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Organizational Ambidexterity

Implications for the Strategy-
Performance Linkage

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Springer Gabler

RESEARCH

1. Introduction

1.1. Research Question

When companies develop a strategy, they typically analyze environmental and industrial conditions, assess internal strengths and weaknesses, and define a strategic position based on competitive advantage.¹ This process follows an alignment of the value chain according to the selected business model and setting of financial targets as well as budget allocations. For example, if an organization aims to become a dominant player in the mass market, it needs to focus on efficiency (exploitation) and cost reduction based on centralized decision making. If a firm instead aims to excel by constantly harvesting new opportunities and expanding its existing markets, it needs to focus on flexibility (exploration) and product innovation, which require decentralized decision making.²

The underlying logic of a company that uses such a rational, decision-oriented process to formulate and implement its strategy has its roots in contingency theory,³ commonly known as “the concept of fit.”⁴ This theory’s central paradigm states that organizational survival depends on fitting a firm’s characteristics, such as its structure, to contingencies reflecting the organization’s situation, including its environment,⁵ size,⁶ and, especially, its strategy.⁷ The better a firm manages to create and maintain a fit between its selected strategy and the resulting appropriate structure, the better it will perform.⁸

Because any selected strategy has only a limited number of potentially beneficial structures,⁹ researchers gradually developed ideal combinations of strategy and structure and saw these “best practice typologies” as among the most important

¹ For this and the following see Kim/Mauborgne (2009), p. 73.

² Doty/Glick (1994), pp. 231–236.

³ Donaldson (2001), p. 1

⁴ Venkatraman (1989), p. 423.

⁵ Burns/Stalker (1961), p. 121.

⁶ Child (1975), p. 19.

⁷ Chandler (1962), p. 4.

⁸ Doty/Glick/Huber (1993), p. 1196–1199.

⁹ Miles/Snow (1984), pp. 10–16.

insights from research in the field of strategic management.¹⁰ These typologies include very well-known concepts, such as Michael Porter's set of "generic strategies" or Miles and Snow's "strategic archetypes," which have shaped strategic research and practice for the past 30 years.¹¹ For companies selecting and implementing one of these ideal types, this means consequently aligning structure and processes according to a selected strategic goal.¹² However, most of these developed typologies consist of opposite poles—"an either-or situation, for example, where one alternative must be selected over other attractive alternatives."¹³ Unsurprisingly, research confirms that most companies tend to implement a focused profile when aligning strategy and structure¹⁴.

While many empirical studies confirm this idea,¹⁵ by the mid-1990s, firms had perceived increasing competition, and the accelerating pace of change led researchers to start thinking critically about these typologies' underlying logic.¹⁶ Moreover, today's companies in diverse industries such as airlines, media, or consumer goods see their markets invaded by new competitors using strategies different from those of the established players.¹⁷ To cope with these challenges, today's companies need both; on one hand, they leverage their current competencies and exploit existing products and services, and, on the other, they build new capabilities to develop innovative solutions.¹⁸

Therefore, instead of selecting and maintaining a focus on either efficiency or flexibility, these firms balance resource allocation and become so-called ambidextrous organizations.¹⁹ This balancing act, however, offers one of the toughest of all managerial challenges because it requires "the ability to simultaneously pursue both incremental and discontinuous change."²⁰

¹⁰ Dobni/Luffman (2003), p. 577.

¹¹ Porter (1985); Miles/Snow/Meyer/Coleman (1978).

¹² Kim/Mauborgne (2009), p. 73.

¹³ Cameron (1986), p. 545.

¹⁴ Zahra/Pearce (1990), p. 759.

¹⁵ Venkatraman (1990), pp. 19–41.

¹⁶ Grant (1996), p. 375; Volberda (1996), p. 359.

¹⁷ Markides/Oyon (2010), p. 25.

¹⁸ Benner/Tushman (2003), p. 238.

¹⁹ O'Reilly III/Tushman (2004), pp. 74–77.

²⁰ Tushman/O'Reilly III (1996), p. 24.

