (1999) argue that divestitures have little impact on subsequent performance when they do not happen together with additional focus. In this vein, Montgomery and Thomas observe different divestiture types: "(...) firms react to their poor performances in substantially different ways. 'Tactical' divestors and 'distress' divestors appear to focus directly on the short-term performance issue. In these cases divestment appears to be seen as a direct means to improve a firm's financial standing. In contrast, the 'strategic' divestors appear to take a broader view of their firms' predicaments. In these cases poor relative performance appears to trigger a re-evaluation of firm strategy" (1988: 95). Also, Kaiser and Stouraitis (2001) describe the restructuring of the large conglomerate Thorn EMI, which was triggered by a serious

performance decline. The fundamental alteration of this firm's diversification strategy in 1985 led to the re-establishment of a much narrower strategic focus and an impressive performance improvement.

These examples show that business divestitures have strategic implications. However, while their performance outcomes have attracted many researchers' interest particularly from finance and financial economics (for an overview see, e.g., Mulherin & Boone, 2000), its strategic implications for the divesting parent firm have gained much less attention (Decker & Mellewigt, 2007).

Prior findings (e.g., Burgelman, 1994, 1996; Kaiser & Stouraitis, 2001; Markides, 1995) imply that a divestiture can be a vehicle for the elimination of a misconceived strategy that challenges a firm's acceptability in the market. In that vein, Byerly et al. (2003) differentiate between refocusing and repositioning as potential strategic implications of divestiture. Both options denote a kind of strategic reorientation. *Refocusing* means that a firm aims to eliminate peripheral activities. Especially businesses that are unrelated to a firm's core are abandoned (Byerly et al., 2003: 537). So a firm's current core is to be strengthened. The German automobile company BMW is an example for this strategy. Since the abandonment of Rover, BMW has been concentrating on a single and central task again - the construction of luxury cars – and can now be considered as one of Germany's most profitable and successful companies. By *repositioning* a firm aims at striking a new strategic path. Such a step involves a new business of emphasis, i.e., a core change (Byerly et al., 2003: 537; Greve, 1990: 590). There are some corporations that have successfully changed their core, such as Mannesmann (from steel to telecommunications) and Preussag (formerly known as a large industry conglomerate, now mainly engaged in tourism [TUI]). A more recent example is the German producer of spirituous beverages and juices Eckes in Nieder-Olm. As a result of a steadily decreasing per capita consumption of spirits in Germany and legislative pressures,

Eckes sold its traditional domestic hard liquor business to Rotkäppchen-Mumm and transformed itself into a company being famous for its high-quality juices. The latter example illustrates that repositioning entails a firm's entire abandonment of prior strategies and structures and their replacement by completely new ones. It is a risky step because it requires a new attitude of the firm towards its former core business and a reallocation of resources from this unit into a new business of emphasis (Byerly et al., 2003: 539; Sommers et al., 1987: 18). Some business divestitures may be associated with both core change and a simultaneous reduction of the number of business units. Altana, e.g., withdrawing from its pharmaceutical business by selling it to the Danish company Nycomed, turned to its much smaller chemistry business and changed it into its new core business.

The aforementioned examples from management practice illustrate that business divestiture can be an opportunity for changing a firm's strategic status quo (Hoskisson & Johnson, 1992). Consequently, in this study and according to Burgelman (1996), a *strategic business exit* denotes a divestiture of a business unit which involves strategic reorientation. It means either refocusing or repositioning or the simultaneous pursuit of both. Many divestitures do not involve strategic reorientation but only a reduction of firm assets, i.e., asset retrenchment (Morrow et al., 2004). Those divestitures are being denoted as *status quo-preserving business exits*. Thus, this study further extends prior research by relating firm financial performance and corporate strategy to two different divestiture types.

Firm Financial Performance

An established organization typically enjoys its stakeholders' acceptance and benevolence as a consequence of its past satisfactory performance (Zimmerman & Zeitz, 2002). A sudden performance decline can challenge its perceived organizational fit. In fact, prior studies emphasize the impact that poor performance exerts on the pursuit of business divestiture. It

will be especially likely, if an underperforming business can no longer be hidden among its peer units because the whole corporation's performance suffers from a unit's decline (e.g., Chang, 1996; Cho & Cohen, 1997; Montgomery & Thomas, 1988).

Underperformance of a firm often signals the necessity to change corporate strategy, particularly when some businesses do not meet expectations but burden a firm with high debt. In particular, a performance decline at the firm level entails strategic reorientation (Barker & Duhaime, 1997; Chen & Guo, 2005; Kaiser & Stouraitis, 2001; Lant et al., 1992). Empirical research also provides evidence that underperforming firms are more likely to undertake risky steps than those being profitable and meeting their investors' expectations. A precondition for a subsequent positive market reaction is that the strategic action which is undertaken by firm managers as a consequence of a performance decline involves more than just tactical steps such as cost reduction and asset sales (Morrow et al., 2007). Put in a nutshell:

H1: The weaker a firm's financial performance, the higher the likelihood of strategic versus status quo-preserving business exit.

Corporate Strategy

Provided that a corporate strategy is defined as an internally consistent set of resources, businesses, organization structure, systems and processes, the existence of a multibusiness firm will be justified, (1) if each business adds value to the corporation, (2) if this value extends the cost of coordination, and (3) if the parent adds more value to a single business than any other owner (Goold et al., 1994: 6; Campbell et al., 1995: 121; Collis, 1996: 124). In this context, many studies illustrate the necessity to discard a business due to its lack of fit with its peer businesses. Negative "synergy" among activities, i.e., the absence of internal complementarities, means that the marginal return of an activity does not increase with the augmenting level of another activity in the same corporation (Hanson & Song, 2003; Stieglitz & Heine, 2007). A lack of intraorganizational complementarities can trigger divestiture (e.g.,

Duhaime & Grant, 1984; Kaiser & Stouraitis, 2001; Montgomery & Thomas, 1988; Montgomery et al., 1984). Moreover, many studies reveal that the competences that are unified in a single corporation can be too diverse and dissipated (e.g., Byerly et al., 2003; Johnson, 1996; Markides, 1992a, 1992b; Steiner, 1997). A firm that is able to create a narrow and well understandable strategic focus is less likely to divest in the long run than a more diversified one (Stieglitz & Heine, 2007: 9).

