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Corporate Portfolio Analysis Tools Revisited: Assessing Causes that may Explain Their Scholarly Disdain

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While prominent corporate portfolio analysis tools such as the BCG Growth-Share Matrix took centre stage in the field of strategic management from the 1960s to the mid-1980s, this review of the literature shows that they have since then largely disappeared from the academic agenda, despite their practical relevance and widespread application. There may be two independent reasons for this apparent scholarly disdain: corporate portfolio analysis tools (a) may have been recognized as unsuitable owing to inherent flaws or superior alternative concepts or (b) may have become obsolete because of proof that corporate diversification is inferior to market diversification. Thus, this assessment is based on an extensive review of the most relevant academic literature on corporate portfolio analysis tools and on the constitutive diversificationperformance link published in leading management journals over the past five decades. The review reveals that research to date has not produced advanced tools based on an objective criticism of the original matrices, nor has corporate diversification – as a precondition for corporate portfolio analysis - proved to be inferior to market-based co-ordination mechanisms. Thus, this literature review constitutes a call for further academic research in the field of corporate portfolio analysis tools as well as corporate

Introduction

Triggered by significant changes in the economic environment of the 1960s, management scholars and practitioners put greater emphasis on marketing, market segmentation and organizational divisionalization (van der Velten and Ansoff 1998). As excess cash and the saturation of traditional markets fostered diversification into new businesses, top management of diversified corporations faced the increasing problem of managing a set of more or less related businesses. Transferring the concept of portfolio analysis from finance theory (e.g. Sharpe 1963) to the real economy, management consultancies such as The Boston Consulting Group (1970), A.D. Little (Wright 1978) and McKinsey (Wind 1974) developed and

propagated different product portfolio approaches (Bettis and Hall 1981; Cummings and Daellenbach 2009). They predominantly proposed making use of a graphical representation of the competitive positioning of a corporation's businesses, supporting decision-making with regard to resource allocation, formulating strategies, setting individual performance targets and valuating the portfolio balance (e.g. Grant 2008, p. 420f.). Such portfolio matrices became very popular and were implemented by many large companies, especially in the 1970s (Bettis and Hall 1981; Haspeslagh 1982; Wind and Mahajan 1981). However, they were also criticized from the beginning.

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Original corporate portfolio analysis (CPA) tools such as BCG's Growth-Share Matrix and

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McKinsey's Industry Attractiveness–Business Strength Matrix have been subject to harsh criticism in the academic literature (e.g. Bettis and Hall 1983; Day 1977; Derkinderen and Crum 1984). Criticism ranges from fundamental arguments denying the validity of these concepts in general (e.g. Armstrong and Brodie 1994; Day 1977; Slater and Zwirlein 1994) to questioning the underlying assumptions and incorporated components (Hax and Majluf 1983; Wensley 1982), through to criticizing the inappropriate practical application of CPA instruments by corporate executives (Day 1977; Seeger 1984). This criticism may be an important reason for the fact that hardly any scholarly publications since the 1980s have dealt with CPA instruments. However, neither has there been any comprehensive review and critical assessment regarding the validity and relevance of this criticism to date.

Another possible reason for the apparent scholarly disdain of CPA tools is based on the argument that they are obsolete or at least negligible because diversified multi-business firms are outdated models owing to economic disadvantages compared with market-based co-ordination mechanisms (e.g. Denis et al. 2002; Markides 1995; Villalonga 2004). However, at least two facts cast doubt on the reliability of this paradigm dismissing diversification. On the one hand, despite at least two decades of writing off conglomerates, i.e. firms with a set of mainly unrelated businesses and diversified corporations at large, they still exist (Montgomery 1994) and – even more importantly – many of them are exceedingly successful (e.g. General Electric or 3M; Kaye and Yuwono 2002). On the other hand, there are increasing doubts regarding the validity and reliability of empirical studies that analysed diversificationperformance links, corporate effects and/or conglomerate discounts (e.g. Lang and Stulz 1994; Sull and Houlder 2006). However, despite existing reviews of the diversification-performance literature (Palich et al. 2000), it is necessary to assiduously reappraise the prevailing research in this field.

Hence, possible research inconsistencies as well as current economic developments that contradict the general belief and confidence that financial markets are of superior rationality and efficiency suggest that research regarding appropriate CPA tools is still high relevance. The objective of this paper is therefore to prove the need for new research initiatives and to propose future research initiatives with regard to CPA instruments – especially matrices – based on a comprehensive review and assessment of the

academic debate, including relevant theories, concepts and empirical findings.

The paper offers a qualitative review of the main publications in the fields of CPA and corporate diversification. We conduct a broad literature review of peer-reviewed journals, focusing mainly on the following top-ranked journals: Harvard Business Review, Journal of Finance, Journal of Marketing, Long Range Planning and Strategic Management Journal. The reviewed papers cover theory-focused and conceptual research as well as empirical studies. Our review of these journals spans over 50 years (1957–2010) and covers research on CPA tools and corporate diversification. Both the focus on peerreviewed, high-quality research and the extensive time span ensure a comprehensive reflection of the current status of this field of research.

The remainder of the paper is structured as follows. The research question of the degree to which scholarly criticism of CPA tools is valid is at the centre of a comprehensive review of the academic coverage of respective instruments. corporate diversification and multi-business corporations are fundamental preconditions for the application of CPA tools, we continue by reviewing the most relevant studies on diversification and assess in particular the empirical findings regarding the diversification-performance link. As part of the conclusion, we focus on highlighting future research streams.