The literature describes the challenge of becoming an ambidextrous organization as a “central paradox of administration” because explorative and exploitative activities require substantially different resources in an organization;²¹ actions required for short-term success often create conditions for long-term failure, and vice versa.²² Unsurprisingly, despite investing significant assets and effort, many companies remain unsuccessful in their efforts and fail in this regard.²³

Recently, researchers have moved away from the classical, focused paradigm of the concept of fit and concentrated on solving this paradoxical phenomenon to support companies on their way to becoming successful ambidextrous organizations.²⁴ Hence, the field of organizational ambidexterity has become one of the most flourishing battlegrounds of management thought. Although current studies point out different ways to become ambidextrous,²⁵ they assume that organizations that increase their organizational ambidexterity will achieve a high level of sustainable performance²⁶ as they become efficient in managing today’s business demands while also showing the flexibility they need to adapt to new challenges and opportunities in their environment.²⁷

Both the developments in practice and the increase in research on organizational ambidexterity show that despite the fact that scholars in the mid-1990s thought they knew most of what they needed to know about strategy, classical ideas and statements about the fit between strategy and structure have come under fire.²⁸ More precisely, although the concept of fit and the idea of organizational ambidexterity share some common understanding, they lead, ultimately, to fundamentally different recommendations for a company. Well-known management scholars developed ideal combinations of strategy and structure with a clear focus on either efficiency or innovation, and those scholars see striving for a

²¹ He/Wong (2004), pp. 481–494.

²² Tushman/O'Reilly III (2002), p. 8.

²³ Markides/Oyon (2010), p. 25.

²⁴ For this and the following see Raisch/Birkinshaw/Probst/Tushman (2009), pp. 685–695.

²⁵ Raisch/Birkinshaw (2008), pp. 375–377.

²⁶ He/Wong (2004), pp. 481–494; Lubatkin/Simsek/Yan/Veiga (2006), pp. 646–672; Simsek/Heavey/ Veiga/Souder (2009), pp. 864–894.

²⁷ Benner/Tushman (2003), pp. 238–240; Gibson/Birkinshaw (2004), pp. 209–212.

²⁸ Collis/Montgomery (2008), p. 140.

perfect fit as a requirement for superior performance.²⁹ Research on ambidexterity, in contrast, clearly postulates the creation of both explorative and exploitative activities as the only way to maintain high performance in the long run.³⁰

While much empirical support particularly sustains the alignment of strategy and structure according to a certain focus, first empirical studies confirm the logic of organizational ambidexterity as well. Thus, as evidence exists for both points of view, this dissertation aims to broaden the literature in the field of strategic management and provide company executives with up-to-date insights on the following key question:

Is the creation of a fit between a firm's strategy and structure based on a focus on either explorative or exploitative activities or the creation of ambidextrous capabilities the right choice to ensure a firm's success?

To answer this key question in the most detailed way, this dissertation will cover several related aspects. More precisely, it answers these questions:

- Do insights gleaned from decades of research on aligning strategy and structures according to a dedicated focus continue to be valid?
- Given the challenges to transitioning to ambidexterity, does the creation of ambidextrous capabilities really lead firms to superior performance?
- What options exist for a company to build ambidextrous capabilities and avoid failures during the transformation process?

1.2. Structure and Goal of the Thesis

To answer these research questions, the author divided this dissertation into five parts:

(A) Introduction, (B) Literature Review, (C) Synthesis, (D) Research Design and Analyses, and (E) Conclusion (Fig. 1).

²⁹ Besides these two ends of a continuum—efficiency and flexibility—for example, Porter (1998), pp. 17–19, discusses the challenge of simultaneously managing two different business models in the same industry. Furthermore, Miles et al. (1978), pp. 553–557, introduced the analyzer strategic type, combining the behavior of efficient and flexible firms.

³⁰ Tushman/O'Reilly III (1996), pp. 24–28.

2. The Concept of Fit

Having its roots in the seminal contributions of strategic management research, the “concept of fit” affirms a company’s management options, as there is more than just one best way to manage a firm³³. Scholars have consequently identified various ways to achieve a competitive advantage by aligning different organizational characteristics.³⁴ Thus, to properly introduce the concept of fit in a structured way, this section will first explain its foundations and the underlying contingency theory.

Many other fields of management research have applied the idea of fit, as in analyzing the influence of managerial characteristics,³⁵ information technology,³⁶ or management control systems.³⁷ However, the second part of this chapter focuses especially on developments regarding a fit between strategy and structure. As researchers see only a limited number of potential strategy and structure combinations as effective,³⁸ this part of the chapter emphasizes the most common best practices profile, showing companies how to create and maintain the perfect fit.³⁹

While the underlying fundamentals, such as fitting a company’s strategy and structure to a selected focus (independent from the view the author has adopted), unify the studies in the field by different conceptualizations, testing schemes have led to inconsistent results.⁴⁰ Hence, in the third part of this chapter, literature and empirical findings from the past decades, applying these different approaches are

³³ Donaldson (2001), pp. 1–3.

³⁴ Teece/Pisano/Shuen (1997), p. 509.

