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# Path-related empirical research on M&A-outcome: review and research agenda

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**Abstract** This article attempts to reflect the current state and progress of contemporary research on financial and non-financial M&A outcome. Based on a review of 183 empirical M&A studies an integrative framework is developed, in which impact factors are classified into four major dimensions to explore the impact on M&A outcome: antecedents, transaction content characteristics, transaction process characteristics, and the transaction itself. The review reveals that M&A research is dominated by studies focusing on state variables at the expense of path-related variables. The review also shows that, to date, neither state-related research nor path-related research on financial and non-financial M&A outcome categories have reached maturity. Although there is still room for clarifying the impact of various state-related variables, the most valuable new insights are expected to emerge from researching path-related variables. Building on these insights, an extensive future research agenda is presented, which focuses on path-related research questions and methodological issues.

**Keywords** Empirical review · Framework · Mergers and acquisitions · Path

**JEL Classification** G34 · M19

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## 1 Introduction

Mergers and acquisitions (M&A) have lost none of their fascination. Despite the economic crisis, worldwide more than 64,000 transactions worth over US \$ 3,620 billion were signed off in 2009 (Bureau van Dijk 2010). This trend has remained unbroken in 2010 with numerous companies announcing their M&A intentions. For example, Novartis announced to acquire an additional 52% stake of Alcon from Nestlé in a transaction prized \$ 28.1 billion. BHP Billiton intends to take over Potash, but is contested by various competitors. Intel has received considerable attention for its announcement to acquire anti-virus software specialist McAfee for \$ 8 billion. And every week, the business press adds more names to the list of companies that engage in M&A. However, irrespective of its popularity, the M&A phenomenon is still not well understood.

Over the past decades, research has generated a vast amount of studies exploring the M&A phenomenon. At the outset research mainly focused on the performance of the acquiring firm. Later, research extended the observation to the performance consequences for the target, the combined performance effect, and the antecedents of M&A (Haleblian et al. 2009). Characteristic for the vast majority of this research has been the static conceptualization of M&A. Each M&A transaction has been treated as an isolated and independent event in the company's history. More recently, however, scholars have begun to consider that companies typically engage in multiple M&A transactions over time. For example, companies such as Cisco, General Electric or Microsoft each acquired more than 50 companies during the 1990s (Laamanen and Keil 2008). Given the repetitive nature of M&A, scholars have thus argued that it may be unrewarding to consider M&A transactions as isolated and independent. Rather, a company's M&A transactions and, by that, the outcome of M&A is likely to be—at varying degrees—dependent upon the company's (M&A) path.

In light of the two opposing approaches to conceptualize M&A, it seems that there is value in taking stock of what we have learned so far and what is still to be explored in M&A research. Accordingly, the purpose of the present study is to provide a large-scale review of empirical research on M&A outcome, particularly focusing on path-related research approaches. Carefully reviewing a set of 183 M&A studies, we develop an integrative framework to categorize existing research. We are able to identify research questions that have been neglected in the past and, building on these insights, we highlight white spots for future research. Thereby our suggestions relate to both under-researched areas and methodological issues.

The paper is organized as follows. In the next section, we provide a concise overview of previous M&A literature reviews. We do so, in order to legitimize why yet another M&A review is needed. In Sect. 3, we present our approach to identifying relevant literature before describing the framework used in this study to review the literature identified in Sect. 4. Subsequently, in Sect. 5 we present the results of our review. Finally, in Sect. 6 we provide an extensive future research agenda and develop propositions aimed at stimulating further theoretical and empirical work applying a path-related approach to M&A research. We close our paper with a short conclusion in Sect. 7.

## 2 Why yet another M&A review?

Over the years, various literature reviews on M&A have been published. Accordingly, the value of yet another M&A review may not be apparent at first sight. Therefore, we will subsequently provide a short overview and discussion of available M&A reviews in order to clarify the distinct value of our own M&A review. To do so, we will structure the following overview and discussion along three distinct characteristics: scope of the review, use of an integrative framework, and conceptualization of M&A.

Overall, we identified 11 M&A reviews that were published in the past two decades (see Table 1). With regard to the *scope of the review* we found that *review type* and *thematic focus* are the main driver of this characteristic. Seven M&A reviews applied a *narrative approach* to review M&A literature, while the remaining four reviews used a *meta-analytic* methodology to cumulate results from empirical M&A research. While a meta-analytic approach to review a set of literature has several distinct advantages, the approach is by definition restricted to a limited number of frequently researched relationships. For example, Datta et al. (1992) were restricted to the analysis of five relationships. Likewise King et al. (2004) explored only four frequently researched relationships in their meta-analysis of M&A literature. A narrative approach to review a given set of literature, however, is able to summarize different primary studies from which conclusions may be drawn into a holistic interpretation contributed by existing theories and models. It is able to comprehend the diversities and pluralities of understanding surrounding the topic at hand.

Similarly to review type, the existence or absence of a thematic focus largely determined the scope of the respective M&A review. We found that the overwhelming majority is driven by a thematic focus. More precisely, with the exception of Haleblan et al. (2009) all M&A reviews, though to a varying degree, focused on a specific M&A theme. Six M&A reviews concentrated on the performance effects of M&A, making it the most common thematic focus (King et al. 2004; Tuch and O'Sullivan 2007). More recently, studies have begun to explore other issues that surround M&A. Homberg et al. (2009), for example, focused on synergies created by four different types of relatedness. Likewise, Stahl and Voigt (2008) focused on the impact of cultural differences within M&A transactions. Again, studies with a specific thematic focus have provided new and valuable insights. A non-thematically focused review, however, may reveal neglected as well as emerging research streams, capturing the phenomenon on a broader base.

Interestingly, the development and use of an integrative framework as the basis for the literature review has not been as common as we suspected and has been applied only by Schmidt et al. (2005), Stahl and Voigt (2008), Homberg et al. (2009), and Haleblan et al. (2009). An integrative framework is not necessarily required to review a body of literature. However, a major benefit of an integrative framework is that it enables the reader to quickly obtain an overview of the issue at hand, provides guidance for the reader, and enables the identification of neglected areas.

**Table 1** Overview of M&A reviews

Year	Author(s)	Number of studies	Number of journals	Period	Type (narrative vs. meta-analytic)	Thematic focus	Frame-work presented	Dependent variable	Independent variable	Moderators identified
1992	Datta, Pinches, Narayanan	41	n.a.	1977–1989	Meta-analytic	Shareholder wealth creation	No	Abnormal stock returns	Impact of (i) number of bids; form; deal currency; relatedness; regulatory changes; on shareholder wealth	No
1997	Mueller	61	n.a.	1970–1995	Narrative	Antimerger policy implications	No	Profitability changes; market share; productivity; announcement returns	Acquisition itself	No
2002	Bruner	114	n.a.	1971–2001	Narrative	Value creation	No	Investment returns	Acquisition itself; diversification; synergy expectations; market power; deal currency; regulation; slack; form; managerial toehold; M&A programs;	No
2004	Bruner	114	n.a.		Narrative	Value creation	No	Investment returns	Relatedness; restructuring; M&A programs; strategic synergies; market power; value acquiring; slack; private targets; international deals; M&A waves; deal currency; LBOs; earnouts; collars; merger of equals; tax exposure; institutional investor activism; managers's stake; attitude; anti-takeover defenses;	No
2004	King, Dalton, Daily, Covin	93	14	1930–2004	Meta-analytic	Post-acquisition performance	No	Stock-and accounting based performance measures	Conglomerate acquisition; related acquisition; method of payment; acquisition experience	Identified as relevant, not specified