Reviewing the scholarly assessment of **CPA** tools

In response to diversification strategies triggered by growth aspirations and the resulting decision problems of multi-business firms (e.g. resource allocation, acquisition, divestiture), portfolio analysis concepts elaborated in the field of finance theory in order to optimize investment alternatives (e.g. Sharpe 1963) were adapted to evaluate a set of products and businesses managed by a corporation. In the late 1960s, management consultancies such as The Boston Consulting Group (1970), A.D. Little (Wright 1978) and McKinsey (Wind 1974), as well as corporate practitioners (e.g. General Electric) developed frameworks to support executives of diversified corporations (e.g. Goold and Luchs 1993; Grant 2008; Hax and Majluf 1983). All prominent product or corporate portfolio concepts evaluate and rank strategic business units (SBUs) with regard to (a)

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their market attractiveness along one axis and (b) their competitive position along the second axis, thus constituting different kinds of matrices (Bettis and Hall 1981; Prahalad and Bettis 1986). While the original BCG Growth-Share Matrix measures and quantifies these two dimensions based on single proxies (market growth versus relative market share), frameworks such as the GE/McKinsey Industry Attractiveness-Business Strength Matrix aggregate multiple parameters (e.g. Bettis and Hall 1981; Grant 2008; Wind and Mahajan 1981). Other corporate portfolio instruments consider different dimensions, but fundamentally resemble the traditional versions or merely apply modifications (Hambrick and Mac-Millan 1982). An empirical study by Haspeslagh (1982) showed that CPA matrices were applied in their original form or adapted to the specific needs of the respective firms by a large share of diversified firms in the 1960s and 1970s. Accordingly, the underlying concepts found their way into almost every contemporary strategic management textbook and the vast majority of curricula of strategic management courses (e.g. Grant 2008; Johnson et al. 2008).

Although predominantly perceived as helpful, innovative and easy-to-handle toolkits for the management of large, diversified corporations by practitioners and academics alike (e.g. Hax and Majluf 1983; Hedley 1977; Morrison and Wensley 1991; Seeger 1984), CPA tools – mainly developed by management consultancies – have been criticized in the academic literature from the beginning.

Peaking in the early 1980s – partly in reaction to a shift in strategic thinking from corporate sification towards refocusing on core competencies (Prahalad and Hamel 1990) - a wide range of criticism have been expressed in the academic literature. In this paper, criticism of CPA tools is subsumed under three major categories: (a) denying the validity of portfolio concepts at large; (b) questioning underlying assumptions and basic components of portfolio instruments; and (c) criticizing the inadequate application of these instruments.

Criticism regarding the validity of portfolio concepts

A common concern addresses the danger of oversimplification of complex and interdependent strategic decisions of multi-business firms (e.g. Ansoff et al. 1982; Grant 2008). Corporate portfolio analysis instruments are criticized for their dogmatic nature – deriving norm strategies for SBUs that have been

identified as, for example, dogs, cash cows, stars or question marks, does not account for all competitive environments and situations (Christensen et al. 1981; Seeger 1984). Similarly, oversimplification of traditional CPA tools is criticized by Ansoff et al. (1982), who state that – especially in turbulent environments - 'single point positioning' of business units into the grid systems should be replaced with 'dispersed positioning', i.e. plotting areas rather than points into the matrices according to the estimated probability of occurrence of the respective parameters. Another stream of fundamental criticism asserts that there is empirical evidence of inferior performance of companies following the prescriptions of CPA tools (Armstrong and Brodie 1994; Slater and Zwirlein 1994), although the underlying experiments, analyses and conclusions have been questioned (Wensley 1994). Furthermore, it is argued that the traditional portfolio models bear the risk of producing inconsistent results as a result of inherent problems and incompatibilities associated with the application of financial portfolio concepts in the business world (Devinney and Stewart 1988). Thus, the authors suggest a more rigorous model tied much more closely to risk-return criteria.

Criticism regarding underlying assumptions and basic components

Underlying assumptions of the portfolio concepts and on basic components of CPA tools are frequently criticized. In particular, criticism addresses the ambiguity of definitions of determinants such as SBUs, relevant markets, the matrix scales and dividing lines (e.g. Bettis and Hall 1983; Christensen et al. 1981; Day 1977; Morrison and Wensley 1991; Wind et al. 1983). According to Day (1977), the definition of market growth and relative market share is highly dependent on the definition of the relevant market and is thus often vague. Morrison and Wensley (1991, p. 126) criticize 'the arbitrary nature of the scales, the criteria and the variability of the resulting classifications'. Wind et al. (1983) illustrate the consequences of ambiguous or weak definitions of matrix dimensions and dividing lines in a case study of a Fortune 500 company with 15 SBUs. They compare the positioning of these SBUs within the BCG Growth-Share Matrix based on four different definitions of market growth and market share and show that only four out of the 15 SBUs were consistently classified, i.e. positioned in the same quadrant. Bettis and Hall (1983) criticize the SBU definition underlying the business

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portfolio approach for being too ambiguous and suggest a 'less dogmatic approach relying on a situational matching of implementation to the circumstances of the particular firm' (p. 98).

Other critics are concerned with the lacking comprehensiveness of existing instruments (e.g. Derkinderen and Crum 1984; Haspeslagh 1982; Morrison and Wensley 1991; Wensley 1982). Risk assessment is one of the factors claimed to missing in the existing portfolio instruments (Derkinderen and Crum 1984; Devinney and Stewart 1988; Wensley 1982). In addition, capabilities and endurance, defined as 'the capability of a company to marshal resources to ensure survival in the event of adverse developments', are mentioned with regard to inadequate consideration by original CPA tools (Derkinderen and Crum 1984, p. 131). Other authors miss a sound evaluation of competitive expectations (Wensley 1982) and a more stringent method regarding the identification and assessment of new businesses (Haspeslagh 1982). Furthermore, the BCG Growth-Share Matrix in particular is criticized for its too narrow focus on two measures (Morrison and Wensley 1991). However, the authors fail to specify which factors should be included in more comprehensive CPA models.