³⁵ See Kerr/Jackofsky (1989), p. 157, who discuss the development and selection of managers as alternative means to achieving alignment between managers and strategy.

³⁶ See Henderson/Venkatraman (1999), who recognize the increasing strategic role of information technology and therefore discuss the alignment of business and IT strategy. See also Hsin-Lu/Kai/Iris (2008), who investigate IT-fit within the electronic procurement systems of Chinese high-tech companies.

³⁷ Bruggeman/An Der Stede (1993), pp. 206–207.

³⁸ Miles/Snow (1984), pp. 10–16. The discussion about the fit between structural forms and particular strategies gained increasing popularity from the 1970s to the 1990s onward and represents the most important sub-stream of contingency theory.

³⁹ Ghoshal (2003), p. 109; Hambrick (2003), p. 115.

⁴⁰ Venkatraman (1989), p. 423.

3. Organizational Ambidexterity

As early as 1967 Thompson discussed the need for a firm to strive for certainty and flexibility.³⁰⁵ Despite the fact that Miles and Snow's analyzer type, for example, also shows a way to cope with this paradox situation, over the past decades most companies have tended to implement strategies with a clear focus.³⁰⁶ Nevertheless, due to the weaknesses and criticism of the focused approaches as highlighted in the previous chapter, especially in the early 1990s, scholars more and more switched back to ambidextrous thinking. Moreover, an accelerating pace of change in the markets and increasing global competition created the practical need for different approaches to the existing ones.³⁰⁷ Hence, while several years ago companies tended to implement strategies with a focus on either efficiency or flexibility,³⁰⁸ today there exists the theoretical idea as well as the practical need to combine both.³⁰⁹ A number of articles refer to this described development; while in 2004 only 10 studies discussed this paradox, the number rose to more than 80 in 2009.³¹⁰ Unsurprisingly, research on organizational ambidexterity only recently emerged for consideration as a promising paradigm.³¹¹

While the interest in antecedents and consequences of organizational ambidexterity has increased, disagreement regarding the nature of the construct has also risen.³¹² Hence, as a first step, the main underlying logic for this study is defined. As researchers borrowed a considerable amount of knowledge from different fields of literature, a second step analyzes the contributions from the different areas of research.³¹³ For a final evaluation of the latest conceptual and empirical work on this topic, especially relevant for the field of strategic

³⁰⁵ Thompson/Zald/Scott (1967), p. 190.

³⁰⁶ March (1991), p. 72.

³⁰⁷ Kim/Mauborgne (2009), p. 74; Grant (1996), p. 375; Volberda (1996) p. 359.

³⁰⁸ March (1991), p. 72.

³⁰⁹ Kim/Mauborgne (2009), p. 74.

³¹⁰ Raisch et al. (2009), p. 685.

³¹¹ Raisch/Birkinshaw (2008), p. 396.

³¹² Simsek (2009), p. 589.

³¹³ See, e.g., Jansen (2005); Raisch/Birkinshaw (2008), pp. 377–380. Studies on technological innovation, technological change, organizational learning, organizational adaptation or change, organization theory or design and strategic management have discussed these extensively.

management, this study uses Simsek's recently developed typology as a framework for clustering the available studies.³¹⁴

3.1. Theoretical Foundations

While seminal contributions in the field of strategic management have outlined the idea of organizational ambidexterity,³¹⁵ recent literature in the field of strategic management uses March's 1991 distinction between exploration and exploitation as a fundamental basis, derived from the field of organizational learning.³¹⁶

Figure 13: Research on Exploration and Exploitation

Research Stream	Related distinction	Example
Organizational learning	Refinement search and innovative search	March (1991); Levinthal & March (1993)
Technological innovation	Incremental and radical innovation	Abernathy & Clark (1985); Benner & Tushman (2003)
Technological change	Competence enhancing and competence destroying	Anderson & Tushman (1990)
Organizational change	Evolutionary and revolutionary change	Miller & Friesen (1980); Tushman & O'Reilly (1996)
Organizational theory	Certainty and flexibility	Burns & Stalker (1961); Thompson (1967)

Source: On the basis of Jansen (2005), p. 21.

More precisely, he observed that firms tend to concentrate either on capabilities for exploitation or exploration, while he postulates that organizations need both: to learn through experience by refining their existing capabilities (exploitation) and by creating variety in experience through experimenting, innovating, and risk taking

³¹⁴ Simsek et al. (2009), p. 868.

³¹⁵ See, e.g., Duncan (1976) Thompson et al. (1967).

³¹⁶ March (1991), p. 72; Levinthal/March (1993), p. 95.