Also, some firms fail to recognize the substitutability of activities and, consequently, invest in redundant activities. The simultaneous investment in too many and too diverse technological fields or the performance of redundant activities often results in inefficiency. It hence leads to a perceived lack of strategic focus, i.e., a suboptimal level of diversification. The latter jeopardizes a firm's credibility in the market. Its abolishment in order to re-establish a consistent corporate identity and internal coherence can be a strong motive for a strategic business exit (Davis et al., 1994; Zuckerman, 2000). Thus:

H2: The higher a firm's diversification level, the higher the likelihood of strategic versus status quo-preserving business exit.

The Interaction between Firm Financial Performance and Corporate Strategy

Steiner (1997) empirically demonstrates that the probability of divestiture is negatively related to firm performance and positively associated with a firm's diversification level. In addition, reductions in diversification levels can lead to performance improvements (Markides, 1992a). Frequently, a performance crisis signals the need to alter the corporate portfolio of businesses (Hoskisson & Turk, 1990). A failed diversification strategy can cause diseconomies and hurt performance which often leads to asset reductions. A business divestiture can then serve the purpose of creating a context in which firms can achieve benefits of internal resource reallocation (Burgelman, 1996; Kaiser & Stouraitis, 2001; Markides, 1992b, 1995; Robbins & Pearce, 1992).

Thus, firms may pursue both performance enhancements *and* strategic reorientation with business divestiture. Both motives seem to interact. Especially studies from finance and financial economics lend support to this point. They mainly concentrate on the performance effects of divestitures and the conditions under which business divestitures are likely to lead to the expected performance improvements (e.g., Alexander et al., 1984; Hanson & Song, 2003; Lang et al., 1995; Mulherin & Boone, 2000), while related studies from the management area are more likely to investigate the antecedents of and barriers to business divestiture (e.g., Montgomery & Thomas, 1988; Porter, 1976). John and Ofek (1995), e.g., empirically demonstrate that firms will be more likely to experience performance enhancements, if they simultaneously increase their strategic focus. In their study, the performance of a seller's remaining assets in the three years following the divestiture is enhanced, only if the firm simultaneously increases its strategic focus. The latter is a significant determinant of a divesting firm's stock price reaction. Empirical evidence by Steiner (1997) corroborates this result. In a similar vein, recent findings by Bartsch and Börner (2007) from an event study on 140 divestitures that were undertaken by German public firms from January 1997 to April 2003, reveal that subsequent valuation effects differ with regard to the nature of divestitures: positive valuation effects can be expected for strategic divestitures, while market reactions on non-strategic divestitures lead to much lower or even negative effects.

Previous research on business divestiture, especially research from the strategic management area, has left some questions unanswered. First, many prior studies have investigated the independent effects of performance and strategy on divestiture (e.g., Duhaime & Grant, 1984; Hamilton & Chow, 1993; Ravenscraft & Scherer, 1991), though firm financial performance and corporate strategy may be interrelated. Second, they do not distinguish their interaction with different strategic implications of business divestiture. Instead, they at most concentrate

on divestiture *modes* such as sell-off or dissolution (e.g., Chang & Singh, 1999; Mitchell, 1994) or do not distinguish any types of divestiture at all (e.g., Hanson & Song, 2003), particularly not with reference to strategic reorientation. To date, no study has considered how interactions among firm financial performance and corporate strategy may affect the choice between divestiture *types* such as strategic and status quo-preserving business exit. Therefore:

H3: The weaker a firm's financial performance in combination with a high diversification level, the higher the likelihood of strategic versus status quo-preserving business exit.

METHODS

Sample and Data Sources

The initial sample consists of all firms that are listed at the German Stock Exchange in the CDAX-index. The CDAX is a composite index which includes the shares of all domestic companies listed in *Prime Standard* and *General Standard*. It represents the German equity market in its entirety, i.e., all companies listed on the Frankfurt Stock Exchange. All in all, 678 firms were identified. The *Mergers & Acquisitions Database* being published by the University of St. Gallen (Switzerland) provided data on selling and buying firms, the sold units, and their industries. It was used to identify relevant transactions, namely all divestitures that were undertaken by the CDAX-firms in the time period from 1999 to 2004. Finally, 521 transactions which had been undertaken by 160 firms listed in the German CDAX were identified. The number of divesting firms is less than the number of business divestitures because of multiple exits by the same parent firm.

Compustat Global, *Datastream*, and *Worldscope* mainly provided the required data. Additional data were retrieved from the *Hoppenstedt Database*. Moreover, the German *Federal Statistical Office* provided information on the general economic environment, e.g., the gross national product, the number of firms per industry, their turnover and taxes paid and employment data.

Most studies eliminate restructuring transactions that were undertaken in the financial services industry because acquisitions and divestitures are part of those firms' business models and hence accompanied by different motives (e.g., Villalonga, 2004). Those firms were eliminated. When firms reported more than one divestiture a day, these incidents were treated as a single transaction per day because of difficulties in distinguishing antecedents and implications for each of them. Due to a lack of data on many firms in the initial sample or incomplete information in the *Mergers & Acquisitions Database*, the sample was restricted to its final size of 213 business exits undertaken by 91 firms during 1999 and 2004.

Dependent Variable

Divestiture type. Refocusing and/or repositioning as well as retrenchment have been identified as potential strategic implications of business divestiture. Strategic reorientation can be measured as the absolute change in the corporate diversification level of a diversified firm. The numbers and types of segments in different NACE codes reported by a focal firm are analyzed over the time period in order to measure reductions or changes in corporate diversification which indicate refocusing and/or repositioning (Villalonga & McGahan, 2005). Based upon the NACE classification, the absolute difference in diversification level between the years t (= year of divestiture) and $t+1$ (= one year after divestiture) is calculated and represents the kind of change in corporate strategy. Refocusing means a reduction in the number of businesses (here: number of NACEs) that a firm reports, repositioning is revealed by a change in a firm's main classification code. If both a reduction in the number of businesses and a change in firm's core business are observable, then both refocusing and repositioning are pursued. If a divestiture does not involve strategic reorientation, there will be no visible change in a firm's NACE. This study does not differentiate between these strategic options because its purpose is to demonstrate the strategy-changing potential of

divestitures in general. Hence, the dependent variable is a binary one, whereby 1 denotes that a divestiture involves strategic reorientation (= “strategic business exit”) and 0 means divestiture without strategic reorientation (= “status quo-preserving business exit”).