In addition, underlying assumptions are claimed to be void. This criticism addresses primarily three premises of the original CPA matrices: (a) the necessity to maintain a balanced portfolio in terms of internal cash flows; (b) the positive correlation between market share and profitability; and (c) investment in market growth (e.g. Armstrong and Green 2007; Day 1977; Hax and Majluf 1983; Wensley 1981). First, the basic assumption of the Growth-Share Matrix, i.e. that an ideal corporate portfolio has to feature a net cash flow balance, is questioned by stressing the fact that 'the capital market as a source of funds seems to be almost ignored in some approaches' (Wensley 1981, p. 176; similarly, Hax and Majluf 1983). Secondly, another specific assumption of the BCG matrix, i.e. the use of relative market share as a proxy for the advantage or disadvantage of the respective competitive position and profitability, is challenged. While Day (1977), for example, does not question the general logic of the experience-curve concept underlying the market share-profitability link, he argues that this correlation becomes tenuous under certain circumstances and provides empirical evidence that the value of market share differs significantly from industry to industry. Similarly, Hax and Majluf (1983) question whether market share is really

the major driver of profitability. Based on evidence from 12 studies, Armstrong and Green (2007) show that pure competitor-oriented objectives such as increasing market share tend to reduce rather than increase profitability. Hambrick and MacMillan (1982) also question the unequivocal relationship between relative market share and profitability as well as the blurred line distinguishing high- from lowshare businesses. They provide empirical evidence based on PIMS data that not all dog businesses are poor performers and that they consequently need not necessarily be divested. Instead, it should rather be carefully analysed whether and how these businesses can 'achieve their potential as long-term, reliable cash generators' (Hambrick and MacMillan 1982, p. 94). Finally, the second dimension of the original Growth-Share Matrix, i.e. market growth, is similarly criticized within the academic literature. Critics cast particular doubts on the assumption that industry growth is the only dominant variable that fully explains growth opportunities (Hax and Majluf 1983) and that, as a consequence, free cash flow should always be directed from lower-growth markets towards high-growth markets (Wensley 1981).

Another frequent – albeit minor – point of criticism regarding the elements of CPA tools is the allegedly destructive labelling of matrix positions. It is argued that labels such as 'dogs' or 'question marks' might be too derogatory (e.g. Hax and Majluf 1983).

Criticism regarding misapplication

Inadequate or inappropriate application of CPA tools by executive managers of corporations is another major concern addressed within the academic literature. As one of the earliest critics, Day (1977) objected that – facilitated by the somewhat arbitrary nature of CPA tools - managers might be tempted to manipulate the product-market boundaries and the input parameters in order to give their businesses the appearance of a more favourable positioning in the grid system, thus increasing the likelihood of receiving funds, managerial attention and respect. Beyond defective actions by different groups, unintended misinterpretations and too rigid adherence to norm strategies also increases the risk of misapplication (Seeger 1984). In addition, the latter author refers to the fact that, owing to their standardized methodology and CPA matrices may lead to sub-optimal decisions, as managers may stick to prescribed strategies rather than seeking and using additional information that is

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often necessary. Referring to the terminology of the Growth–Share Matrix, he argues that 'not all stars turn out to be winners', cash cows could 'give more than milk', and 'every dog has its day' (pp. 94, 96). Similarly, Christensen *et al.* (1981) question the appropriateness and feasibility of norm strategies, especially concerning 'dog' businesses. They argue, for instance, that divestments of 'dog businesses' are in some cases not reasonable and are in many cases difficult to implement owing to potential interdependencies among business units, legal or political barriers to exit, and ethical or societal expectations.

Evaluating the validity of the criticism

The objective of the following section is to show that criticism targeting CPA tools is not generally valid and not limited to these corporate decision-making instruments. There is ample evidence that CPA tools should not be removed from the academic or management agenda. Rather, critical suggestions should be understood as a call for research efforts to advance them.

Strategic decisions, by definition, bear significant consequences for the success and survival of the respective organization. They can be characterized by long-term effects and a high degree of uncertainty, complexity and interdependence. In order to support strategic decision-making effectively, instruments have to make use of simplification, similar to theories. Simplification is therefore a major reason for and an important benefit of such instruments. The downside of simplification is - although difficult to determine – oversimplification. This is, however, more a problem of managers applying strategic planning tools, as they have to assess the need to take into account additional decision factors (e.g. Day 1977). However, theories and strategic planning tools alike are subject to verification of their reliability and accuracy through empirical studies. While some researchers claim to have empirically proved a systematic underperformance of firms using CPA tools, these studies have in part also been challenged by other researchers (e.g. Wensley 1994). It is apparent that further empirical research testing the CPA application-firm performance link is needed.

Criticism challenging the underlying assumptions of CPA tools and complaining about neglected but important elements and variables (e.g. risk, interdependence) does not mean that they should be scrapped rather than advanced. In particular, the

ambiguity and arbitrariness, e.g. of market definitions, scales and mapping, should be addressed. Surprisingly, to the best of our knowledge, there are no academic attempts to advance or substitute traditional CPA tools.

Inappropriate application of CPA tools by senior executives is definitely a serious risk – as it is for any strategic planning tool. With the exception of the methodological limitations already mentioned, however, this is not a flaw of the instrument itself. In addition, misuse of portfolio concepts largely depends on whether the concept is regarded as a prescriptive guide rather than a diagnostic aid (Morrison and Wensley 1991). Although one would assume that the practical application of CPA tools and processes has been frequently studied in order to confirm certain deficiencies and problems, research to that effect is meagre and probably outdated. Empirical research investigating the practice of CPA and addressing, for instance, the number and distribution of users and perceived benefits and drawbacks, as well as the corresponding need for improvement, dates back to the late 1970s and early 1980s (e.g. Bettis and Hall 1981; Haspeslagh 1982). Haspeslagh (1982) conducted a series of interviews and a survey among Fortune 1000 companies as well as some selected European corporations regarding the application and limitations of CPA. According to his study, as of 1979, 36% of Fortune 1000 and 45% of Fortune 500 companies had used portfolio planning approaches – at least to a certain extent. An earlier clinical study of 12 large, diversified US firms by Bettis and Hall (1981) found that, in 1977, at least 200 of the Fortune 500 companies were using some kind of portfolio planning concept. Based on their expert knowledge, the authors assume similar application rates in Europe. Our review reveals that no further empirical studies regarding the actual application of CPA tools have been published in leading management journals since then. Intensifying research in that field may help to identify the key competencies and skills needed to successfully implement CPA methods and thereby provide necessary input for improving management education in that respect (Morrison and Wensley 1991).