(exploration).³¹⁷ Nevertheless, beside this contribution, various scholars have discussed the tension between exploration and exploitation in organizations, as shown in Figure 13.

3.1.1. Exploration and Exploitation

From the perspective of organizational learning, exploitation captures activities such as efficiency, production, selection, and execution.³¹⁸ Organizations that pursue exploitative activities refine their capabilities, apply current knowledge, and focus on current activities in existing domains.³¹⁹ Hence, exploitative innovations build on existing knowledge and reinforce existing skills, processes, and structures.³²⁰ In the end, exploitative activities create reliability in experience through refinement and routinization of knowledge.

Interpreted in a broader, management-oriented way, exploitation refers to incremental innovations of existing products and operations (or more generally, competencies) to meet the needs of existing customers.³²¹ This implies the use and the expansion of existing knowledge and skills and finally leads to improved established designs, the expansion of existing products and services, or the increased efficiency of existing distribution channels.³²² Thereby, application of current knowledge improves and exploits existing products and services, for example, to generate profits in the short run.³²³

While certain organizations focus on exploitative activities to improve and utilize existing competencies, others foster explorative activities and thus create distinctly different competencies. Variation, experimentation, flexibility, risk-taking, and innovation characterize such an explorative focus.³²⁴ Therefore, departing from existing knowledge and new knowledge created with the aim of developing new

³¹⁷ March (1991), p. 72–73.

³¹⁸ March (1991), p. 71.

³¹⁹ Holmqvist (2003), p. 99.

³²⁰ For this and the following see, e.g., Holmqvist (2004), pp. 99–100.

³²¹ Benner/Tushman (2003), p. 243; Jansen (2005), p. 19.

³²² Abernathy/Clark (1985), p. 5.

³²³ March (1991), p. 72; Tushman/O'Reilly III (1996), p. 11.

³²⁴ March (1991), p. 72.

technologies, products, markets, business models or competencies builds the base for growth and a firm's cash flow in the long run.³²⁵ Hence, the following interprets exploration as the fostering of radical innovations designed to meet the needs of emerging customers and markets.³²⁶ This includes the offer of new products, creation of new markets, and development of new distribution channels.³²⁷

As succinctly summarized by March, the distinction between explorative and exploitative activities captures a number of fundamental differences in firm organization and behavior. For a clearly arranged comparison of the main characteristics of both innovation types, see Figure 14. Traditionally, most organizations have chosen to concentrate on either exploitation or exploration.³²⁸ To take such a focused approach seems a viable option as both require substantially different capabilities in the organization³²⁹ and are conceptually easier to implement on their own.³³⁰ While exploitation-oriented firms aim to achieve better efficiency by focusing on production and routinization, for example,³³¹ exploration-oriented firms aim to create flexibility in the organization through an open approach to learning such as experimenting and embarking into riskier innovation projects.³³² However, a dominant focus on either exploitation or exploration may induce a company to fail in the market place and thus a sole focus on one activity or the other apparently does not offer satisfying results.³³³ March reported that while the exclusive pursuit of exploitative activities may result in short-term performance enhancements due to increased efficiency, it ultimately leads to a competency trap.³³⁴ That is, due to the focus on the current environment (and non-adaptation to significant environment changes), skills and knowledge get

³²⁵ Tushman/O'Reilly III (1996), p. 11.

³²⁶ Benner/Tushman (2003), p. 243; Danneels (2002), pp.1095–1097.

³²⁷ Abernathy/Clark (1985), p. 5.

³²⁸ Smith/Tushman (2005), pp. 522–536.

³²⁹ He/Wong (2004), pp. 481–494.

³³⁰ Tushman/O'Reilly III (1996), pp.8–30.

³³¹ Levinthal/March (1993), pp. 95–112.

³³² Cheng/Van De Ven (1996), pp. 593–614; Gibson/Birkinshaw (2004), pp. 209–226; McGrath (2001), pp.118–131; Tushman/O'Reilly III (1996), pp.8–30.

³³³ Referring to the respective shortcomings described before.

³³⁴ Levinthal/March (1993), p.106; Leonard-Barton (1992), p.39.

outdated over time and thereby long-term performance diminishes.³³⁵ Conversely, a sole focus on exploration does not lead to a firm's success in the long-run, since constant renewal of the knowledge stock can lead to a failure trap—an endless cycle of search and unrewarding change. This occurs because a firm may become oversensitive to short-term variations and spend scarce resources that often pay back very little.³³⁶

Figure 14: Characteristics of Exploration and Exploitation

	Exploitation	Exploration
Definition	Incremental development designed to meet the needs of existing customers	Radical developments to meet needs of emerging customers
Tasks	Refinement, efficiency, implementation, execution	Search, experimentation, variation, flexibility
Knowledge base	Existing knowledge	New knowledge, departure from existing knowledge
Outcomes	Improvements to existing competencies	Development of new competencies
Strategic intent	Profits, costs, efficiency	Innovation, growth, adaptability
Time horizon	Short-term	Short-term

Source: On the basis of O'Reilly III/Tushman (2004), p. 80.