**Table 1** continued

Year	Author(s)	Number of studies	Number of journals	Period	Type (narrative vs. meta-analytic)	Thematic focus	Frame-work presented	Dependent variable	Independent variable	Moderators identified
2005	Schmidt, Vogt, Schriber	98	10	1995–2003	Narrative	Six different schools of thought; diverse performance measures	Yes	Abnormal return; accounting return; synergies; value creation; deal support;	Size; relatedness; incentive systems; acquisition experience; bid characteristics; contested deals; third party involvement; strategic fit; managerial attitude; managers' personality	No
2007	Tuch, O'Sullivan	60+	n.a.	1977–2006	Narrative	Firm performance	No	Share price performance (long-term; short-term); accounting performance	Acquisition itself; mood of the bid; payment method; relative size; industrial relatedness; pre-bid performance	No
2008	Stahl, Voigt	46	n.a.	n.a.	Meta-analytic	Impact of cultural differences	Yes	Socio-cultural integration outcomes; synergy realization; shareholder value	Cultural differences	Relatedness; dimensions of cultural differences
2008	Barkema, Schijven	29	n.a.	1985–2005	Narrative	Three learning perspectives: negative transfer; deliberate learning mechanisms; learning from others	No	Various financial and non-financial	Negative experience transfer; deliberate learning mechanisms; learning from others	Identified as relevant, not specified

**Table 1** continued

Year	Author(s)	Number of studies	Number of journals	Period	Type (narrative vs. meta-analytic)	Thematic focus	Frame-work presented	Dependent variable	Independent variable	Moderators identified
2009	Homberg, Rost, Osterloh	67	n.a.	n.a.	Meta-analytic	Synergies through relatedness	Yes	Shareholder value; accounting performance; skill transfer and combination; overall acquisition performance; longevity	Business relatedness; cultural relatedness; technology relatedness; size relatedness;	Knowledge-intensity; acquisition size; region
2009	Haleblian, Devers, McNamara, Carpenter, Davison	167	16	1992–2008	Narrative	n.a.	Yes	Performance outcomes; premiums; turnover; customers/bondholders	Firm characteristics, environmental factors, deal characteristics, managerial effects	No



Finally, we found that with the notable exception of Barkema and Schijven (2008) all M&A reviews have focused on a static conceptualization of M&A. Hence, path related perspectives on the M&A phenomenon have almost completely been overlooked by existing M&A reviews, fostering the impression that there is great value in taking stock of what we have learned so far from a path related M&A research perspective.

Considering the preceding overview of existing M&A reviews, the objectives of our M&A review are as follows: First, we aim at capturing the M&A phenomenon on a broad base. Accordingly, we use a narrative approach to review the literature on M&A and forego a thematic focus. Second, we aim at providing guidance on what we have learned so far in M&A research and identifying white spots in current research. Therefore, we develop and use an integrative framework as a basis for reviewing the body of literature. Third, and most importantly, we summarize the status quo of path-related research approaches on M&A and provide a foundation and stimulus for further theoretical and empirical studies applying a path related approach to explore M&A outcome. To meet this aim, we identify major relationships of interest, present propositions, and methodological suggestions.

### 3 Methodology

We adopted a structured approach to survey the literature. We decided to rely on academic journal articles only, since they are likely to have the highest impact in the field (Podsakoff et al. 2005; Rumelt et al. 1994; Tahai and Meyer 1999). In order to identify relevant journals, we analyzed a set of articles on journal quality and ranking (Kalaitzidakis et al. 2003; Podsakoff et al. 2005; Tahai and Meyer 1999). Haleblan et al. (2009) have shown that the overwhelming majority of studies on M&A have appeared in either the management or the finance literature, which we accordingly decided to review in the present study. We reviewed the appropriateness of the journals identified by checking the scope descriptions in the Business Source Complete database. The resulting working list consisted of 14 top-ranked journals.

Given that deciding what to attend to is at the same time the decision what is not attended to, the results of our review have to be considered in the light of the journals we reviewed. Findings such as the dominance of financial performance as outcome measure may be due to the focus on the management and finance literature. Other academic disciplines such as economics, accounting, or sociology may focus on different issues and outcome measures.

In a second step, we conducted a computer-aided keyword search (Haleblan et al. 2009; Hutzschenreuter and Israel 2008) in the Business Source Complete database for the period 1990–2008. We used three keyword expressions, applying different technical terms for M&A. Table 2 shows the 14 journals and the respective results of the keyword search.

The database search returned 835 disjoint articles, from which we reviewed the abstracts as a first step. We eliminated 427 articles, which turned out either not to deal with M&A transactions at all or to discuss issues not relevant for our review.

**Table 2** Key word hits per journal in abstracts in the business source complete database (January 1990–June 2008)

Academic journals	Hits by key word			Total hits	Disjoint articles
	Acqui*	Merger	Takeover		
<i>Management journals</i>					
Academy of Management Journal	45	10	3	58	51
Administrative Science Quarterly	22	3	6	31	27
Journal of International Business Studies	65	6	8	79	67
Journal of Management	29	11	2	42	32
Journal of Management Studies	45	12	5	62	54
Management Science	65	7	1	73	70
Organization Science	36	10	3	49	41
Strategic Management Journal	124	34	11	163	139
Strategic Organization	9	2	0	11	10
	440	95	39	574	491
<i>Financial journals</i>					
Journal of Business	32	19	17	68	49
Journal of Finance	76	40	42	158	120
Journal of Financial and Quantitative Analysis	22	10	16	48	34
Journal of Financial Economics	64	36	40	140	106
Review of Financial Studies	25	5	15	45	35
	219	110	130	459	344
Total	659	205	169	1,033	835

\* was used as a variable allowing any ending like acquisition or acquirer

We further eliminated 191 studies that did not deal with M&A outcome, the topic of our review. Finally, we excluded 35 studies, which focused on the financial industry because of their specific characteristics and regulatory environment, which limit managerial discretion (Datta et al. 1992).

We scanned the references of the studies in our sample for recurring citations of prominent studies not identified by our approach. In one case, where the findings of the study seemed to be valuable for the whole discipline, we added it to our working list. In total, we identified 183 empirical articles relevant for our review. A comprehensive list of studies reviewed (including additional information on each study) is presented in Online Resource 1, which is available on the journal's website.

## 4 An integrative framework

As we have outlined above, the objective of our study is to provide a review of contemporary research on M&A outcome, with a special focus on path-related research. Accordingly, the first distinction we make in our framework to review the

literature is whether research has taken a static or a dynamic, that is, path related perspective on M&A.

Traditionally, M&A research has explored the impact of current status of variables, which were observed at a certain *point in time*, for example, the announcement date, on the outcome of a focal acquisition. Hence, this research has, for example, focussed on the acquisition itself and its impact on performance, or the relationship between specific characteristics of the M&A transaction and corporate performance, thereby neglecting corporate history. Therefore, we call this the *state-related approach*.

More recently, however, researchers have considered the impact of a company's M&A path on the outcome of the focal M&A. This approach, which includes variables considering a certain *period in time* in a company's history, enables researchers not just to view the focal acquisition as an isolated event, but consider the fact that M&A outcome may be path-dependent. Therefore, we refer to this as the *path-related approach*.

On a lower level, we identified and subsequently distinguish between four categories that have been recognized in previous M&A research to have an impact on M&A outcome, namely: *Antecedents* (A), *Transaction content characteristics* (TrCont), *Transaction process characteristics* (TrProc), and *Transaction* (Tr) itself.

*Antecedents* refer to specific environmental conditions or corporate conditions of either transaction partners, which are prevalent before the focal event or period (Hitt et al. 2006). For example, the cash position of an acquirer or target at the announcement day represents a *status-related antecedent* (Harford 1999), whereas the prior performance of either the acquirer or the target is a *path-related antecedent* (Hayward and Hambrick 1997).