Independent Variables

Three performance measures are used for representing a *performance gap* at the firm level. An accounting-based measure, namely a change in a parent firm’s *ROA* averaged over three years prior to exit is used (Agle et al., 2006). A firm’s *market-to-book ratio* (MB) is incorporated as a market-based indicator for firm performance. This ratio is a firm’s fiscal year-end stock price divided by the book value per share. In order to avoid inter-industry variations, it is divided by the median ratio of the main industry that a firm is engaged in. The ratio is calculated yearly for the time period defined in this study and averaged over three years prior to divestiture (Morrow et al., 2004). Performance problems can also be indicated by a firm’s debt burden. Company debt is operationalized as a parent firm’s industry-adjusted *debt-to-equity* ratio (DE) one year prior to divestiture (per TEuro) (Bergh, 1995).

Two measures for diversification are used. A multibusiness firm’s degree of diversification before business divestiture corresponds to the *number of businesses* that it was engaged in prior to the incident. It is operationalized as the number of industries with distinct NACE codes, respectively, in which it participated in the year prior to business exit (i.e., in t-1) (Chi et al., 2004; John & Ofek, 1995; Steiner, 1997).

Since there may be significant differences between unrelated and related diversifiers, a *relatedness* dummy is included as a measure for a firm’s extent of diversity and coherence among its businesses. The sample firms’ NACE codes are analyzed at the two-digit level (Agarwal et al., 2002: 985). If they are identical, a firm is coded as 0 = “related”. If different two-digit NACE codes can be assigned to a company, it is coded as 1 = “unrelated”. For

example, for Beate Uhse the NACE codes in the year 2004 are 52320, 52423, 52452, and 52472. Hence, all businesses are related. The same holds true for Netlife for which the NACE codes in the year 2004 are 72202 and 72602. Due to the identical NACE codes at the two-digit level, both firms are considered as related diversifiers in 2004 and are coded as 0 = “related”. Conversely, Mainova, e.g., has the NACE codes 41002, 40303, 40203, and 40105 (NACE codes are from the year 2004). Two different two-digit NACE codes can be assigned to this company. The NACE codes for E.On in the year 2004 are 40101, 90006, 41001, 40201, 24660, 70320, and 74156, i.e., six different two-digit NACE codes. Consequently, both Mainova and E.On are coded as 1 = “unrelated” in 2004 (Jandik & Makhija, 2005; Servaes, 1996).

Control Variables

Five control variables are included. *Firm size* which is a typical control variable in empirical studies in the strategic management area (Dobrev & Carroll, 2003), is measured in terms of the logarithm of a firm’s total assets. This variable is included in the analysis because firm size is associated with the direction and magnitude of strategic reorientation as well as with a firm’s propensity to undertake strategic change (Dobrev et al., 2003; Geiger & Cash, 2007; Gleason et al., 2007; Kim & Miner, 2007). *Firm age* is operationalized as the number of years at the time of the divestiture (Dawley et al., 2002).

Also, a variable for *divestiture experience* is introduced which refers to the number of business divestitures that the sample firms have undertaken in the selected time period. Thereby, 1 indicates more than one divestiture per firm and 0 means that a sample firm has undertaken a single divestiture (Beck et al., 2006; Greene, 2000).

The growth of the gross national product (GNP, in percent) over the defined period of measurement is used to assess the *market* development in Germany in the defined time period (Dawley et al., 2002; Dobrev et al., 2001; Dobrev et al., 2003; Ravenscraft & Scherer, 1991). Strategic reorientation frequently requires additional resources. In particular, excess financial resources, i.e., organizational slack, increase the likelihood of strategic reorientation under conditions of organizational decline because they provide strategic flexibility (Barker & Duhaime, 1997; Sommers et al., 1987). *Slack* is measured as a firm's current ratio, i.e., current assets divided by current liabilities. The higher this ratio, the more liquid a sample firm is. Three-year averages are used. In order to exclude industry effects, this measure is corrected by subtracting industry averages (Bergh, 1997; Cheng & Kesner, 1997; Morrow et al., 2004).

RESULTS

The majority of cases in the sample are status quo-preserving business exits (180). Only thirty-three cases are strategic business exits. Logistic regressions are used in order to test the hypotheses since they are beneficial in examining binary choices. The dependent variable in the logistic regression models is the likelihood of strategic versus status quo-preserving business exit (Chang & Singh, 1999; Greene, 2000; Hoetker, 2007).

*** Table 1 about here ***

Table 1 presents means, standard deviations, and correlations among the study variables. Though there are significant correlations among independent variables, their magnitude is not large.¹ The variance inflation factors (VIF) and tolerance measures (TOL) are also calculated. They do not indicate any serious problems of multicollinearity among the study variables.²

¹ The significant correlation between *divestiture experience* and *firm size* is fairly high (0.479). According to Haleblan and Finkelstein (1993), a magnitude of correlations below 0.50 does not represent a severe problem of multicollinearity. Moreover, correlations should be regarded with caution because they represent pairwise

Table 2 presents the results of the logistic regression models. Model 1 includes the direct effects for firm financial performance and Model 2 the direct effects for corporate strategy. Model 3 estimates the direct effects of both firm financial performance and corporate strategy, while Model 4 and 5 show the interactions between the different performance measures and the diversification variables. Therefore, multiplier terms are introduced in Model 4 and 5. In Model 4, the performance variables are multiplied with the *number of businesses* that a firm is engaged in and, alternatively, in Model 5 with *relatedness*.

*** Table 2 about here ***

Hypothesis 1 asserts that a performance gap at the firm level nurtures the likelihood of strategic in contrast to status quo-preserving business exit. The coefficients are positive and significant as expected for the *ROA gap*. In contrast to this accounting-based performance measure, the market-based indicator and the debt measure both have only a weak and insignificant effect on the likelihood of strategic business exit, since the beta coefficients for the *market-to-book* ratio and the *debt-to-equity* ratio are positive but not significant. Consequently, Hypothesis 1 gains partial support. The explanatory power of Model 1 is not high but satisfactory with a Nagelkerke R-square of 0.179.

None of the diversification measures in Model 2 is positive and significant, thus fully refuting Hypothesis 2. The explanatory power of Model 2 is much lower than that of Model 1 with a Nagelkerke R-square of 0.111.

Model 3 includes the direct effects of both firm financial performance and corporate strategy on the choice between strategic and status quo-preserving business exit. In this model, the

associations that do not control for other factors that might determine the likelihood of strategic versus status quo-preserving business exit (Agle et al, 2006: 166 f.).