3.1.2. Organizational Ambidexterity

Given the described shortcoming of focusing on either explorative or exploitative activities, March called for the pursuit of ambidexterity, the simultaneous creation of exploitation and exploration, and argued that achieving ambidexterity has a

³³⁵ For this and the following see Levinthal/March (1993), p.106.

³³⁶ Volberda/Lewin (2003), p. 2127; Levinthal/March (1993), p. 106.

positive impact on performance.³³⁷ However, this idea creates a rather complex challenge³³⁸ for firms, as it leads to the dilemma of allocating resources to both exploitative and explorative activities.³³⁹ Establishing such a balance might prove difficult as exploration and exploitation activities require substantially different, often conflicting, structures, processes, capabilities and cultures.³⁴⁰ Exploratory units are supposed to be small and decentralized, having loose processes and an open culture, whereas exploitative units tend to be larger and rather formal and centralized, having tight processes and cultures.³⁴¹

Moreover, as most firms have only limited resources to invest, a trade-off arises between exploitation and exploration³⁴² and finally creates what Thompson (1967) called the “central paradox of administration.”³⁴³ Hence, it remains crucial for a firm to “engage in enough exploitation to ensure [the organization’s] current viability and, at the same time, to devote enough energy to exploration to ensure its future viability,”³⁴⁴ or, expressed differently, to align and maintain efficiency in managing current business demands while at the same time adapting to changes in the environment³⁴⁵ to achieve success in the long run.³⁴⁶

Thus, ambidexterity represents a combination of the two and describes the behavior of an organization that succeeds in achieving a high level of exploitation and exploration simultaneously,³⁴⁷ thus managing conflicting demands in its task environment. This allows the organization to efficiently manage today’s business demands, while also showing the needed flexibility to adapt to new challenges and opportunities in the environment.³⁴⁸ Still being quite rare, first empirical studies on

³³⁷ March (1991), pp.71–87.

³³⁸ Raisch/Birkinshaw (2008), pp. 375–409.

³³⁹ Floyd/Lane (2000), pp. 154–155; March (1991), p. 71.

³⁴⁰ Tushman/O’Reilly III (1996), p. 24; Sheremata (2000), p. 389.

³⁴¹ Benner/Tushman (2003), p. 247.

³⁴² Markides/Chu (2008), p. 5

³⁴³ Thompson et al. (1967), p. 190.

³⁴⁴ Levinthal/March (1993), p.105.

³⁴⁵ Duncan (1976), p. 172; Tushman/O’Reilly III (1996), p. 24.

³⁴⁶ March (1991), p. 71.

³⁴⁷ Gibson/Birkinshaw (2004), pp. 209–226; Simsek (2009), pp. 597–624; Tushman/O’Reilly III (1996), pp.8–30.

³⁴⁸ Benner/Tushman (2003), pp. 238–256; Gibson/Birkinshaw (2004), pp. 209–226.

ambidexterity show that organizations that achieve a high-level balance between both will find more success than those companies that do not balance the two.³⁴⁹

3.2. Organizational Ambidexterity in Strategic Management Research

As the overall idea of ambidexterity addresses the behavior of organizations' management, numerous scholars from different specific fields, such as technology and innovation management,³⁵⁰ organizational adaption,³⁵¹ organizational design,³⁵² and organizational behavior³⁵³ have investigated how to achieve such an organizational format.³⁵⁴ Duncan suggested that organizations should switch between different organizational structures during phases of exploration and exploitation—one suited for the initiation and one for the implementation stage of the innovation process.³⁵⁵ Later, Tushman & O'Reilly suggested that organizations should establish structurally independent units, each with its own processes, structures, and cultures integrated into the existing management hierarchy.³⁵⁶ Gibson and Birkinshaw referred to the features of an organization's context (and the individuals within) to create organizational ambidexterity.³⁵⁷ Regardless of the manner of creating an ambidextrous organization, scholars generally believe the outcome enhances performance.³⁵⁸

To structure these different approaches, Simsek et al. reviewed the topic and constructed a high-level typology that defines four archetypes of ambidexterity by mapping the most salient concepts, antecedents, and outcomes to focus and align the existing research.³⁵⁹ Specifically, they identified 49 studies concerning the

³⁴⁹ He/Wong (2004), pp. 481–494; Lubatkin et al. (2006), pp. 646–672.