Distinguishing between content and procedural characteristics of the M&A transaction, we introduce a perspective that is frequent in M&A research, but is new to M&A reviews (Cartwright and Schoenberg 2006). *Transaction content characteristics* (for example, relative size, relative R&D spending, difference in management styles, relatedness) thereby represent variables that refer to the combination of business content between transaction partners. Accordingly, the relative size of transaction partners describes a *state-related transaction content characteristic*, whereas the relatedness of previous targets represents a *path-related transaction content characteristic*. Conversely, *transaction process characteristics* (for example, method of target screening process, method of payment, use of advisors, attitude, defence tactics, or form of integration) are variables, which refer to the planning, execution, and integration phase of the transaction. For example, the mode of transaction (Bange and Mazzeo 2004), or the use of anti-takeover measures (Comment and Schwert 1995) are widely researched *state-related transaction process characteristics*. *Path-related transaction process characteristics*, in contrast, such as the recurring experience with transaction advisors consider similarities in prior transactions.

Finally, some studies abstract from the aforementioned antecedents, transaction content, and process characteristics, focusing on the *transaction* itself. For example, acquisition experience—without considering any transaction content and/or process characteristics—represents a *path-related transaction* variable (Finkelstein and

Haleblian 2002). Our framework, incorporating the categories and interrelationships identified above, is depicted in Fig. 1.

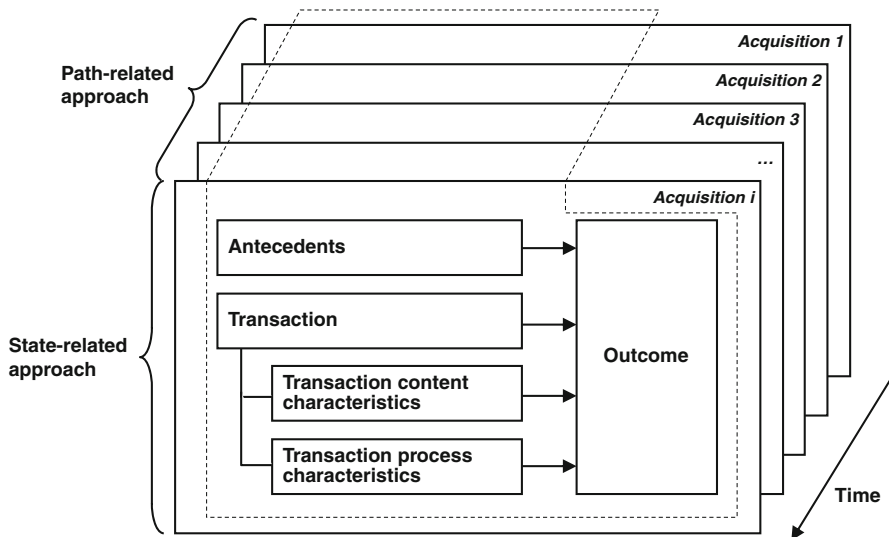
With regard to *M&A outcome*, we distinguished between financial and non-financial outcomes. Research in our sample was clearly dominated by the *financial* perspective on performance, measured either with market-based or accounting-based measures. The category of *non-financial outcomes* comprises various measures of managerial importance, such as management turnover, diversification, innovation performance, measures of satisfaction, or simply longevity until acquisition divestiture.

Building on the elements of our framework, we developed a review matrix. Every study that addressed one or more linkages was then inserted into the corresponding field(s) of the review matrix. Consequently, the review matrix provides a quick overview of the areas and the intensity, with which these areas have been researched. For a more detailed overview, the studies reviewed are further described in the appendix (see Online Resource 1). There, we summarize the major research question(s) pursued (namely “linkage(s)”), the key findings, as well as the characteristics of the sample such as size or period.

## 5 Review of the literature

### 5.1 State-related research

As we expected, our review revealed that state-related research on M&A outcome was most frequent in our sample. Moreover, we found M&A outcome to be predominantly measured in financial terms, which is well in line with our previous



**Fig. 1** Framework for classifying research on mergers and acquisitions

finding that performance effects of M&A is the predominant thematic focus of previous M&A reviews.

Researchers applying a state-related approach almost more or less equally dealt with antecedents, transaction content and transaction process variables. Regarding our antecedents category the impact of financial latitude as well as ownership structure has been most frequently researched. Within transaction content variables the influence of relatedness plays a dominant role. Transaction process characteristics research has been found to be more wide spread, for example, contrasting hostile versus friendly takeovers, impact of takeover defences, method of payment, and integration issues. Surprisingly, only few studies dealt with the planning phase, although the importance of proper planning is recurrently highlighted by deal advisors.

In sum, the results of our review of state-related M&A research are well in line with the results provided by previous M&A reviews such as King et al. (2004); Tuch and O'Sullivan (2007); Homberg et al. (2009); Haleblan et al. (2009). Therefore, due to space restrictions and the similarities of results obtained in previous reviews, we subsequently abstain from presenting these results here and refer interested readers to the aforementioned M&A reviews. Notwithstanding previous reviews in the field, we present the review matrix of state-related M&A research in Fig. 2. It summarizes the linkages explored and is aimed at providing guidance for researches in the field. Using the review matrix, researchers are enabled to get a quick overview of what study explored what relationship or what relationships have (in)frequently been researched, enabling the researches to easily identify relevant studies for their own work. Finally, the review matrix of state-related M&A research nicely contrasts the matrix of path-related M&A research, which will be presented below. At a glance, the preference of state-related approaches at the expense of path-related approaches becomes obvious when comparing both matrices.

## 5.2 Path-related research

In our sample, path-related research was much less frequently performed than state-related research. As can be seen easily in Fig. 3, rather few studies have used a path-related approach and only few areas of the potential research field have been taken by past research.

### 5.2.1 *The effect of antecedents on outcomes*

The most frequently researched path-dependent antecedent in our sample is past financial performance. Period-based by nature, past performance reflects the history of target or acquirer evolution. Although influenced by the general economic and industrial environment, past performance is often used as a proxy for assessing management skills. Hence, superior past performance may indicate superior management skills, which, in turn, may result in superior acquisition performance. However, one may also argue that superior management performance causes hubris and managerial over-confidence, leading to bad acquisition performance (Roll 1986; Billett and Qian 2008; Malmendier and Tate 2008). Empirical work in our sample

			Direct Impact on Outcome		Moderation
Antecedents	Environment	A-St-Env	O-Fin	O-NonFin	011, 052, 121
			011, 018, 037, 045, 055, 060, 079, 098, 125, 128, 130, 163, 164, 177	039, 042, 110, 127, 131, 168	
Corporate	A-St-Corp		016, 024, 027, 031, 041, 044, 047, 050, 054, 058, 065, 066, 070, 076, 080, 087, 093, 095, 096, 098, 108, 109, 112, 114,	003, 017, 022, 024, 053, 072, 075, 077, 078, 114, 118, 145, 153, 179	047, 054, 076, 078, 080, 087, 104, 109, 113, 130, 146, 149, 165
Transaction	Tr-St		002, 035, 057, 064, 088, 089, 090, 097, 104, 117, 128, 138, 174	001, 026, 037, 078, 091, 102	
Transaction content characteristics	TrCont-St		005, 013, 016, 021, 040, 048, 055, 059, 060, 062, 068, 070, 072, 081, 088, 097, 104, 107, 122, 126, 128, 139, 140, 159, 160, 161, 171, 173	003, 022, 032, 033, 038, 075, 091, 101, 102, 103, 107, 115, 116, 121, 133, 144, 170	050, 065, 084, 094, 105, 130, 170
Transaction process characteristics	Planning	TrProc-St-Plan	182, 183		182
			004, 007, 008, 010, 013, 014, 023, 036, 044, 045, 051, 055, 056, 062, 063, 069, 086, 089, 093, 100, 106, 119, 123, 143, 150, 151, 156, 158, 169, 181, 182, 183	063, 067, 075, 086, 106, 111, 116, 144, 154	065, 115, 130, 132, 166, 182
			020, 025, 029, 030, 049, 082, 107, 134, 173, 182, 183	012, 033, 075, 116, 121, 146, 148, 153	115, 153, 173, 182, 183