² A tolerance measure of 0.20 or less is problematic but still acceptable, whereas a value of 0.10 or even less is an indicator of multicollinearity. Hutcheson and Sofroniou (1999) recommend that a VIF should not exceed 5; otherwise there is a serious problem of multicollinearity. In this study, the tolerance measures are all above 0.20; the lowest value is 0.732 for *firm size*. The highest VIF value is 1.366 for *firm size*; the average VIF value is 1.129. In addition, the condition index of 20.375 remains below the maximally acceptable value of 30 (Belsley et al., 1980: 117).

ROA gap has a positive and significant effect on the likelihood of strategic business exit, though it is weak. The impact of the other performance variables is also positive and weak but at an insignificant level. The diversification measures do not nurture the likelihood of strategic business exit. The beta coefficient for *number of businesses* even goes into the opposite direction than predicted, while the effect of *relatedness* is positive as asserted but at an insignificant level. Overall, the explanatory power of Model 3 estimating the direct effects of both performance and strategy is not very high but still satisfactory with a Nagelkerke R-square of 0.194.

According to Hypothesis 3, the interaction between performance and diversification enhances the likelihood of strategic business exit. Two models are estimated in order to examine this hypothesis. In addition to the direct effects incorporated in the three models outlined above, Model 4 further includes three interactions, namely the multiplier terms *ROA gap X number of businesses*, *market-to-book ratio X number of businesses*, and *debt-to-equity ratio X number of businesses*. The *debt-to-equity* ratio multiplied with a firm's *number of businesses* lends strong support to Hypothesis 3. The likelihood of strategic business exit is almost three times higher in firms in which the debt burden and the diversification level are high than in their less indebted and less diversified counterparts, as the odd ratio of 2.859 indicates. In contrast, the effects of the other multiplier terms are both not significant and go into the opposite direction than predicted. The explanatory power of this model is fairly good with a Nagelkerke R-square of 0.283.

In Model 5, the three selected performance variables are multiplied with *relatedness*. Simply put, in addition to the direct effects, it includes the multiplier terms *ROA gap X relatedness*, *market-to-book ratio X relatedness*, and *debt-to-equity ratio X relatedness*. None of these three interaction effects is positive and significant. They are even negative, hence indicating that they do not promote strategic business exit in this model at all. The

explanatory power of Model 5 (Nagelkerke R-square = 0.197) is lower than that of Model 4 but still higher than that of the other models.

Referring to the control variables, the results demonstrate that the growth of the *market* in which the sample firms operate is a strong predictor of strategic business exit. As the beta coefficients for *market* in the five models indicate, the higher the growth of the gross national product, the higher is the likelihood of strategic in contrast to status quo-preserving business exit. *Firm size* only exerts a significant influence in Model 3 and 4. None of the other control variables has a significant impact on the dichotomous choice between strategic and status quo-preserving business exit. Overall, the five estimated models are all significant. The results lend partial support to Hypothesis 1 and 3, while Hypothesis 2 is fully rejected.

DISCUSSION

The starting point of this study based on German data was the observation that business divestiture has not lost its relevance up to now. For more than thirty years many studies from different but related strands of literature have been focusing on the motives for divestiture. However, the strategic implications of a diversified firm's withdrawal from a business have largely been ignored. The studies by, e.g., Burgelman (1996) and Byerly et al. (2003) are rare exceptions.

An optimistic picture of divestiture entails that it can be considered as a new beginning, giving credence to Anslinger et al.'s (1999) claim that "Breaking up is good to do". Such an encouraging attitude towards divestiture may be due to the fact that it can involve strategic reorientation. Firm performance and corporate strategy are associated with the necessity to divest a business in many studies. If business divestiture results in strategic reorientation of the divesting parent firm, e.g., in terms of refocusing or repositioning (Byerly et al., 2003), it is here denoted as a strategic business exit. Conversely, a status quo-preserving business exit

is a retrenchment that serves the purpose of shrinking firm size, complexity, and/or costs without abandoning a previously pursued strategic trajectory (Morrow et al., 2004).

The results of this study demonstrate that firm financial performance plays a more important role in the decision for a certain type of business divestiture than corporate strategy. However, this impact differs with regard to the measures of performance and diversification used in the logistic regression models. For example, the *market-to-book* ratio does not foster the likelihood of strategic business exit, whereas the direct effect of the included accounting-based measure of performance, namely a gap in *ROA*, is positive and significant in three out of five models. The impact of a firm's debt burden as measured in terms of the *debt-to-equity* ratio exerts an important influence on the choice between the two divestiture types, though at an insignificant level. It is a strong and significant predictor of strategic business exit in conjunction with the *number of businesses* that a firm is engaged in but not with *relatedness*. In contrast, none of the diversification variables exerts the predicted direct effect on the choice between the two pre-defined divestiture types. In this study, diversification only exerts a certain influence on the likelihood of certain divestiture types in conjunction with a firm's debt burden. All in all, these results suggest that a firm's diversification level does not drive strategic business exit as long as firm financial performance, especially company debt, is at an acceptable level.

The findings of this study hence suggest that divestiture can occur in different types with regard to the strategic implications for divesting parent firms. Therefore, this study extends prior evidence by highlighting the strategic consequences for divesting multibusiness firms. The main contribution of this examination is that it provides some evidence that divestitures of business units vary in terms of their strategic implications and, as such, can represent the manifestation of different strategic objectives of divesting multibusiness firms. This idea is in line with Burgelman's (1994, 1996) case studies on the Intel corporation and prior

observations by Markides (1992b) and Helfat and Eisenhardt (2004). The study also contributes to the literature on strategic change through its arguments and findings concerning strategic versus status quo-preserving business exit. The strong emphasis on the strategic implications of divestiture brings out a rather “bright” side of an action that is typically associated with organizational decline. It should be viewed as legitimate as any other restructuring action such as alliances or acquisitions which imply a positive connotation due to their optimistic promise of growth (Villalonga & McGahan, 2005).

Despite the findings and contributions outlined above this study remains subject to some open questions and traces avenues for further research. For example, in contrast to Hamilton and Chow (1993) this study does not assess the relative importance of the pre-specified antecedents for the choice between strategic versus status quo-preserving business exit. Similarly to Duhaime and Grant (1984), it juxtaposes the selected motives identified from prior literature and relates them to two divestiture types. It might be interesting to investigate the relative importance of firm financial performance and corporate strategy for the pursuit of one of the two strategic options associated with business divestiture.