³⁵⁰ Ambos/Schlegelmilch (2008), p. 189; He/Wong (2004), p. 481; Markman/Siegel/Wright (2008), p. 1401; O'Reilly III/Tushman (2004), p. 74.

³⁵¹ Brown/Eisenhardt (1997), pp. 1–3; Levinthal/March (1993), p. 95.

³⁵² Adler/Goldoftas/Levine (1999), p. 43; Benner/Tushman (2003), p. 238.

³⁵³ Birkinshaw/Gibson (2004), p. 204.

³⁵⁴ Raisch et al. (2009), pp. 685–695.

³⁵⁵ Duncan (1976), p. 178–179.

³⁵⁶ Tushman/O'Reilly III (1996), p. 24; O'Reilly III/Tushman (2004), pp. 75–76.

³⁵⁷ Gibson/Birkinshaw (2004), p. 209.

³⁵⁸ See e.g., Gibson/Birkinshaw (2004), p. 219; He/Wong (2004), p. 491; Lubatkin et al. (2006), p. 665.

³⁵⁹ For this and the following see Simsek et al. (2009). For their review, they searched multiple databases (ABI/Inform Global, Academic OneFile, Web of Science, and Google Scholar) using

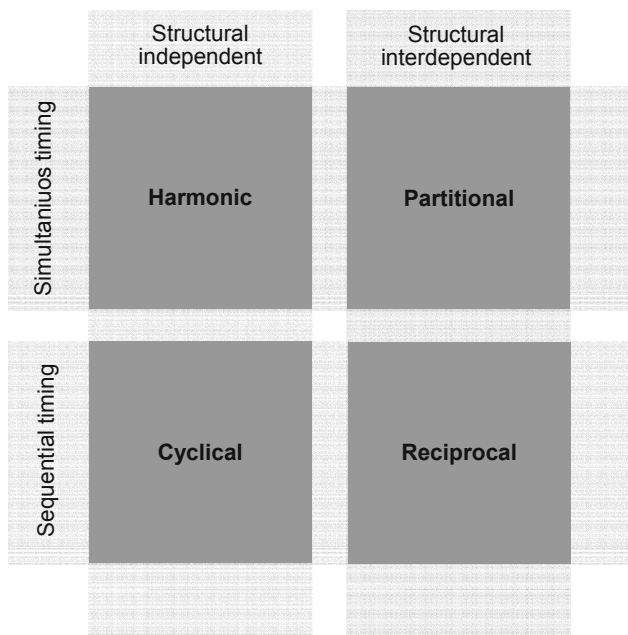
antecedents and the outcomes of organizational ambidexterity. Out of these 49 publications, 25 describe antecedents (9 theoretical, 16 empirical studies) of organizational ambidexterity and 24 focus mainly on its outcomes (3 theoretical, 21 empirical studies). Building on these papers, the authors created two distinct and overarching dimensions underlying the various existing concepts of ambidexterity in strategic management literature.

The first dimension, "Temporal Dimension," captures the extent to which firms pursue ambidexterity simultaneously or sequentially over time. The second dimension, "Structural Dimension," refers to the ongoing discussion about realizing ambidexterity within an independent organizational unit (e.g., a separate business unit) or within independent units (e.g., divisions of a multidivisional corporation). These two dimensions create a two-by-two matrix that delineates four types of ambidexterity: cyclical, reciprocal, harmonic, and partial ambidexterity (Fig. 15).

This typology encompasses the various approaches described in the literature on organizational ambidexterity to date. The following section will introduce each field of organizational ambidexterity. Therefore, theoretical underpinnings and empirical results are presented. If available, especially empirical findings regarding an influence on the firm's financial performance are highlighted. To ensure completeness, the author performed a cross-check among the identified results before sorting the results according to the four fields.

the key words *organizational ambidexterity*, *ambidextrous organizations*, *firm ambidexterity*, and *ambidextrous firms* and identified 49 relevant studies.

Figure 15: Simsek et al.'s Four Fields of Ambidexterity Research



Source: On the basis of Simsek et al. (2009), p. 868.