**Fig. 2** Review matrix on state-related linkages covered in research. *A* Antecedent, *Corp* Corporate, *Env* Environmental, *Exec* Execution phase, *Fin* Financial, *Int* Integration phase, *NonFin* Non-financial, *O* Outcome, *P* Path-related, *Plan* Planning phase, *St* Status-related, *TrProc* Transaction process, *Tr* Transaction, *TrCont* Transaction content

was inconclusive and provided evidence for either interpretation. Well-performing firms were sometimes found to be good acquirers (Morck et al. 1990) as well as being sometimes affected by hubris (Bae et al. 2002; Hayward and Hambrick 1997). Hence, with regard to the inconclusive findings we question if (1) past performance is indeed a good proxy for superior management skills, and (2) superior management skills result in superior acquisition performance. Concerning acquisition targets, past performance may impact target management turnover. Several studies revealed that low-performing target managers are subject to increased management turnover after acquisitions (Hambrick and Cannella 1993; Martin and McConnell 1991; Walsh and Kosnik 1993). Walsh and Ellwood (1991), however, found that while turnover rate in targets is higher than with non-acquired firms, prior

			Direct Impact on Outcome		Moderation
			O-Fin	O-NonFin	
Antecedents	Environment	A-P-Env	011, 034, 084, 132, 135, 152	043, 083, 115, 178	132, 139
	Corporate	A-P-Corp	006, 015, 019, 044, 073, 087, 089, 090, 093, 099, 104, 112, 120, 124, 128, 139, 147, 155, 165, 167	001, 009, 043, 075, 118, 129, 144, 153, 170, 172, 175, 176	014, 078, 099, 108, 153, 165
Transaction		Tr-P	015, 021, 028, 061, 074, 085, 104, 113, 141, 182	046, 071, 092, 103, 170, 172	108, 113, 132, 148
Transaction content characteristics		TrCont-P	006, 046, 061, 074, 085, 142, 182		094, 113, 182
Transaction process characteristics	Planning	TrProc-P-Plan			
	Execution	TrProc-P-Exec			
	Integration	TrProc-P-Int	006, 094	046	149

**Fig. 3** Review matrix on path-related linkages covered in research. *A* Antecedent, *Corp* Corporate, *Env* Environmental, *Exec* Execution phase, *Fin* Financial, *Int* Integration phase, *NonFin* Non-financial, *O* Outcome, *P* Path-related, *Plan* Planning phase, *St* Status-related, *TrProc* Transaction process, *Tr* Transaction, *TrCont* Transaction content

performance did not turn out to have a significant influence. We conclude from the findings within our study that in acquisitions the combined company loses both low-performing as well as out-performing managers. Obviously, an acquisition is a threat to managers at all performance levels, not only for low-performers.

### 5.2.2 The effect of transactions on outcomes

The accumulation of acquisition experience over time is the most prominent path-dependent construct in our sample. It is commonly measured by the number of transactions performed prior to a focal acquisition and examines how the accumulated experience influences a certain outcome attributed to the focal acquisition. Research has regularly assumed that the more transactions an acquirer has closed, the more familiar he is with all aspects of the transaction process, that is, planning, execution, and integration. As a result, experience from many deals are

likely to lead to superior financial performance of later transactions (Bruton et al. 1994), since a more experienced acquirer might be able to select targets with a better fit, negotiate lower prices, and exploit the potential of the target's resources more effectively.

Recent findings, however, question the single-edge positive influence of experience. Over time, successful CEOs are at risk of becoming increasingly confident in performing acquisitions. Rooted in psychological theory, this fact may result in overconfidence in their own ability to generate positive acquisitions returns. As a result, M&A performance has been found to suffer from overconfidence (Billett and Qian 2008; Malmendier and Tate 2008).

Also based on a psychological concept, namely transfer theory, Haleblan and Finkelstein (1999) found that learning effects can also be misappropriated, if they result in inflexible routines, which are misapplied to situations that look superficially similar, but are inherently different. Hence, failing to discriminate between the natures of transactions may in fact lead to inferior performance (Finkelstein and Haleblan 2002; Haleblan and Finkelstein 1999). To exploit the benefits of acquisition experience, the nature, performance, and timing of prior acquisitions have to be carefully interpreted (Haleblan and Finkelstein 1999; Hayward 2002). Unfortunately, we found that the vast majority of research considering the path of experience did not discriminate between its characteristics. Thus, the benefits of learning from prior acquisitions are not yet well understood. In our sample, as well as in other reviews (King et al. 2004) the impact of acquisition experience on financial performance is ambiguous (Barkema and Schijven 2008). Although there are a number of studies, which build on acquisition experience (Bruton et al. 1994; Finkelstein and Haleblan 2002; Greening and Johnson 1996; Haleblan and Finkelstein 1999; Hayward 2002; Hitt et al. 1996; Karim and Mitchell 2000), research is far from being advanced. Hence, future research trying to answer some of the aforementioned questions may bring a great deal of new insight.

### 5.2.3 *The effect of transaction content characteristics on outcomes*

In spite of criticism of the focus on individual acquisitions (Vermeulen and Barkema 2001), the impact of path-related transaction content characteristics on outcomes has largely been overlooked. Although some studies in our sample have indeed employed a path-related approach by investigating acquisition experience (see above), only a few have looked more specifically at transaction content characteristics. A noteworthy exception is Hayward (2002) who concludes that acquisitive learning requires paying attention to the nature, outcome, and timing of prior acquisitions. Firms benefit from the variety of prior experiences and temporal rhythms in their acquisitive behaviour. The nature of prior acquisitions has, for example, been measured by similarity between targets, which was found to have a positive impact on acquisition performance (Haleblan and Finkelstein 1999).

We highlight these findings since they may provide an answer to the inconclusiveness of research on acquisition experience (Barkema and Schijven 2008; King et al. 2004) by breaking down acquisition experience into more fine-



grained categories. Target relatedness measures only one dimension, in which an acquisition can be similar to another. However, in our research agenda we will propose several other dimensions, which seem to be worth to receive more attention. As the different dimensions of similarity reveal deeper insights into the nature of an acquirer's acquisition program, such analysis conveys important information. Hence, we urge future research to increase our understanding in this to date under-researched area.

### 5.2.4 *The effect of transaction process characteristics on outcomes*

In our sample, research on transaction process characteristics has focused almost exclusively on state-related variables. In doing so, promising research opportunities for path-related transaction process research has been overlooked.

Haleblian and Finkelstein (1999) have argued that experience may be misappropriated. Presumably, knowledge transfer processes play an important role. Case-study research suggests that applying the same integration approach to each target benefits the combined company (Baker 1992; Coté et al. 1999). Therefore, it should be tested on a large scale whether serial acquirers, who always apply the same approach not only to integration, but to planning and execution as well, outperform other acquirers. If this is not the case, it would be valuable to know, which kind of experience discrimination successful acquirers adopt. In this context, we point to the work of Ranft and Lord (2002), who suggest that the transfer of tacit knowledge has specific characteristics in terms of channels and duration. For example, according to its website, Cisco acquired 125 firms between 1993 and 2007. Being one of the most successful companies within its industry, the question is which routines concerning acquisition planning und integration does Cisco apply? Are these routines perfectly similar to each other, or does Cisco take tacit knowledge specificity into account?