Reviewing the academic enhancement of CPA tools

Despite extensive academic criticism of CPA concepts and instruments, the advancement of traditional CPA matrices has been neglected by academia, with rare exceptions.

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First, there are a few academic contributions suggesting more sophisticated approaches with regard to alternative corporate investment decisions, instance theoretical models for the portfolio problem based on risk and profitability reasoning (e.g. Devinney and Stewart 1988). However, there are no attempts to translate these theoretical approaches into pragmatic, easy-to-handle and nevertheless sophisticated instruments that can be applied by corporate planners to improve resource allocation decisions. Early approaches to applying risk-return portfolio analyses – as originally developed in finance – to product-line decisions (Cardozo and Smith 1983; Cardozo and Wind 1985) have also been criticized for the critical underlying assumptions (Devinney et al. 1985).

Secondly, there are a few alternative matrix-based approaches that focus on different, yet often highly specific, corporate management issues. One alternative published in leading management journals is the Parenting Matrix, or Ashridge Portfolio Display, proposed by researchers from the Ashridge Strategic Management Centre (Campbell et al. 1995; Goold et al. 1998; Johnson et al. 2008). Unlike traditional CPA matrices, the Parenting Matrix does not evaluate and compare the attractiveness of individual but rather assesses the strategic fit between the parent company and its portfolio of SBUs. The authors argue that such a fit is necessary in order to add superior value to the business and thereby justify corporate ownership. SBUs that do not yield such a fit should be sold to an alternative owner to increase shareholder value (Campbell et al. 1995). Another less prominent alternative approach is the 'CV/M Matrix' (Gomes and Knowles 1997). Building on a strong marketing focus, this customer-oriented portfolio matrix assesses SBUs based on the two dimensions 'perceived customer value' and 'fit to mission.' However, from our perspective, these alternative approaches are more supplements than substitutes and do not offer a comprehensive solution to the shortcomings of traditional CPA matrices.

Conclusion 1: Need for advanced CPA tools and applications

Although parts of the criticism of CPA tools, particularly traditional CPA matrices, are valid, the academic conclusion to abandon them appears to be wrong and ignorant. Wrong because there is adequate substitute regarding the strategic management of multi-business firms, and ignorant

there have been only a few research attempts to further confirm and understand problems regard to CPA applications and/or to advance the relevant instruments and applications. The majority of companies probably do not apply traditional CPA matrices dating back 50 years, but rather adjust them to their specific needs based on their competitive environment. In addition, it is reasonable to assume that top management consultancies such as BCG or McKinsey have developed more sophisticated CPA methods in the meantime. Academic research that builds on these resources and information may advance knowledge within this important field of strategic management. As a result, the benefits as well as the limitations and pitfalls of CPA tools may become more apparent.

Nonetheless, some researchers, mainly economists, argue that evaluating and advancing CPA and CPA tools at large is a hopeless endeavour in itself, as corporate diversification has been proved - at least theoretically – to be inferior to market-based diversification. In other words: corporate diversification has to be considered as a precondition for the development of management concepts and tools that support the efficient management of multi-business firms, i.e. corporate portfolios. Thus, if - for whatever reason - corporate diversification vanishes altogether, the development and application of CPA tools will also become dispensable. To be comprehensive, a review and evaluation of the causes of a scholarly disdain of CPA tools must therefore answer the fundamental question of whether corporate diversification has actually been proved to be economically inferior. This implies a review of the research in the field of diversification and especially of empirical studies that address the diversificationperformance link.

Reviewing the diversificationperformance literature

Since the beginning of the diversification era in the 1950s and, in particular, since the emergence of conglomerates, i.e. corporations with many – mostly unrelated – businesses, diversification and diversification strategies have been elaborated in the academic literature. Besides strategic intentions and motives for diversification, the fundamental question of whether and how diversification leads to superior performance dominated the research and respective publications. The academic attention to the topic of

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diversification has not abated to this day (Jackson 2009). While the common impression prevails that research regarding diversification, and particularly the diversification–performance link, has produced relatively clear results, namely the superiority of external markets over internal co-ordination as well as overwhelming proof for conglomerate discounts, past reviews already cast doubts (e.g. Grant 2008, p. 406; Palich *et al.* 2000; Robins and Wiersema 2003) on such predictions.

While the diversification-performance link is of main interest for an assessment of the need for CPA and CPA tools, ambiguities and inconsistencies regarding the definition of diversification as well as the underlying motives for diversification seem to be one reason why insights derived from diversification research are still relatively blurred. As the review of the relevant academic literature will prove, First, there is no unequivocal definition of the term 'diversification' in the academic literature. Secondly, the reasons for diversification are manifold and cannot be reduced to one general motive. Inconsistent results brought forward by numerous empirical studies analysing the impact of diversification on firm performance may be the direct consequence.

The impact of different forms of diversification

Despite ongoing research activities, a broadly accepted definition of the term 'diversification' is still lacking (Ramanujam and Varadarajan 1989). More importantly, many empirical studies of the diversification–performance link do not define the term at all, making it hard to compare results (e.g. Berger and Ofek 1995; Servaes 1996; Villalonga 2004).

Diversification may be defined according to three aspects: (a) range of products; (b) markets in which the firm is active; and (c) tangible and intangible resources constituting the full value chain. Whereas most researchers only take one or two of these aspects into consideration, others account for all three dimensions. Chandler (1962), for example, already considers the development of new products as diversification. Berry (1975, p. 37), too, applies only one dimension - in this case markets - and defines diversification as 'an increase in the number of industries in which firms are active'. Most of the current definitions of diversification refer to Ansoff's product–market approach. His narrower definition – accounting for two of the three aspects mentioned above - limits diversification to cases where new

markets are served with new products (Ansoff 1965). Ansoff's multi-dimensional approach is further specified by Ramanujam and Varadarajan (1989, p. 525), who put special emphasis on the administrative linkages and processes and therefore argue that 'simple product line extensions that are not accompanied by changes in administrative linkage mechanisms do not fall under the conceptualization of diversification'. Furthermore, they distinguish between the process and the status of diversification and introduce the term 'diversity' for the being diversified (*ibid*.). Applying a resource-based view, Rumelt (1974, p. 10) suggests that 'a diversification move is taken to be any entry into a new product-market activity that requires or implies an appreciable increase in the available managerial competence within the firm [...] using as a point of departure the range of skills possessed corporately by the firm'.