In addition, prior literature also shows that there are further motives for divestiture (e.g., Brauer, 2006). For instance, management turnover frequently precedes business divestiture (e.g., Kaiser & Stouraitis, 2001; Wiersema, 1995). Interesting questions could be of how management turnover promotes the likelihood of strategic versus status quo-preserving business exit and of how it interacts with other strong motives for divestiture such as firm financial performance and corporate strategy.

Although empirical evidence demonstrates that environmental determinants such as market attractiveness are less important predictors of exit decisions than firm-level factors such as financial performance or corporate strategy (Dixit & Chintagunta, 2007), many researchers do not cease to emphasize their influence (e.g., Doi, 1999; Hamilton & Chow, 1993; Peel, 1995).

However, none of these studies investigates the question of whether and how different levels of market attractiveness influence the choice between divestiture *types*. This study at least includes the control variable *market* which exerts a significant influence on the likelihood of strategic business exit in each model. Future studies could use more elaborate measures for investigating the impact of environmental factors on the choice between strategic and status quo-preserving business exit and additionally examine the effect of the interaction of firm-level and environmental factors on business divestiture.

This study also has a number of limitations. First, it implicitly assumes that, in general, strategic reorientation is a desirable implication of divestiture. Such a viewpoint ignores empirical results from organization ecology research which illustrate that those actions are surrounded by high ambiguity. They strongly increase the uncertainty that a firm faces and thus enhance the hazard of organizational failure (Barnett & Freeman, 2001; Beck et al., 2006; Chang, 1996). A follow-up study at a later point in time might examine whether the sample firms that pursued a strategy-changing divestiture will have survived or failed in the long run. Up to now, this study cannot show yet whether strategic business exit sustains or rather harms organizational viability in the long run.

Second, prior evidence illustrates that firms differ with reference to their financial situation, especially the severity of their performance decline (e.g., Gilson, 1989, 1990). This study does not differentiate between financially distressed and non-distressed firms though the threat of bankruptcy might have a strong impact on a firm's propensity or reluctance to undertake a business divestiture associated with strategic reorientation. For example, Altman's (1968) *z*-score being widely established in financial studies could be calculated and included in future studies on this topic in order to differentiate between financially distressed divestors and non-distressed sample firms.

Third, this study does not distinguish between modes of business divestiture, though prior studies by, e.g., Chen and Guo (2005), Nixon et al. (2002) or Stienemann (2003), reveal that the importance of the motives for divestiture may differ for, e.g., sell-offs, carve-outs, and spin-offs. This limitation is due to the data sources that have been chosen. For the identification of cases, the *Mergers & Acquisitions Database* from the University of St. Gallen was used. It mainly incorporates sell-offs. Future studies examining differences between types of divestiture should not rely on a single database for the identification of cases but compare and merge the results of database research with, e.g., company reports, interviews with corporate executives, or the daily business press in order to retrieve details on the mode of divestiture in question.

Fourth, the rather disappointing results for Hypothesis 2 may be due to the measures in use. The *number of businesses* that a firm is engaged in and the *relatedness* dummy might be too crude for the purposes of this study. Due to data constraints, more elaborate measures were not available. Future studies should investigate the relationship between corporate strategy and divestiture type by relying on more elaborate measures for diversification.

Taking this study as a starting point hence suggests a variety of interesting and novel directions for research on business divestiture, particularly by incorporating its strategic implications for divesting parent firms.

TABLES

Table 1: Means, Standard Deviations and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 divestiture type	0.155	0.363	1										
2 ROA gap	0.756	7.638	0.101	1									
3 market to book ratio	0.054	4.845	-0.020	0.085	1								
4 debt to equity ratio	0.000	1.291	0.177**	0.002	-0.129	1							
5 number of businesses	4.498	2.809	-0.095	-0.110	0.100	-0.011	1						
6 relatedness	0.592	0.493	0.013	-0.070	-0.135*	0.004	0.052	1					
7 firm size	6.524	1.171	0.130	-0.169*	-0.026	0.033	0.130	-0.039	1				
8 firm age	74.014	69.724	-0.003	0.004	0.074	-0.082	0.163*	0.023	0.019	1			
9 divestiture experience	0.742	0.439	0.104	-0.062	0.056	-0.012	0.078	0.012	0.479**	-0.067	1		
10 market	1.086	1.190	0.194**	0.102	0.004	-0.098	-0.088	-0.030	0.028	0.163*	-0.012	1	
11 slack	-0.038	1.801	-0.010	0.101	0.054	-0.008	0.007	-0.011	-0.081	0.111	-0.188**	0.193**	1

Significance levels: ** p < 0.01; * p < 0.05.

Table 2: Results of the Logistic Regressions

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	beta (s.e.)	odds	beta (s.e.)	odds	beta (s.e.)	odds	beta (s.e.)	odds	beta (s.e.)	odds
Constant	-5.256*** (1.440)		-4.065*** (1.320)		-5.482*** (1.567)		-7.192*** (1.863)		-5.319*** (1.584)	
Control Variables										
firm size	0.358 (0.223)	1.430	0.268 (0.204)	1.307	0.409* (0.231)	1.505	0.584** (0.254)	1.793	0.374 (0.239)	1.454
firm age	-0.001 (0.003)	0.999	-0.001 (0.003)	0.999	0.000 (0.003)	1.000	0.001 (0.003)	1.001	0.000 (0.003)	1.000
divestiture experience	0.553 (0.663)	1.739	0.467 (0.609)	1.595	0.553 (0.665)	1.739	0.519 (0.730)	1.681	0.620 (0.692)	1.858
market	0.500*** (0.169)	1.649	0.423*** (0.163)	1.527	0.491*** (0.172)	1.634	0.560*** (0.184)	1.750	0.500*** (0.178)	1.649
slack	-0.045 (0.120)	0.956	-0.025 (0.120)	0.975	-0.050 (0.121)	0.951	-0.051 (0.130)	0.951	-0.020 (0.130)	0.981
Direct Effects										
H1 ROA gap	0.055** (0.028)	1.057			0.057** (0.029)	1.058	0.082 (0.064)	1.085	0.063* (0.032)	1.065
market to book ratio (MB)	0.004 (0.047)	1.004			0.010 (0.049)	1.010	0.118 (0.171)	1.125	0.006 (0.090)	1.006
debt to equity ratio (DE)	0.554 (0.336)	1.740			0.528 (0.329)	1.696	-1.994** (0.951)	0.136	0.693 (0.632)	2.000
H2 number of businesses			-0.101 (0.077)	0.904	-0.092 (0.079)	0.912	-0.090 (0.093)	0.914	-0.094 (0.080)	0.910
relatedness			0.224 (0.408)	1.251	0.402 (0.436)	1.495	0.795 (0.484)	2.214	0.456 (0.450)	1.578
Interaction Effects										
H3 ROA gap X number of businesses							-0.004 (0.017)	0.996		
MB X number of businesses							-0.063 (0.064)	0.939		
DE X number of businesses							1.051*** (0.370)	2.859		
ROA gap X relatedness									-0.032 (0.067)	0.969
MB X relatedness									-0.003 (0.110)	0.997
DE X relatedness									-0.284 (0.773)	0.753
Nagelkerke R square	0.179		0.111		0.194		0.283		0.197	
-2 Log Likelihood	160.467		169.509		158.319		145.611		157.977	
Chi square	23.210**		14.167**		25.357***		38.065***		25.700**	
df	8		7		10		13		13	
<i>Notes:</i> N = 213; significance levels: * p < 0.10; ** p < 0.05; *** p < 0.01.										