In summary, many of the hypothesized relationships between antecedents, transaction, transaction content, and transaction process characteristics and outcomes have not received unequivocal empirical support. Many of the proposed theories and relationships are based on a state-related conceptualization of M&A, which to date has yielded a considerable body of literature. In contrast, our sample has shown that the path-related perspective on M&A has received only limited attention, yet. Notwithstanding the amount of knowledge generated by traditional state-related research, we believe that additional insights may be gained by taking a path-related approach. Considering the complementarity in knowledge that may be generated taking a path-related M&A perspective, we call researches to enter into this exiting field. In the next section, we outline, where researches may want to start their journey.

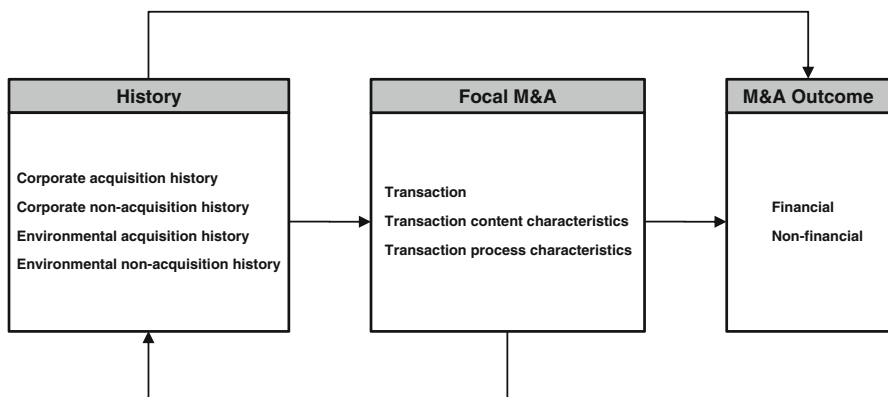
## 6 An agenda for path-related research on M&A outcome

In the preceding section we have presented an overview of almost two decades of research on M&A outcome. Our findings have revealed that to date comparatively few studies have taken a path-related approach to explore M&A outcome. As a

consequence, M&A research taking a path-related perspective is in an early stage of development, reflected amongst others in inconclusive and often even contradictory findings (Hunt and Dodge 2000). Thus, given the immaturity of path-related research on M&A outcome, it seems appropriate to take a closer look on what path-related research is and why path-related research warrants future attention, before we present an agenda for path-related research on M&A outcome.

The starting point of any path-related perspective stresses the importance of past actions for future actions. In a more focused way, path-related M&A research takes into account that foregoing events affect current and future corporate acquisitions (Booth 2003; Sydow et al. 2009). Hence, the path-related M&A perspective conceptualizes current transactions, in particular the outcome of current transactions, as being historically conditioned. As Teece et al. (1997: 522) have pointed out “bygones are rarely bygones”. In short then, the essential insight of path-related M&A research, and in fact all path-related research, is that history matters (Sydow et al. 2009; Booth 2003).

In Fig. 4 the overall path-related perspective on M&A outcome is portrayed. It contains the following building blocks: *history*, *focal M&A*, and *M&A outcome*. History is a broad concept defined as a chronological record of significant events in the past. With regard to the locus of these events, we are able to distinguish the *company* and the *environment*. Therefore, we may in a first step differentiate history into *corporate history* and *environmental history*. Given the present context, we can then further differentiate whether or not the historical events were related to acquisitions or not. Thus, the impact of history in a path-related M&A perspective may be explored with regard to corporate acquisition history, corporate non-acquisition history, environmental acquisition history, and environmental non-acquisition history. Due to space restrictions, we focus on developing a set of propositions that may guide future research exploring the impact of *corporate acquisition history* on M&A outcome. However, we call for future studies to identify future research agendas for the remaining strands.



**Fig. 4** A path-related perspective on M&A outcome

## 6.1 Impact of corporate acquisition history

To date, the vast majority of path-related M&A research has focused on the impact of corporate acquisition history on the outcome of the focal M&A. An interesting aspect of such research has been the *organizational learning* perspective, with learning being defined as the transfer of a company's prior *experience* from an acquisition to a subsequent one (Barkema and Schijven 2008). Thereby, experience has generally been equated with the number of acquisitions a company has performed prior to the focal M&A (see, for example, Bruton et al. 1994; Hayward 2002; Porriani 2004). Accordingly, experience has been treated as a homogeneous construct. More recently, however, researchers have begun to question the simplistic assumption that experience is homogeneous. Drawing on related disciplines such as psychology or sociology, research has begun to provide a more fine-grained picture of experience (Finkelstein and Haleblan 2002; Haleblan and Finkelstein 1999). In the following, we develop propositions aimed at further qualifying the construct of acquisition experience. In doing so, we contribute to the evolution of a more theoretically grounded organizational learning framework that applies to settings such as acquisitions (Barkema and Schijven 2008).

To further qualify acquisition experience, we may in a first step analytically distinguish the *creation* of experience from the *use* of experience. In a second step, we can then distinguish the creation of experience according to the *quantity* as well as the *similarity* of experience. Likewise, we may distinguish use of experience according to the *mindfulness* and *time* of use of experience. Since the quantity of experience has frequently been researched in the past (for example, Bruton et al. 1994; Haleblan and Finkelstein 1999; Hayward 2002; Porriani 2004) we will subsequently focus on similarity, mindfulness, and time.

### 6.1.1 Similarity

The concept of similarity takes into account that no two corporate acquisitions are identical. Rather, as acquisitions generally differ along a multitude of dimension, so does the respective experience. Similarity deals with the relationship between events. In particular, similarity refers to the factual distance between events in one or multiple dimensions.

A path-related perspective on M&A enables researchers to shift focus from acquirer-to-target similarity (the focus of status-related M&A research) to target-to-target similarity. Considering a company's acquisition path, targets are likely to be similar in one or multiple dimensions such as industry, size, governance structure, technology, or culture (Barkema and Schijven 2008; Hayward 2002). Corporate acquisitions are complex events. However, as behavioral learning theory has shown individuals as well as companies tend to apply a simple mechanism to reduce task complexity: they generalize from previous tasks in case previous conditions are similar to current conditions. Hence, if task complexity is the result of being unfamiliar with specific task characteristics, then the similarity of the company's prior acquisition(s) to the focal acquisition with regard to *transaction content*

*characteristics* and/or *transaction process characteristics* is likely to affect the outcome of the focal M&A.

Building on the basic assumption that a company is able to learn from acquisitions (Barkema and Schijven 2008), the application of this knowledge to subsequent tasks should have a positive effect on the outcome of the task. For example, from a *transaction content perspective*, an acquirer experienced in acquiring targets similar in size is likely to be able to efficiently balance the alignment of production processes. Likewise, having experience with a number of formerly family-owned targets, an acquirer is likely to be able to consider the idiosyncratic non-financial goals of family-owned target shareholders, such as preservation of the target's company name or preservation of employees for a specific period of time. As a consequence, the family-owner might well accept a lower consideration for the target. In this context, Baker (1992), for example, showed that the US-based company Beatrice enjoyed superior returns for more than 20 years when only buying targets which were (1) family owned and (2) less than 9% in book value relative to itself. Moreover, technological relatedness (Homburg et al. 2009) between targets may lead the acquirer to generalize from prior experience. For the frequent acquirer General Electric, for example, the similarity of the technological base is one of the most important investment criteria. Only, in case a company's long-term technological base is similar to the ones of previous acquisitions, is the respective company considered a potential target. Finally, in the context of cross-border acquisitions (Shimizu et al. 2004) a company is likely to benefit from prior similar experience. With cultural distance being a major obstacle in cross-border acquisitions (Stahl and Voigt 2008; Bjorkman et al. 2007), a company that has previously acquired targets in a specific cultural setting is likely to be able to benefit from this experience when acquiring an additional target in the respective cultural setting.