Inconsistent definitions and the fact that many researchers do not define the term underlying their empirical studies at all have a substantial influence on the generalizability of results and must be considered as some of the reasons for the ambiguity of empirical research results regarding economic implications of corporate diversification. Thus, future studies in the field of diversification – whether conceptual or empirical – should provide clear definitions in order to prevent misleading conclusions and ensure comparability of results.

The impact of different diversification motives

Contributions identifying and evaluating motives¹ for corporate diversification are of special interest, as knowledge about the underlying objective for diversification activities may help to answer the question of whether diversification strategies offer economic advantages over market-based co-ordination forms and, if so, under what circumstances.

Reviewing the relevant literature on diversification motives (see Table 1) reveals four dominant categories, namely (a) growth aspirations, (b) profitability increases, (c) risk reduction and (d) self-interest of corporate managers.

A common motive for deliberate corporate diversification activities is the aspiration for growth opportunities – especially when the opportunity to

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¹The term 'motive' in this paper also subsumes aspects mentioned as advantages or reasons for diversification in the academic literature.

Table 1. Overview of motives for corporate diversification

	Author	Year	Journal	Nature of study	Specific motives for corporate diversification	Category
1	Ansoff	1958	Harvard Business Review	Conceptual/qualitative	Improved growth patterns and sales stability	Growth aspiration
2	Williamson	1979	Journal of Law & Economics	Conceptual/qualitative	Lower transaction costs	Profitability
3	Goold/Luchs	1993	Academy of Mgmt Executive	Qualitative/lit. review	Value added through general management skills of top executives	Profitability
4	Montgomery	1994	Journal of Economic Perspectives	Qualitative/lit. review	Aspiration to create market power	Profitability
5	Campbell/Goold/Alexander	1995	Harvard Business Review	Conceptual/qualitative	Parenting advantage	Profitability
6	Servaes	1996	Journal of Finance	Empirical/quantitative	Increase of shareholder wealth ^a Private benefits of managers (agency problem)	Profitability and personal benefits
7	Stein	1997	Journal of Finance	Conceptual/qualitative	Lower cost of capital through internal capital markets with lower information asymmetry	Profitability
8	Palich/Cardinal/Miller	2000	Strategic Management Review	Empirical/quantitative	Aspiration to create market power	Profitability
9	Hadlock/Ryngaert/Thomas	2001	Journal of Business	Empirical/quantitative	Financing/equity issuing benefits	Profitability
10	Denis/Denis/Yost	2002	Journal of Finance	Empirical/quantitative	Private benefits of managers ^b (agency problem)	Personal benefits
11	Chiu	2007	Journal of Fin. Mgmt & Analysis	Empirical/quantitative	Corporate risk reduction ^c	Risk reduction

^aThrough (a) overcoming imperfections of external capital markets, (b) tax shield advantages of debt financing and (c) economies of scope.

^bE.g. increased power and prestige, compensation arrangements and personal risk reduction.

^cBy means of hedging cash flow uncertainty.

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increase a firm's market share in its primary domain is limited or exhausted. Accordingly, Ansoff (1958) describes diversification based on a product—market matrix as one of four commonly recognized growth alternatives that a corporation can pursue, the others being market penetration, market development and product development.

In addition to growth aspirations, improvement of profitability by exploiting cost advantages, synergies, general management skills and parenting advantage, on the one hand, and market power-related mechanisms (Montgomery 1994; Palich et al. 2000), on the other, is frequently mentioned within the literature as another motive for diversification. Servaes (1996), Stein (1997), as well as Hadlock et al. (2001), for instance, highlight the lower cost of capital of diversified firms as a reason for diversification. Whereas Hadlock et al. (2001) provide empirical evidence that equity issues (in the external market) are evaluated more positively by the capital market for diversified firms than for focused Stein (1997) and Servaes (1996) argue for higher efficiency of internal capital markets of diversified firms as compared with external capital markets (similarly, Williamson 1979). Goold and Luchs (1993) propose that the major justification – and thus the primary motive – for the emergence of diversified firms in the late 1950s was the hypothesis general management skills of executives translate into an added value of diversified firms. Similarly, Goold et al. (1998) - advocating their concept of parenting advantage – argue that the corporate centre of diversified corporations could add value to the firm as a whole. The parenting advantage concept can therefore also be included under the diversification objective of profitability enhancement.

Yet another motive for diversification is the minimization of corporate risk. Chiu (2007), for example, refers to the hedging of cash-flow uncertainty as a major motive for diversification. Ansoff (1958) already mentioned the improved stability of sales as a major reason for diversification decisions.

Finally, self-interest of corporate managers is frequently mentioned – especially by advocates of agency theory – as another important motive for corporate diversification. Without repeating the broad, mainly conceptual, literature here, it is argued that corporate managers maximize their own interests at the expense of the shareholders, based on an existing information asymmetry (Jensen 1986; Jensen and Meckling 1976; Shleifer and Vishny 1997). Triggered partly by executive compensation

that is related to company size, a reduction of the managerial risk due to diversified investments and increased power and prestige through 'empire-building', some corporate managers are assumed to diversify to serve their own interests (Denis *et al.* 2002; Servaes 1996).