REFERENCES

- Agarwal, R., Sarkar, M. B., & Echambadi, R. 2002. The conditioning effect of time on firm survival: An industry life cycle approach. *Academy of Management Journal*, 45: 971-994.
- Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., Srinivasan, D. 2006. Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal*, 49: 161-174.
- Alexander, G. J., Benson, P. G., & Kampmeyer, J. M. 1984. Investigating the valuation effects of announcements of voluntary corporate selloffs. *Journal of Finance*, 39: 503-517.
- Altman, E. I. 1968. Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance*, 23 (4): 589-609.
- Anslinger, P. L., Klepper, S. J., & Subramaniam, S. 1999. Breaking up is good to do. *McKinsey Quarterly*, 1999(1): 16-27.
- Barker, V. L., & Duhaime, I. M. 1997. Strategic change in a turnaround process: Theory and empirical evidence. *Strategic Management Journal*, 18: 13-38.
- Barnett, W. P., & Freeman, J. 2001. Too much of a good thing? Product proliferation and organizational failure. *Organization Science*, 12: 539-558.
- Bartsch, D., & Börner, C. 2007. Werteffekte strategischer Desinvestitionen. Eine empirische Untersuchung am deutschen Kapitalmarkt. *Zeitschrift für betriebswirtschaftliche Forschung*, 59: 2-34.
- Beck, N., Brüderl, J., & Woywode, M. 2006. *Momentum or deceleration? Theoretical and methodological reflections on the analysis of organizational change*. Retrieved Thursday, July 3, 2007 from <http://www.sowi.uni-mannheim.de/lehrstuehle/lessm/papers/Change%20Momentum.pdf>.
- Belsley, D. A., Kuh, E., & Welsch, R. E. 1980. *Regression diagnostics: Identifying influential data and sources of collinearity*. New York: John Wiley.
- Bergh, D. D. 1995. Size and relatedness of units sold: An agency theory and resource-based perspective. *Strategic Management Journal*, 16, 221-239.
- Bergh, D. D. 1997. Predicting divestiture of unrelated acquisitions: An integrative model of ex ante conditions. *Strategic Management Journal*, 9: 715-731.
- Bergh, D. D. 1998. Product-market uncertainty, portfolio restructuring, and performance: An information-processing and resource-based view. *Journal of Management*, 24, 135-155.
- Bergh, D. D., & Lawless, M. W. 1998. Portfolio restructuring and limits to hierarchical governance: The effects of environmental uncertainty and diversification strategy. *Organization Science*, 9: 87-102.
- Bethel, J. E., & Liebeskind, J. 1993. The effects of ownership structure on corporate restructuring. *Strategic Management Journal*, 14 (Special Issue): 15-31.
- Bigley, G. A. & Wiersema, M. F. 2002. New CEOs and corporate strategic refocusing: How experience as heir apparent influences the use of power. *Administrative Science Quarterly*, 47: 707-727.
- Boddewyn, J. J. 1976. *International divestment: A survey of corporate executives*. New York: Business International.

- Bowman, E. H., & Singh, H. 1990. Overview on corporate restructuring trends and consequences. In: Rock, M. L. & Rock, R. H. (eds.), *Corporate restructuring. A guide to creating the premium-valued company*: 8-22. New York: McGraw-Hill.
- Bowman, E. H., & Singh, H. 1993. Corporate restructuring: reconfiguring the firm. *Strategic Management Journal*, 14 (Summer Special Issue): 5-14.
- Bowman, E. H., Singh, H., Useem, M., & Bhadury, R. 1999. When does restructuring improve economic performance? *California Management Review*, 41 (2): 33-54.
- Brauer, M. 2006. What have we acquired and what should we acquire in divestiture research? A review and research agenda. *Journal of Management*, 32: 751-785.
- Burgelman, R. A. 1994. Fading Memories: A process theory of strategic business exit in dynamic environments. *Administrative Science Quarterly*, 39: 24-56.
- Burgelman, R. A. 1996. A process model of strategic business exit: Implications for an evolutionary perspective on strategy. *Strategic Management Journal*, 17: 193-214.
- Byerly, R. T., Lamont, B. T., & Keasler, T. 2003. Business portfolio restructuring, prior diversification posture and investor reactions. *Managerial and Decision Economics*, 24: 535-548.
- Campbell, A., Goold, M., & Alexander, M. 1995. Corporate strategy: The quest for parenting advantage. *Harvard Business Review*, March-April 1995: 120-132.
- Chang, S. J. 1996. An evolutionary perspective on diversification and corporate restructuring: Entry, exit, and economic performance during 1981-89. *Strategic Management Journal*, 17: 587-611.
- Chang, S. J., & Singh, H. 1999. The impact of modes of entry and resource fit on modes of exit by multibusiness firms. *Strategic Management Journal*, 20, 1019-1035.
- Chen, H.-L., & Guo, R.-J. 2005. On corporate divestiture. *Review of Quantitative Finance and Accounting*, 24: 399-421.
- Cheng, J. L. C., & Kesner, I. F. 1997. Organizational slack and response to environmental shifts: The impact of resource allocation patterns. *Journal of Management*, 23: 1-18.
- Chi, T., Nystrom, P. C., & Kircher, P. 2004. Knowledge-based resources as determinants of MNC structure. Tests of an integrative model. *Journal of International Management*, 10 (2): 219-238.
- Cho, M.-H., & Cohen, M. A. 1997. The economic causes and consequences of corporate divestiture. *Managerial and Decision Economics*, 18: 367-374.
- Collis, D. J. 1996. Related corporate portfolios. In Goold, M. & Luchs, K. S. (eds.), *Managing the multibusiness company. Strategic issues for diversified groups*: 122-142. London, New York: Routledge.
- Davis, G. F., Diekmann, K. A., & Tinsley, C. H. 1994. The decline and fall of the conglomerate firm in the 1980s: The deinstitutionalization of an organizational form. *American Sociological Review*, 59: 547-570.
- Dawley, D. D., Hoffman, J. J., & Lamont, B. T. 2002. Choice situation, refocusing, and post-bankruptcy performance. *Journal of Management*, 28 (5): 695-717.
- Decker, C., & Mellewigt, T. (2007): Thirty years after Michael E. Porter: What do we know about business exit? *Academy of Management Perspectives*, 21 (2): 41-55.