To date, the construct of similarity has largely focused on industry similarity. However, similarity is clearly a multi-dimensional construct. Thus, the acquirer should be able to more effectively make use of experience from prior acquisitions the more prior targets are similar over multiple dimensions. Thus, the following proposition might be set forth:

**Proposition 1** *The cumulated degree of similarity between the focal target and the company's prior experience in its various transaction content characteristics should have a positive effect on the outcome of the focal M&A. In particular, we expect the cumulated degree of similarity in terms of (1) size, (2) governance structure, (3) technology, or (4) cultural distance, to have a positive impact on M&A outcome.*

Apart from transaction content characteristics, acquisitions may also be described by transaction process characteristics such as method of target screening process, method of payment, use of advisors, attitude, defence tactics, or form of integration. While these have received less attention as path-related variables in M&A research, they nonetheless constitute an important part in an acquisition and are likely to have an impact on M&A outcome. Similar to the case of transaction content characteristics, learning effects are likely to occur when repeatedly applying similar transaction process characteristics, that is, when having recurring experience with

similar characteristics. Accordingly, building on the preceding theoretical reasoning leads to the following proposition:

**Proposition 2** *The cumulated degree of similarity between the focal target and the company's prior experience in its various transaction process characteristics should have a positive effect on the outcome of the focal M&A. In particular, we expect the cumulated degree of similarity in terms of (1) screening method, (2) method of payment, (3) use of advisors, or (4) integration measures, to have a positive impact on M&A outcome.*

So far, our assumption was that similarity affects M&A outcome. However, interesting new insights may evolve when exploring the reversed causality. According to the economic perspective, behaviour is driven by preferences. Psychologists, however, have challenged this perspective, arguing that preferences are *created* by task performance, in particular, the outcome of a task (Ariely and Norton 2007). In short, taking a psychological perspective, it may well be, that similarity is the result of a favourable outcome, rather than vice versa.

The American psychologist Thorndike (1898) has shown that whether or not a task is performed anew depends upon the outcome of the former task. In his well-known *law of effect*, Thorndike (1913: 4) states that “when a modifiable connection between a situation and a response is made and is accompanied or followed by a satisfying state of affairs, that connection’s strength is increased: When made and accompanied or followed by an annoying state of affairs, its strength is decreased.” Thus, behavior leading to a positive outcome tends to persist and strengthen, whereas behavior leading to a negative outcome tends to diminish and weaken. For M&A transactions this may imply that the feedback from prior acquisitions will affect the company’s choice of future transaction content characteristics as well as process characteristics. A successful transaction is likely to bring about a similar transaction in the future. For example, if a transaction, in which a specific target screening process or method of payment was used, turns out to be successful, it is likely that the company will use the same target screening process or method of payment for the subsequent transaction. Conversely, an unsuccessful transaction is likely to lead the company to engage in a transaction with dissimilar transaction content and process characteristics. Hence, taking a psychological perspective it may well be that the aforementioned US-based company Beatrice repeatedly acquired family owned targets of similar size because the preceding similar acquisitions were successful. Based on these arguments the following proposition might be set forth:

**Proposition 3** *The similarity between corporate acquisitions may be driven by the outcome of the prior acquisition(s). In particular, a satisfying outcome is likely to lead the company to subsequently acquire a similar target, whereas a dissatisfying outcome is likely to lead the company to subsequently acquire a dissimilar target.*

### 6.1.2 Mindfulness

By referring to mindfulness, we subsequently no longer only explore the creation of experience but shift focus to the *use* of experience. The vast majority of research on

company experience is consistent with behavioral learning theory, according to which a company learns from experience (Cyert and March 1963). Behavioral learning theory is based on an important implicit assumption: The company applies its entire knowledge and set of skills to the execution of a task. It is assumed that there is no gap between what a company *can do* in terms of knowledge and skills it has acquired in the past through repeated experience, and what the company *actually does* when being confronted with the task once more (Salomon and Globerson 1987). The painful truth, however, is that often companies do not make good use of their knowledge and skills. Despite the availability of the necessary prerequisites (knowledge and skills), judgments are often biased, attention directed to superficial and irrelevant cues and decisions based on erroneous heuristics (Nisbett and Ross 1980). But why is this the case? Why does a company fall short to efficiently apply its stock of knowledge and skills?

Research in psychology has shown, that the gap between competence (what a company can do) and execution (what a company actually does) may depend on the degree of mindfulness, with which the task is approached (Langer 1989; Salomon and Globerson 1987). Mindfulness is not an easy concept to define but may be understood as a state of active awareness characterized by greater sensitivity to the environment, openness to novel information, continual creation and refinement of categories, and willingness to take multiple perspectives in problem solving, and an orientation in the present (Langer and Moldoveanu 2000; Rerup 2005).

When a company approaches a task for the first time, it is necessarily attentive to the particularities of the respective task. Hence, the company is open to the information associated with the novel task, creates and refines categories related to the task, and is willing to take multiple perspectives in solving the task. This quality of attention and awareness helps the company to successfully execute the task and also to successfully learn from its experience, remain vigilant, and minimize errors (Levinthal and Rerup 2006; Weick et al. 1999). Hence, as long as acquisitions are perceived as some sort of novel task, the company will engage in acquisitions mindfully, leading the company to appropriately apply its existing knowledge and skills to the task, that is, learn from its prior experience.

However, as we all know from personal experience, the more often we perform a task, the more we engage in automatic rather than controlled information processing (Shiffrin and Schneider 1977; Dutton 1993). Over time, as acquisitions forfeit the aspect of novelty, the company is likely to become increasingly mindless when performing an additional acquisition. Rather than considering the idiosyncrasies of the focal acquisition, the company increasingly acts like being on automatic pilot (Dutton 1993), relying too rigidly on categories, distinctions, and organizational routines created in the past (Langer 2000, 1989). The hitherto successful company is therefore likely to reduce the intensity of information search and processing, decrease the openness with which incoming information are analyzed, and trim down the sensitivity and responsiveness of its overall information processing. As the company ignores the idiosyncrasies of the focal acquisition and exhibits an orientation in the past, its current decisions are likely to lack relevance for the current task (Starbuck 1983). Hence, the appropriateness of how the company applies its knowledge to the task is likely to rapidly decrease, thereby increasing the

probability of failure (Baumard and Starbuck 2005). These patterns suggest the following proposition:

**Proposition 4** *The mindfulness, with which the company approaches its first few acquisitions, enables it to increase knowledge and skills, and as a consequence initially improve M&A outcome. Emerging mindlessness, however, prevents the company to further benefit from additional experience, even leading the company to misapply its knowledge and skill to further acquisitions. Hence, for low level of M&A experience there is an inverted U-shaped relationship between M&A experience and M&A outcome.*

Although negative at first sight, a failure may have a healing effect. Research on aspiration levels has shown, that a company tends to assess performance not in absolute but in relative terms (Cyert and March 1963; Lewin et al. 1944). Whether or not the performance of a task is considered a success or a failure depends upon the preceding performance of the task. If the company is faced by a decrease in M&A outcome, the company will consider these acquisitions a failure. In contrast to the successful outcome of early M&As, which the company is likely to attribute to its own decisions and actions, the poor outcome of subsequent M&As is initially attributed to the external environment (Clapham and Schwenk 1991). At some point, however, the ongoing deterioration of M&A outcome acts as a wake-up call, leading the company to engage in a search process (Cyert and March 1963; Hayward 2002; Shimizu 2007). The company is likely to thoroughly analyze and question its current approach to M&A, thereby creating an environment for readjusting lessons learned and adjusting routines that are no longer appropriate. In other words, perceiving acquisitions as failure will—at some point—increase the company's mindfulness with regard to future M&A transaction. As a result, the company is again able to appropriately apply its knowledge and skills to the execution of M&As, which, in turn, is likely to be reflected in the outcome of the M&A. This, however, may just be the beginning of a vicious cycle. Based on the preceding reasoning we are able to set forth the following propositions:

**Proposition 5** *The increase in mindfulness that sets in after the deterioration of M&A outcome is likely to lead to a renewed improvement of M&A outcome for subsequent acquisitions. As a result, the relationship between M&A experience and M&A outcome will be sigmoid (S-shaped).*

**Proposition 6** *Over time, periods of mindfulness will alternate with periods of mindlessness. Hence, whereas the relationship between M&A experience and M&A outcome exhibits a sigmoid pattern when considering a rather limited number of corporate acquisitions, considering a larger number of corporate acquisitions will result in a wave-like relationship between M&A experience and M&A outcome, reflecting periods of mindfulness and mindlessness.*

### 6.1.3 Time

One of the main advantages of path-related approaches is that it enables researchers to include time in their studies, thereby considering different temporal perspectives.