3.2.1. Cyclical Ambidexterity

Based on the literature on punctuated equilibrium,³⁶⁰ cyclical ambidexterity describes organizations having long periods of exploitation interrupted by detached periods of exploration.³⁶¹ Hence, sequentially allocating resources and time-wise exploration and exploitation creates cyclical ambidexterity. Consequently, this type of ambidexterity requires a system of temporal cycling in which the organization falters from long periods of exploitation to short terms of exploration.³⁶² Gupta et al. considered punctuated equilibrium appropriate when

³⁶⁰ Gersick (1991), p. 10 ff.

³⁶¹ Simsek et al. (2009), pp. 882–884.

³⁶² For this and the following see Gupta/Smith/Shalley (2006), pp. 695–703.

exploration and exploitation exist within the same domain and the level of analysis remains within a single organizational unit.

Generally, the punctuated equilibrium model puts more emphasis on explorative than exploitative change, hence the changes due to the sequence of explorations seem quite radical and competence destroying.³⁶³ In general, the idea of temporal separation in the context of organizational ambidexterity is not new.³⁶⁴ Duncan first described such a process; specifically he mentioned “dual structures” that allow an organization to switch between two kinds of structures during exploration and exploitation phases—one suited to initiation and one to the implementation stage of the innovation process.³⁶⁵ Thereby, the units pursue sequentially (rather than simultaneously) either exploratory activities, often with decentralized structures that facilitate radical innovations in products and technologies, or exploitative activities, often with centralized structures that support efficiency, and thereby allocate resources to the respective task.³⁶⁶ This method allows a better fit between organizational structure and the actual requirements of the task environment.³⁶⁷

Several scholars have demonstrated the switch from exploitative to explorative activities of companies.³⁶⁸ Recent research outcomes show that cyclical ambidexterity is mostly associated with innovative outcomes, such as product innovations.³⁶⁹ Technologically focused units having these rounds of exploration and exploitation are designed to pursue product innovations and increase their performance by being innovative.³⁷⁰ Research shows that patterns of investment in technological-oriented firms follow an S-shaped curve.³⁷¹ The beginning of the curve reflects the early stage efforts and its required investments moving toward a dominant design.³⁷² An increase in production and an exploitation of the innovation follows. This sequence of punctuated movements between explorative and

³⁶³ Simsek (2009), p. 603.

³⁶⁴ Siggelkow/Levinthal (2003), pp. 650–652.

³⁶⁵ Duncan (1976), pp. 178–179.

³⁶⁶ Simsek et al. (2009), p. 882.

³⁶⁷ McDonough III/Leifer (1983), p. 727.

³⁶⁸ See, e.g., Rothaermel/Deeds (2004), p. 203.

³⁶⁹ Han/Celly (2008), p. 335.

³⁷⁰ Atuahene-Gima (2005), p. 61.

³⁷¹ Tushman/O'Reilly III (1996), p. 13; Tushman/Anderson (1986), p. 460.

³⁷² Chen (2005), p. 231.

exploitative activities within one organizational unit exemplifies cyclical ambidexterity.³⁷³

Furthermore, researchers have identified these patterns in biotechnological firms³⁷⁴ or U.S. software alliances³⁷⁵ that suggest a sequential combination of explorative activities in the beginning, followed by exploitative activities afterwards, for businesses with strong technological focuses. Due to the explicit focus during the explorative period, these units not only can discover new, innovative solutions on the one hand, but also can establish themselves as dominant players in the industry.³⁷⁶ The shift to an exploitative orientation leads to a performance improvement by process innovation. This shift between periods of exploration and periods of exploitation signifies a possible way to avoid competency traps (too much exploitation) and failure traps (too much exploration).³⁷⁷ In either case, innovation performance would suffer.³⁷⁸

From an organizational point of view, shifts back and forth between exploration and exploitation are less effective than an emphasis on switching roles,³⁷⁹ as these dramatic shifts might lead to role conflicts between managers.³⁸⁰ Thus, the transition process necessitates the creation of switching rules to determine the appropriate structure, which depends on the degree of innovation needed.³⁸¹ Furthermore, an open communication flow as well as dedicated mechanisms help the transition between times of exploitation and exploration.³⁸² Figure 16 provides a representation of the concept.

³⁷³ Simsek et al. (2009), pp. 882–884.

³⁷⁴ Rothaermel/Deeds (2004), p. 201.

³⁷⁵ Lavie/Rosenkopf (2006), p. 797.

³⁷⁶ Henderson/Clark (1990), p. 9.

³⁷⁷ Siggelkow/Levinthal (2003), pp. 664–666.

³⁷⁸ Wang/Li (2008), p. 930.