- Delios, A., & Beamish, P. W. 2001. Survival and profitability: The roles of experience and intangible assets in foreign subsidiary performance. *Academy of Management Journal*, 44: 1028-1038.
- Dixit, A. D., & Chintagunta K. 2007. Learning and exit behavior of new entrant discount airlines from city-pair markets. *Journal of Marketing*, 71: 150-168.
- Dobrev, S. D., & Carroll, G. R. 2003. Size (and competition) among organizations: Modeling scale-based selection among automobile producers in four major countries, 1885-1981. *Strategic Management Journal*, 24: 541-558.
- Dobrev, S. D., Kim, T.-Y., & Carroll, G. R. 2003. Shifting gears, shifting niches: Organizational inertia and change in the evolution of the U.S. automobile industry, 1885-1981. *Organization Science*, 14 (3): 264-282.
- Dobrev, S. D., Kim, T.-Y., & Hannan, M. T. 2001. Dynamics of niche width and resource partitioning. *American Journal of Sociology*, 106 (5): 1299-1337.
- Doi, N. 1999. The determinants of firm exit in Japanese manufacturing industries. *Small Business Economics*, 13: 331-337.
- Dranikoff, L., Koller, T., & Schneider, A. 2002. Divestiture: Strategy's missing link. *Harvard Business Review*, 80 (5): 74-83.
- Duhaime, I. M., & Baird, I. S. 1987. Divestment decision-making: The role of business unit size. *Journal of Management*, 13: 483-498.
- Duhaime, I. M., & Grant, J. H. 1984. Factors influencing divestment decision-making: Evidence from a field study. *Strategic Management Journal*, 5: 301-318.
- Geiger, S. W., & Cashen, L. H. 2007. Organizational size and CEO compensation: The moderating effect of diversification in downscoping organizations. *Journal of Managerial Issues*, 29: 233-252.
- Gibbs, P. A. 1993. Determinants of corporate restructuring: The relative importance of corporate governance, takeover threat, and free cash flow. *Strategic Management Journal*, 14: 51-68.
- Gilmour, S. C. 1973. *The divestment decision process*. Unpublished doctoral thesis, Harvard University.
- Gilson, S. C. 1989. Management turnover and financial distress. *Journal of Financial Economics*, 25: 241-262.
- Gilson, S. C. 1990. Bankruptcy, boards, banks, and blockholders. *Journal of Financial Economics*, 27: 355-387.
- Gleason, K., Payne, B., & Wiggernhorn, J. 2007. An empirical investigation of going private decisions of U.S. firms. *Journal of Economics and Finance*, 31: 207-218.
- Goold, M., Campbell, A., & Alexander, M. 1994. *Corporate-level strategy. Creating value in the multibusiness company*. New York et al.: Wiley.
- Greene, W. H. 2000. *Econometric analysis*. 4th edition, Upper Saddle River, NJ: Prentice-Hall.
- Greve, H. R. 1999. The effect of core change on performance: Inertia and regression toward the mean. *Administrative Science Quarterly*, 44: 590-614.

- Haleblian, J., & Finkelstein, S. 1993. Top management team size, CEO dominance, and firm performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal*, 36 (4): 844-863.
- Hamilton, R. T. & Chow, Y. K. 1993. Why managers divest – evidence from New Zealand's largest companies. *Strategic Management Journal*, 14 (Summer Special Issue): 479-484.
- Hanson, R. C., & Song, M. H. 2003. Long-term performance of divesting firms and the effect of managerial ownership. *Journal of Economics and Finance*, 27(3): 321-336.
- Helfat, C. E., & Eisenhardt, K. M. 2004. Inter-temporal economies of scope, organizational modularity, and the dynamics of diversification. *Strategic Management Journal*, 25 (13): 1212-1232.
- Hoetker, G. 2007. The use of logit and probit models in strategic management research: Critical issues. *Strategic Management Journal*, 28: 331-343.
- Hoskisson, R. E., & Johnson, R. A. 1992. Corporate restructuring and strategic change: The effect on diversification strategy and R&D intensity. *Strategic Management Journal*, 13: 625-634.
- Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. 1994. Corporate divestiture intensity in restructuring firms: Effects of governance, strategy, and performance. *Academy of Management Journal*, 37: 1207-1251.
- Hoskisson, R. E., & Turk, T. A. 1990. Corporate restructuring: Governance and control limits of the internal capital market. *Academy of Management Review*, 15: 459-477.
- Hurry, D. 1993. Restructuring in the global economy: The consequences of strategic linkages between Japanese and U.S. firms. *Strategic Management Journal*, 14 (Summer Special Issue): 69-82.
- Hutcheson, G. & Sofroniou, N. 1999. *The multivariate social scientist*. London, UK: Sage.
- Jandik, T., & Makhija, A. K. 2005. Can diversification create value? Evidence from the electric utility industry. *Financial Management*, Spring 2005: 61-93.
- John, K., & Ofek, E. 1995. Asset sales and increase in focus. *Journal of Financial Economics*, 37: 105-126.
- Johnson, R. A. 1996. Antecedents and outcomes of corporate refocusing. *Journal of Management*, 22: 439-483.
- Kaiser, M. J., & Stouraitis, A. 2001. Reversing corporate diversification and the use of proceeds from asset sales: The case of Thorn EMI. *Financial Management*, 30 (4): 63-102.
- Kalnins, A., Swaminathan, A., & Mitchell, W. 2006. Turnover events, vicarious information, and the reduced likelihood of outlet-level exit among small multiunit organizations. *Organization Science*, 17 (1): 118-131.
- Karim, S. 2006. Modularity in organizational structure: the reconfiguration of internally developed and acquired business units. *Strategic Management Journal*, 27: 799-823.
- Kim, J.-Y., & Miner, A. S. 2007. Vicarious learning from the failure and near-failure of others: Evidence from the US commercial banking industry. *Academy of Management Journal*, 50 (2): 687-714.
- Lang, L., Poulsen, A., & Stulz, R. 1995. Asset sales, firm performance, and the agency costs of managerial discretion. *Journal of Financial Economics*, 37: 3-37.