In particular, researchers may consider *recency* (time elapsed between the focal and its preceding acquisition), *pace* (the number of acquisitions in a given period of time), or *rhythm* of acquisition (temporal distribution of acquisitions within a certain period of time).

Learning has been shown not to occur immediately. Since organizations are subject to bounded rationality and limited cognitive scope it takes time to draw conclusions from an event, to identify new knowledge, and to store this newly acquired knowledge in the organization's memory (Cohen and Levinthal 1990; Simon 1945). If organizations allow themselves only a too short time period to draw conclusions they may face time compression diseconomies, meaning that the return on learning may diminish (Dierickx and Cool 1989). Conversely, knowledge has also been shown to deteriorate over time (Rao and Argote 2006). Therefore, we suggest that the most vivid knowledge in an organization's memory is the one concerning the most recent event. Although time has been identified as an important contingency factor (Mosakowski 2000; Ancona et al. 2001a, b), in particular with regard to learning (Thomas and Eden 2004), the temporal distance within a company's acquisition path is hardly researched. A notable exception is Hayward (2002) who has provided evidence that an acquisition should neither be too close nor too distant to the focal acquisition. According to his results, a *moderate* (Hayward 2002: 36) temporal distance provides the acquirer with the best financial performance since it provides the acquirer with enough time to learn from the previous acquisition, while preventing existing knowledge to deteriorate. Extending the findings of Hayward, we suppose that the temporal distance is likely to differ according to the acquirer's experience. Hence, we assume that comparing a sample of novice acquirers with a sample of experienced acquirers we should find that moderate temporal distance means different things to novice as opposed to experienced acquirers. In contrast to novice acquirers, experienced acquirers have organizational routines at hand, which allow them to quickly draw conclusions, while novice acquirers do not possess such routines. Accordingly, this suggests:

**Proposition 7** *Due to their ability to timely identify and absorb new knowledge, experienced acquirers are able to reduce the time between the preceding and the focal acquisition, without affecting the outcome of the focal M&A. Accordingly, comparing experienced with novice acquirers, we should find that the moderate temporal distance is shorter for experienced as opposed to novice acquirers.*

As an acquirer may perform multiple acquisitions over time, the focal company is likely to evolve from a novice to an experience acquirer. This evolution, however, should be reflected in the focal acquirer's moderate temporal distance. Thus, we propose:

**Proposition 8** *The moderate temporal distance between the preceding and the focal acquisition decreases as the company becomes more experienced with acquisitions. Hence, there is a negative relationship between acquisition experience and temporal distance.*

Extending the recency perspective, researchers have begun to explore the impact of *pace* of an organization's actions on outcomes (Vermeulen and Barkema 2002;



Wagner 2004; Laamanen and Keil 2008). Vermeulen and Barkema, for example, have shown that the more foreign subsidiaries a company tries to establish in a given period of time, the more likely it will suffer from diseconomies of time compression (Dierickx and Cool 1989), which in turn will negatively affect the performance of these companies. Likewise, Laamanen and Keil (2008) argued and found a negative relationship between the amount of acquisitions a company undertakes within a given period of time and acquisition performance.

The reasons for the negative impact of *pace* on outcome found by previous research may well be numerous. However, the main reason for the negative impact of pace on outcome is generally seen in the company's limited ability to deal with complexity (Vermeulen and Barkema 2002; Hutzschenreuter and Voll 2008), which in the case of corporate acquisitions has been argued to lead to corporate indigestion (Kusewitt 1985; Fowler and Schmidt 1989). In general, the company's limited capacity to deal with complexity has been traced to the limited managerial services available for corporate growth (Penrose 1959). Although a key factor in the literature on corporate growth (Penrose 1959; Tan and Mahoney 2005), research has yet foregone the opportunity to further specify managerial services. Rather, to date managerial services have implicitly been assumed to be the same across varying companies. If, however, managerial services is the bottleneck to corporate growth, then the amount of managerial services available is likely to have an impact on the company's ability to deal with complexity. A company, which possesses more managerial services, should therefore be able to deal with a higher amount of complexity as opposed to a company with less managerial services (Bausch and Krist 2007). The preceding reasoning leads to the following propositions:

**Proposition 9** *Managerial services enable the company to deal with complexity. As a result, there is a positive relationship between the amount of a company's managerial services and the number of acquisitions per period of time in which the company is engaged.*

**Proposition 10** *Considering a given acquisition pace, a company with more managerial services is able to devote more managerial services to a single acquisition as opposed to a company with less managerial services. Thus, there is a positive relationship between the amount of a company's managerial services and the speed of finalizing the acquisition.*

Although even more difficult to obtain, a measure for the quality of managerial services would be highly desirable. Our review has revealed that both past performance and acquisition experience have been used as a measure for the quality of managerial services impacting acquisition performance. In summary, however, we have found that both existing measures have turned out to be weak proxies. Therefore we encourage future research to develop approaches to assess the quality of managerial services.

Considering a company's acquisition path, the distribution of events within a certain period of time can be explored. Laamanen and Keil (2008) have introduced the variance of the acquisition rate as an independent variable. Building on Vermeulen and Barkema (2002) they argued and found that variance of the

acquisition rate negatively impacts acquisition performance. Although their research was a big step forward, Laamanen and Keil (2008) themselves plead for considering more content characteristics than simply the variance of frequency. As the complexity of an individual acquisition stems from its transaction content and transaction process characteristics, we conclude that the variance of the dimensions discussed above are also important. An irregular distribution of acquisitions within a given period of time challenges the ability of a company to learn from prior events. Periods of abstaining from a certain dimension could be associated with a loss of dimension specific acquisition knowledge. Once the acquirer engages anew in an acquisition with a content dimension similar to one experienced long ago, we suspect the value of the respective knowledge to have eroded, for example, due to substantial changes in the environment. Based on this reasoning, we propose:

**Proposition 11** *The variance of acquisitions in terms of its various content characteristics and process characteristics has a detrimental effect on the company's knowledge base. As a result, there is a negative relationship between variability in content characteristics as well as process characteristics and M&A outcome.*

## 6.2 Methodological implications and suggestions

Subsequently, we present several methodological implications and suggestions for future research on M&A outcome. Some of these implications and suggestions are equally relevant for both state-related M&A research and path-related M&A research. Other methodological implications and suggestions focus on the idiosyncrasies of path-related M&A research, only.