The variety of reasons and motives for corporate diversification discussed in the academic literature indicates that the evaluation and measurement of the benefit and value of diversification are more complex than they might seem at first glance. Depending on the respective motives behind the diversification decisions, diversification may be beneficial for some corporations while reducing competitiveness for others. Furthermore, there are additional concerns regarding the usefulness of the academic debate on diversification motives. While one may argue that different motives may be used and tested as contingency factors regarding the diversificationperformance link, our review does not confirm such a use. In addition, some of the diversification motives suggested in the scientific literature (e.g. 'empirebuilding' by risk-averse, opportunistic managers) lack empirical examination.

While strategic motives for corporate diversification are, as a rule – with the exception of managerial self-interest – related to aspects that lead to competitive advantage, diversification also has to bear costs. Most prominent co-ordination and monitoring costs mount, while synergies and parent advantages dwindle away as more and more unrelated businesses have to be co-ordinated by corporate managers (e.g. Lamont and Polk 2002; Palich *et al.* 2000). Thus, the relationship between corporate diversification and corporate performance is determined by a set of relatively complex cost and benefit effects.

Assessing the unambiguousness and validity of diversification—performance studies

Research on the diversification—performance link is a domain within the field of strategic management theory which has attracted broad attention over the years (Chatterjee and Wernerfelt 1991; Ramanujam and Varadarajan 1989). Various authors from different disciplines, mainly financial economics and management, have analysed the diversification—performance link at large. A closer look reveals both similarities and important differences between these studies. With regard to CPA, the important question arises as to whether these empirical studies unambiguously prove an economic disadvantage of

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corporate diversification, as in that case CPA would become obsolete - at least from a theoretical perspective. We therefore briefly review relevant empirical studies. We do not intend to provide a comprehensive review of the topic,² but to elaborate the need for further research owing to striking inconsistencies between the various results. As we argue that these inconsistencies may be the result of diverging operationalization of key variables, we analyse studies relevant in this respect first.

The impact of different diversification measures. Generally, there are two different approaches to operationalizing corporate diversification: categorical and continuous measures. While categorical measures classify firms into one of several types of diversification, continuous measures position a firm on a continuous scale indicating its relative degree of diversification (Robins and Wiersema 1995). A major deficiency of the first measure is the lack of objectivity due to the low level of standardization of the underlying information, leading to a subjective analysis and classification process (Rumelt 1974). Continuous measures offer two important advantages that make them very attractive for quantitative research: they provide variables at a higher level of measurement, and they use (secondary) data classified according to standardized categories (Robins and Wiersema 1995), e.g. 'standard industrial classification' (SIC) codes. The manifold continuous measures proposed in the academic literature range from simple summations of the number of products or segments to measures assigning weightings to the relative importance of each of the corporation's products or segments (Jacquemin and Berry 1979). The major criticism of such measures (e.g. SIC based) is the fact that these codes offer only limited information regarding strategic interdependencies (e.g. synergies) that are important for the efficiency of a multi-business firm (Robins and Wiersema 2003). In its simplest form, the continuous measure merely counts the number of SIC codes, thus neglecting any information on the relative importance, e.g. revenue or staff distribution, of individual business units. This may result in an exaggeration of the degree of overall diversification in the case of numerous, relatively small business units (Varadarajan 1986). In order to eliminate this deficiency,

Varadarajan (1986) and others propose to apply more sophisticated indices which use weighted average measures and take into account the relative importance of each SIC segment to the particular company. The three most common diversification indices the Herfindahl index, the entropy measure concentric index - differ in the way they weight the individual business units. The Herfindahl index employs the respective size of each business unit (or SIC segment) as a weighting factor. As a consequence, large business units have a strong influence on the degree of diversification. Jacquemin and Berry (1979) suggest applying the entropy measure, a logarithmic weighting factor, in order to eliminate the bias of the Herfindahl index towards large business units. Finally, the concentric index proposed by Caves *et al*. (1980) applies the relatedness of SIC codes among the industries in which the firm is active as a weighting factor (Wernerfelt and Montgomery 1988).

Beyond the mere difficulty of comparing empirical studies testing the diversification-performance link due to different methods of measuring diversification, Robins and Wiersema (2003) demonstrate that different modes of operationalization may even lead to opposing results.

Application of different performance measures. Diverging operationalization of the diversification performance link does not stop at the independent variable: The dependent variable, i.e. performance, is also measured in different ways. Measures may include profitability indicators such as return on capital, return on equity and return on assets (Chatterjee and Wernerfelt 1991; Itami et al. 1982; Markides 1995; Rumelt 1974, 1982), growth measures such as the growth rates of sales or earnings (Itami et al. 1982; Kim et al. 1989), and risk parameters (Itami et al. 1982). In addition to these accounting-based indicators, performance is frequently measured in terms of market value of the corporation (e.g. Fauver et al. 1999; Lamont and Polk 2002; Villalonga 2004; Wernerfelt and Montgomery $1988).^{3}$

²Comprehensive reviews of the diversification–performance link have been provided, for example, by Goold and Luchs (1993), Martin and Sayrak (2003), Palich et al. (2000) and Ramanujam and Varadarajan (1989).

³We are grateful for the comment of a reviewer, who emphasizes the fact that, besides studies that investigate the direct link between product diversification and financial performance, other researchers and studies have checked for indirect performance effects by examining the relationship between diversification and investments in R&D, i.e. product innovation (e.g. Baysinger and Hoskisson 1989; McEachern and Romeo 1978).

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Variations in the operationalization of the independent as well as the dependent variable of different diversification—performance studies may play an important role in explaining inconsistent and partly contradictory results that make generalizations difficult and obstruct comparability (Martin and Sayrak 2003).

Implication 1: Inconsistent findings regarding the performance impact of diversification. A review of academic contributions that empirically study the link between corporate diversification and firm performance shows that there is strong ambiguity not only in the measurements of the underlying dependent and independent variables, but also in the results of the correlation itself (see Table 2). While a few studies have proved a positive correlation between diversification and performance (e.g. Rumelt 1974, 1982), other studies yield results showing an inverse relation between these two factors (e.g. Markides 1995). A third group of studies concludes that diversification may have positive and negative performance impacts. According to the findings of Kim et al. (1989), for instance, the impact of diversification on corporate profit varies, depending on the extent of a firm's international market diversification. Earlier studies of Itami et al. (1982), as well as a more meta-analysis of 55 previously published studies by Palich et al. (2000), suggest that there is a curvilinear, 'inverted U-shaped' relation between the degree of diversification and profitability. It must therefore be acknowledged that, despite more than forty years of empirical research, the relationship between diversification and firm performance is still relatively vague (Grant 2008; Markides and Williamson 1994).