- Lant, T. K., Milliken, F. J., & Batra, B. 1992. The role of managerial learning and interpretation in strategic persistence and reorientation: An empirical exploration. *Strategic Management Journal*, 13 (8): 585-608.
- Makhija, M. V. 2004. The value of restructuring in emerging economies: The case of the Czech Republic. *Strategic Management Journal*, 25: 243-267.
- Markides, C. C. 1992a. Consequences of corporate refocusing: Ex ante evidence. *Academy of Management Journal*, 35: 398-412.
- Markides, C. C. 1992b. The economic characteristics of de-diversifying firms. *British Journal of Management*, 3: 91-100.
- Markides, C. C. 1995. Diversification, restructuring and economic performance. *Strategic Management Journal*, 16: 101-118.
- Mitchell, W. 1994. The dynamics of evolving markets: The effects of business sales and age on dissolutions and divestitures. *Administrative Science Quarterly*, 39: 575-602.
- Montgomery, C. A., & Thomas, A. R. 1988. Divestment: Motives and gains. *Strategic Management Journal*, 9: 93-97.
- Montgomery, C. A., Thomas, A. R., & Kamath, R. 1984. Divestiture, market valuation, and strategy. *Academy of Management Journal*, 27: 830-840.
- Morrow Jr., J. L., Johnson, R. A., & Busenitz, L. W. 2004. The effects of cost and asset retrenchment on firm performance: The overlooked role of a firm's competitive environment. *Journal of Management*, 30 (2): 189-208.
- Morrow Jr., J. L., Sirmon, D. G., Hitt, M. A., & Holcomb, T. R. 2007. Creating value in the face of declining performance: Firm strategies and organizational recovery. *Strategic Management Journal*, 28: 271-283.
- Mulherin, J. H. & Boone, A. L. 2000. Comparing acquisitions and divestitures. *Journal of Corporate Finance*, 6: 117-139.
- Nixon, T. D., Roenfeldt, R. L., & Sicherman, N. W. 2000. The choice between spin-offs and sell-offs. *Review of Quantitative Finance and Accounting*, 14: 277-288.
- Peel, M. J. 1995. The impact of corporate restructuring: Mergers, divestments and MBOs. *Long Range Planning*, 28 (2): 92-101.
- Porter, M. E. 1976. Please note location of nearest exit: Exit barriers and planning. *California Management Review*, 19 (Winter 1976): 21-33.
- Ravenscraft, D. J., & Scherer, F. M. 1991. Divisional sell-off: A hazard function analysis. *Managerial and Decision Economics*, 12: 429-438.
- Robbins, D. K., & Pearce, J. A. 1992. Turnaround: Retrenchment and recovery. *Strategic Management Journal*, 13: 287-309.
- Rumelt, R. P., Schendel, D. E., & Teece, D. J. 1994. Fundamental issues in strategy. In Rumelt, R. P., Schendel, D. E., & Teece, D. J. (eds.), *Fundamental issues in strategy: a research agenda*: 9-47. New York: Wiley.
- Schendel, D. 1993. Introduction to the Summer 1993 Special Issue on 'Corporate Restructuring'. *Strategic Management Journal*, 14 (Summer Special Issue): 1-3.
- Servaes, H. 1996. The value of diversification during the conglomerate merger wave. *Journal of Finance*, 51 (4): 1201-1225.

- Seward, J. K., & Walsh, J. P. 1996. The governance and control of voluntary corporate spin-offs. *Strategic Management Journal*, 17: 25-39.
- Singh, H. 1993. Challenges in researching corporate restructuring. *Journal of Management Studies*, 30: 147-172.
- Sommers, W. P., Nemec Jr., J., & Harris, J. M. 1987. Repositioning with technology: Making it work. *Journal of Business Strategy*, 7 (3): 16-29.
- Steiner, T. L. 1997. The corporate sell-off decision of diversified firms. *Journal of Financial Research*, 20: 231-241.
- Stieglitz, N., & Heine, K. 2007. Innovations and the role of complementarities in a strategic theory of the firm. *Strategic Management Journal*, 28: 1-15.
- Stienemann, M. 2003. *Wertsteigerung durch Desinvestitionen*. Göttingen: Cuvillier.
- Villalonga, B. 2004. Intangible resources, Tobin's q , and sustainability of performance differences. *Journal of Economic Behavior and Organization*, 25: 205-230.
- Villalonga, B., & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. *Strategic Management Journal*, 26: 1183-1208.
- Whetten, D. A. 1980. Organizational decline: A neglected topic in organizational science. *Academy of Management Review*, 5: 577-588.
- Wiersema, M. F. 1992. Strategic consequences of executive succession within diversified firms. *Journal of Management Studies*, 29: 73-94.
- Wiersema, M. F. 1995. Executive succession as an antecedent to corporate restructuring. *Human Resource Management*, 34: 185-202.
- Wright, P., & Ferris, S. P. 1997. Agency conflict and corporate strategy: The effect of divestment on corporate value. *Strategic Management Journal*, 18: 77-83.
- Zimmerman, M. A., & Zeitz, G. J. 2002. Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27: 414-431.
- Zuckerman, E. W. 2000. Focusing the corporate product: Securities analysts and de-diversification. *Administrative Science Quarterly*, 45: 591-619.

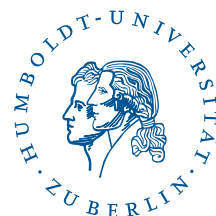
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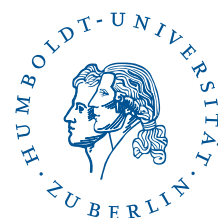
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