### 6.2.1 Construct validity of independent variables

Our review reveals that some empirical studies suffer from operationalization of their independent variables. Considering the case of business relatedness, results suffer from the use of proxies, which do not fully represent the transaction content characteristics as hypothesized. Industry relatedness is predominantly measured using SIC codes (Bhagat et al. 2005; Buchholtz et al. 2003; Lubatkin et al. 1997; Morck et al. 1990; Bausch and Pils 2009). However, the SIC classification is based on economic sector classification and does not consider any relatedness in customer or suppliers (Flanagan 1996). It seems that many studies have overemphasized substantive research at the expense of searching for a valid measure of the employed construct (Hutzschenreuter and Kleindienst 2006). Thus, alternative measures, which have higher construct validity, should be employed.

There are several suggestions for industry relatedness measures readily available, which do not rely on the SIC system. Fan and Lang (2000), for example, have proposed a relatedness measure based on actual commodity flows between industries. The higher the value of commodity transfers between industries, the more related are the industries. This measurement is dynamic as it relies on current inter-industry transfer. Moreover, it is not subject to a fixed industry classification

system, such as SIC. In contrast, Farjoun's (1994, 1998) relatedness measure is based on human resource profiles in industries. His skill-based approach indicates maximum relatedness whenever the businesses employ the same patterns of occupation. Another alternative introduced by Teece et al. (1994) uses actual combinations of business activities within companies. They argue that unrelated activities constitute less efficient combinations and will not survive in the long run. Hence, in contrast to the static SIC system, using these alternative measures of relatedness may enable researches applying path-related M&A research to account for changes in industry relatedness that may occur over time. Overall, this is likely to increase the validity of the results obtained.

However, relatedness may also be assessed using other dimensions than the industrial ones like technology and size (Homborg et al. 2009). Technological relatedness is often measured in terms of patent numbers of the transaction partners. Obviously, this measure suffers from being highly erratic as capabilities need not to be registered as a patent to be valuable. Moreover, the history of patent registrations might not be a good predictor for current innovativeness as, for example, innovation budgets might have been cut. Even more important, two innovative firms with a high patent flow might not be able to enjoy synergies if the patents are not complementary. A more fine-grained measure has been proposed by Hall et al. (2001) who suggested calculating technological relatedness according to IPC classes. A further alternative measure by Robins and Wiersema (1995) relies on existing patterns of technology flows showing which industries are actually interrelated with each other.

As a transaction content specific variable size is measured in relative terms as size of the target divided by size of the acquirer. Studies in our sample suggest that relative size is positively related to shareholder wealth of the acquiring company (Bae et al. 2002; Eckbo and Thorburn 2000; Fuller et al. 2002). This finding, however, suffers from different measures of relative size that were applied. Size was measured either by market value of equity (Fuller et al. 2002; Seth 1990), book value of equity (Bae et al. 2002; Eckbo and Thorburn 2000), sales numbers, assets, or employees (Fowler and Schmidt 1989; Kroll et al. 1997). We argue that the level of equity is not necessarily a good predictor for operating outcomes as operational changes are dependent on the level of integration. However, relative size in terms of equity does not determine the level of integration. Therefore, the operational linkage might not be generalizable. Rather, we believe that it is highly important to determine an appropriate variable for relative size. Hence, we propose to also apply different measures of size such as assets or sales. The amount of assets, for example, is not statistically related to the dependent performance variable. Moreover, it is under management's control, which is a prerequisite if any variation in assets is to be sensibly attributed to the performance of the company. Hence, applying different measures of size is likely to increase the robustness of result.

### 6.2.2 Construct validity of dependent variables

Improving construct validity of the dependent variable is also an important task. Most studies employ a financial measure of acquisition performance, either accounting- or stock-market based. Frequently, stock-market based performance

measures like short-term cumulated abnormal returns are used. Most studies justify their choice by reflecting on efficient market theory. However, there are several concerns about using short-term financial measures. A frequently cited critique of the efficient market hypothesis questions the assumption that the stock market correctly reflects every implication of the acquisition (Asquith 1983; Healy et al. 1992). The alternative, however, that is, long-term measures are prone to dilution from other events (Barber and Lyon 1997). In this context, we applaud the work of Zollo and Meier (2008), who analysed the linkage of several measures used for the construct of acquisition performance. Interestingly, their results revealed that short-term event study measures, which are most frequently used, are not linked to any other performance measure. Therefore, current research focusing on short-term event study measures is in danger of betting on the wrong horse. Researchers should test their results for robustness by using different measures for acquisition performance (Zollo and Meier 2008). Furthermore, the measure used for the construct should fit to the research question pursued. As a means of construct validity, different research questions may need different performance measures. Hence, we propose that researchers should, whenever applicable to the research question, also include non-financial measures. Those measures may include external measures such as the number of imitators, or media praise, as well as internal ones such as innovativeness. In doing so, other dimensions of acquisition performance may be detected and controlled for.

### 6.2.3 Research model

We believe that M&A research can offer greater value to scholars and managers by employing an integrative perspective close to reality (Ketchen et al. 2004). In reality, numerous variables may interact with each other at the same time. The resulting acquisition performance is a complex, multi-faceted phenomenon. Therefore, applying a configurational approach might lead to a great deal of new insights. Conversely to cross-segmental studies, the configuration approach focuses on firms that share strategic, organizational, and environmental characteristics (Meyer et al. 1993). A configurational approach aims to identify relationships between variables within a consistent set of firms (Ketchen et al. 2004). As discussed above, acquisition experience may be qualified according to similarity, degree of mindfulness, and temporal path characteristics. A configurational approach may shed light into the interrelationship between those variables. Thereby, research will be able to explain and predict, which firms will be successful under a certain set of circumstances (Short et al. 2008). Configurational research could also consider other important variables, for example, the sources of acquisition experience and the channels which are used to make use of this experience. Within such settings, using structural equation modelling techniques may help to detect unexplored relationships.

### 6.2.4 Data structure

Based on our review we found the cross-sectional research approach to be most frequently used. However, focussing on path-related variables may require

collecting longitudinal data to be able to determine differences between two specific points in time. In this context, we pointed, for example, to the insights from considering acquisition rates within specific periods of time and their variability (Laamanen and Keil 2008). This research approach, however, requires panel data in terms of companies and periods. However, to the best of our knowledge, detailed panel data are hardly available as secondary databases, but would be highly appreciated. Moreover, panel data require specific statistical methods for analysis. However, panel data have only been used infrequently in acquisition research.

### 6.2.5 *Relationship between independent and dependent variable*

Traditional cross-sectional research sometimes suffers from reversal ambiguity. Reversal ambiguity occurs if the cause-effect relationship between dependent variable and independent variable cannot be clearly established because they are measured within the same period. For example, analysing the relationship between length of integration stage and management turnover, it might be hard to determine whether the lengthy integration caused management to resign or management turnover increased the length of the integration period.

In contrast, path-related research deals with the impact of a certain feature from corporate historic path on an outcome in the present. In other words, the temporal sequence decisively determines the direction of the cause-effect relationship. Although obvious, this is an important and valuable characteristic of path-related research since it reduces causal ambiguity as the cause-effect relationship cannot be reversed. After all, past events cannot be affected by current or even future events.

## 7 Conclusion

This paper has aimed to review almost two decades of literature concerned with the impact of M&A characteristics on outcome, with a specific focus on path-related approaches to M&A research. Our review reveals that to date, path-related relationships have only been researched superficially. The few path-related approaches are mainly concerned with antecedents, with only few exceptions dealing with transaction characteristics. Of the few studies dealing with transaction characteristics, the vast majority focuses on the transaction itself, but do not account for specific transaction content or process characteristics.

Therefore, we call for more research, which considers the path of acquisitions. In doing so, we may get a better understanding of the specific patterns that influence the outcome of acquisitions. In addition, we suggest that future research should specifically deal with the impact of path-related transaction content characteristics as well as transaction process characteristics. As outlined in our future research agenda, pressing questions suggest brighter future prospects for research in these fields. At the end of this journey, we may better understand the mysterious phenomenon called M&A.

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