Implication 2: Inconsistent findings regarding the market value impact of diversification. Similar to the diversification—performance studies described above, empirical studies analysing the impact of diversification on market value also yield ambiguous results (see Table 3). The hypothesis that diversification negatively impacts the market value of corporations (i.e. 'conglomerate discount') has found broad acceptance in the academic literature. Several empirical studies provided support for this hypothesis (e.g. Berger and Ofek 1995; Best et al. 2004; Billet and Mauer 2003; Denis et al. 1997, 2002; Lamont and Polk 2002; Lang and Stulz 1994; Lins and Servaes 1999; Servaes 1996; Wernerfelt and

Montgomery 1988). However, there is also empirical evidence for the opposite hypothesis, i.e. the existence of conglomerate premiums depending on various contingency factors and time periods researched (e.g. Fauver et al. 1999; Klein 2001; Villalonga 2004). Furthermore, other researchers even doubt the existence of any causality between diversification and market value (Campa and Kedia 2002; Mansi and Reeb 2002). While the latter show that lower values were attached to diversified firms than to focused firms, they could not find evidence that this discount was caused by a diversification strategy. Hence, there is no unequivocal evidence that the stock market 'punishes' all conglomerates with a valuation discount. Furthermore, as market value is influenced by the expectations of the market participants, i.e. shareholders and analysts, the existence of self-fulfilling prophecies cannot be ruled out.

On the impact of relatedness as key moderating factor. A few studies take into account that different degrees of relatedness between the business units held by a corporation may impact the economic consequences of diversification. While there are many diversification—performance studies which support Rumelt's (1974) original finding that related diversified firms perform better than unrelated ones, i.e. conglomerates (Chiu 2007; Itami et al. 1982; Palich et al. 2000; Rumelt 1982), there is also evidence in support of the opposite result (Chatterjee and Wernerfelt 1991; Michel and Shaked 1984).

While most diversification-performance studies consider the moderating impact of relatedness, only a limited number of conglomerate discount/premium studies do so (see Table 3). For instance, Wernerfelt and Montgomery (1988) and Berger and Ofek (1995) find significantly lower valuation discounts for related diversifiers than for unrelated diversifiers. Similarly, Villalonga (2004) proved a positive impact of relatedness on market value, showing that related diversification yields valuation premiums, whereas unrelated diversification results in conglomerate discounts.

For the purpose of proving the causes of an apparent scholarly disdain of CPA tools, one can refrain from further reviewing the relatedness literature (e.g. types and relevance of relatedness, operationalization and measures), as the fundamental challenge of CPA tools, i.e. the disappearance of multi-business firms, can be refuted owing to a lack of empirical evidence.

	Author	Year	Time period under review	Diversification/performance correlation	Performance measure	Distinction between degree of relatedness	Results of relatedness examination
1	Rumelt	1974		Positively correlated	ROC	Yes	Positive correlation between relatedness and profitability
2	Itami et al.	1982	1963–1973	Dependent on degree of diversification/relatedness ^a	ROC, ROE, growth of sales, growth of earnings, risk	Yes	Positive correlation between relatedness and profitability
3	Rumelt	1982	1976	Positively correlated	ROCI	Yes	Positive correlation between relatedness and profitability
4	Michel/Shaked	1984	1975–1981	Dependent on degree of diversification/relatedness	Sharpe, Treynor and Jenson measure	Yes	Negative correlation between relatedness and profitability
5	Kim/Hwang/Burgers	1989	1982–1985	Varying contingent upon international diversification	Profit growth and stability	No	Related diversifiers only outperform unrelated ones in case of low global market diversification
6	Chatterjee/Wernerfelt	1991	1981–1985	Positively & negatively correlated	ROA	Yes	Under specific circumstances unrelated diversification can also create value
7	Markides	1995	1981–1987	Negatively correlated	ROS, ROE, ROA	Yes	Unrelated-business firms with lower profitability than single-business firms
8	Palich et al.	2000	n/a	Dependent on degree of diversification/relatedness ^a	Several accounting- and market-based measures ^b	Yes	Positive correlation between relatedness and profitability

^aCurvilinear, inverted U-shaped correlation. ^bMeta-analysis of 55 previously published studies.

Table 3. Overview of diversification—market value research

	Author	Year	Time period under review	Discount/premium	Distinction between degree of relatedness	Results of relatedness examination
1	Wernerfelt/Montgomery	1988	1976	Discount	Yes	Related diversifiers outperform unrelated diversifiers
2	Lang/Stulz	1994	1978–1988	Discount	No	_
3	Berger/Ofek	1995	1986–1991	Discount	Yes	Lower discount for related diversifiers
4	Servaes	1996	1961-1976	Discount	No	_
5	Denis/Denis/Sarin	1997	1984-1986 and 1992	Discount	No	-
6	Fauver/Houston/Naranjo	1999	1991–1995	Discount/premium ^a	No	-
7	Lins/Servaes	1999	1992/93 and 1994/95	Discount	No^b	-
8	Klein	2001	1966–1974	Discount/premium ^c	No	-
9	Campa/Kedia	2002	1978–1996	No causality ^d	No	-
10	Denis/Denis/Yost	2002	1984–1997	Discount	No	_
11	Lamont/Polk	2002	1979–1997	Discount	Yes	Negative correlation between unrelatedness ^e and excess value
12	Mansi/Reeb	2002	1988–1999	Insignificant relation ^d	No	-
13	Billet/Mauer	2003	1990-1998	Discount	No	_
14	Best/Hodges/Lin	2004	1987-1998	Discount	No	_
15	Villalonga	2004	1989–1996	Discount/premium ^f	Yes	Related diversification yielding premiums, unrelated diversification yielding discount

^aDiscount in high-income countries; no discount or premium in lower income countries.

^bNo consideration of relatedness because of evidence that there is no effect (referring to Berger/Ofek).

^cDiscount shown in the 1970s; no discount shown in the 1960s.

^dDiscount is proved, but no causality between diversification and discount is doubted.

^eProxied in terms of diversity in industry investment.

^fDiscount for unrelated diversification and a premium to related diversification.

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Conclusion 2: Corporate diversification matters – so do CPA tools

Inconsistencies between empirical results regarding the economic impact of diversification are caused by different factors: First, by the variety of assumptions, operationalization and measurement problems (e.g. Robins and Wiersema 2003) and, secondly, by the conclusion that several other internal and external factors besides the pure degree of diversification have a substantial influence on the economic performance of a multi-business firm, as well as its valuation by different investors. Furthermore, it is proposed that inconsistent findings can be explained by the sensitivity of the results to (a) the measures used to perform the comparisons, (b) the way these measures are normalized in order to facilitate parison across researched companies, and (c) the starting dates of these comparisons (Lang and Stulz 1994). Finally, the existing literature on the diversification-performance link is criticized for its neglect or insufficient consideration of relatedness of the businesses in diversified firms' portfolios (Markides and Williamson 1994). According to the latter authors, there are two reasons why 'there is still considerable disagreement about precisely how and when diversification can be used to build long-run competitive advantage' (p. 149). First, relatedness is not measured appropriately, because the strategic importance and the similarity of the underlying assets are neglected. Secondly, truncated and misleading assumptions of traditional researchers are criticized. Limiting the economic benefits of relatedness to the exploitation of economies of scope ignores the potential for related diversifiers to expand their stock of strategic assets or to build up new ones more quickly and at lower cost than competitors (Markides and Williamson 1994).

As a result of this review, one must conclude that the ongoing interest in and great number of empirical studies analysing the impact of diversification on performance and market value is a sign of open questions rather than of a clear answer or even convergence. So far, there is no evident proof of a general economic inferiority of diversification (internal co-ordination) compared with purely focused companies (external co-ordination). Although relatedness has been identified as a major moderator and curvilinear relationships have been favoured lately (e.g. Palich *et al.* 2000), other studies show the need to examine its general applicability and, moreover, to define and operationalize relatedness more precisely

(e.g. Markides and Williamson 1994). Given the economic relevance of corporate diversification, one must conclude that the management of multibusiness firms, corporate strategy at large and corporate portfolio management are still important and relevant concepts in the domain of strategic management. Consequently, it is worthwhile to advance existing CPA tools further based on legitimate criticism.

Conclusion

Evidence from corporate headquarters and multibusiness firms at large indicates that there is still a need for strategic planning instruments that support strategic decision-making with regard to the allocation of scarce resources to SBUs, the acquisition of new businesses and divestment of others, and the exploitation of synergies and parenting advantage. Predominantly developed by top management consultancies, CPA matrices have been widely applied and have become an essential element in most management education curricula. As this review reveals, the academic debate of CPA and CPA tools was largely limited to criticism based on logical or theoretical reasoning and, to a lesser degree, on empirical verification. After peaking in the early 1980s, relevant publications in leading management journals disappeared, with rare exceptions. Addressing this apparent discrepancy, this contribution seeks to reveal and critically assess underlying causes in order to prove the need for new research initiatives and propose future research initiatives.

One frequently mentioned major reason for the diminishing academic interest in CPA tools is the economic inferiority of internal capital markets of diversified, multi-business firms compared with coordination by external capital markets. Contradicting conventional wisdom, this literature review reveals that there is clear evidence neither of a systematically negative diversification—performance link nor of a curvilinear relationship. Consequently, strategic decision-making regarding the management of a parent firm's portfolio of businesses will remain a relevant strategic management topic as long as multi-business firms persist.

Unsuitability and deficiencies of CPA tools, particularly CPA matrices, may be another major reason for the observed academic disdain. The first part of our comprehensive review of the respective criticism published in leading management journals

shows that most of it applies to other strategic plan-

ning tools, as well, or needs further elaboration.

More importantly, the review reveals a striking reluc-

tance of strategic management thinkers and research-

ers to advance and enhance existing CPA processes

and instruments or to propose superior approaches.

Finally, there has been almost no empirical research

the field of corporate portfolio management and cor-

responding CPA instruments in the future in order to

fill these gaps and provide practitioners with advanced

the inconsistency of existing research results on the

diversification-performance link calls for further

conceptual and empirical research. There is probably

no one best way, i.e. an unequivocal answer to the

general question of whether diversification creates or

destroys value. It therefore seems necessary to inten-

sify the research into the still relatively vague concept

of 'relatedness', as different aspects of relatedness

may impact firm performance differently. Addition-

ally, research regarding important contingencies

beyond relatedness that builds on previous works

investigating, for instance, the impact of the organiza-

tional context (Stern and Henderson 2004) or the

specificity of resources (Chatterjee and Wernerfelt

1991)⁴ seems to provide fruitful avenues to advance

Concerning the actual CPA research, we suggest

starting by understanding the current practices and

needs of corporate practitioners. Questions regarding

the current use of CPA tools, the embedding of the

CPA process into other strategic processes, the

relevant criteria for evaluating business units and

their interaction, and the benefits, shortcomings and

areas for improvement of existing CPA concepts

and instruments should be in the focus of these initial

research initiatives. A sound understanding of the

actual requirements of practitioners provides a valid

starting point for the necessary academic analysis of

established CPA concepts and their advancements,

and the results should be compared with existing

emerging organizational and strategic theories

order to draw relevant conclusions.

knowledge about corporate diversification.

addition.

We therefore propose to intensify the research in

on CPA practices for more than two decades.

methods to support and improve future

decision-making at the corporate level. In

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reference.

⁴We wish thank one of the reviewers for this important

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