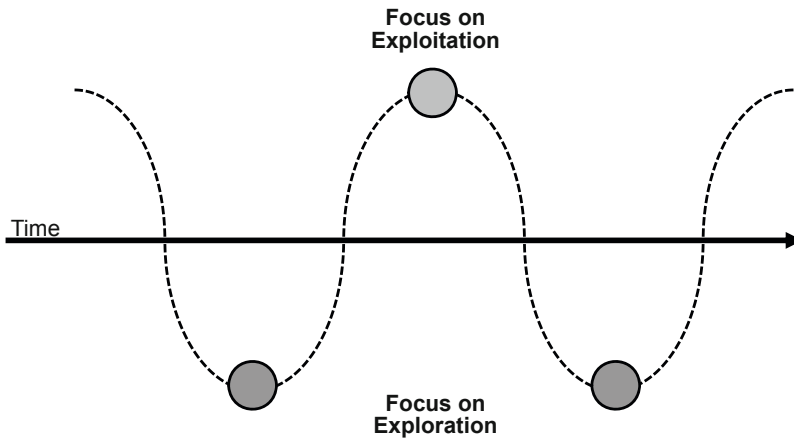
³⁷⁹ Adler et al. (1999), p. 43.

³⁸⁰ Floyd/Lane (2000), p. 157.

³⁸¹ Duncan (1976), pp. 182–184.

³⁸² Bierly/Daly (2007), pp. 495–496.

Figure 16: Cyclical Ambidexterity - Phases of Exploration and Exploitation



Source: Author's compilation based on Raisch (2008), p. 485.

We can summarize cyclical ambidexterity as an alternative method to the simultaneous approach that allows for specializing in exploration and exploitation activities during the respective periods.³⁸³ Therefore, the organization can adapt to its environment and avoid traps.³⁸⁴ Further, the competing demands of exploration and exploitation may take place within a single business unit. However, management needs to decide the appropriate times to follow particular tasks.³⁸⁵ Also, the dramatic shifts in organizational orientation might produce conflicts between managers,³⁸⁶ making it necessary to install mechanisms to cope with such conflict. Nevertheless, those mechanisms come at a cost: considerable amounts of planning and implementation costs may arise and productivity decrease during transition phases due to a higher employee turnover and resistance to change.³⁸⁷

As described, empirical evidence for the concept was found, as recent studies analyzed the influence of cyclical ambidexterity on factors, such as the number of

³⁸³ Gupta et al. (2006), pp. 697–700.

³⁸⁴ Siggelkow/Levinthal (2003), p. 665.

³⁸⁵ Gibson/Birkinshaw (2004), p. 211.

³⁸⁶ Floyd/Lane (2000), pp. 162–164.

³⁸⁷ Raisch/Birkinshaw (2008), p. 489.

products in development, or the sales growth.³⁸⁸ However the direct influence of cyclical ambidexterity on firm performance has been neglected so far.

3.2.2. Reciprocal Ambidexterity

To date, reciprocal ambidexterity has received the least attention from organizational researchers.³⁸⁹ This type assumes a reciprocal interdependence between units performing exploration and exploitation. For example, the exploitative output from unit A becomes the input for exploration by unit B and the output of unit B cycles back to become the input of unit A.³⁹⁰ This results in a combination of exploitation and exploration across time and units.³⁹¹ Moreover, “the interplay between exploitation and exploration takes place both within and between organizations.”³⁹²

This perspective builds on a long discussion in research. Certain scholars argue that balancing exploration and exploitation challenges a company too much, and firms consequently cannot achieve this within one organization.³⁹³ Porter, for example, found it impossible to achieve both a low-cost and a differentiation strategy at the same time (under certain circumstances).³⁹⁴ From his perspective, a firm can achieve ambidexterity through the efficient specialization of exploitation and exploration across an inter-organizational network. Therefore, as a solution, researchers suggest externalizing either one of the activities by outsourcing³⁹⁵ or establishing alliances.³⁹⁶

This option seems important since firms may risk obsolescence of knowledge when relying only on internally generated knowledge.³⁹⁷ Especially, for exploration,

³⁸⁸ Simsek et al. (2009), p. 884.

³⁸⁹ For this and the following see Simsek et al. (2009), pp. 886–887.

³⁹⁰ Thompson et al. (1967), p. 56.

³⁹¹ Lavie/Rosenkopf (2006), pp. 798–807.

³⁹² Holmqvist (2004), p. 72.

³⁹³ Jansen (2005), p. 37.

³⁹⁴ Porter (1996), p. 69.

³⁹⁵ Baden-Fuller/Volberda (1997), pp. 97–99.

³⁹⁶ Holmqvist (2004), p. 70.

³⁹⁷ Eisenhardt/Martin (2000), pp. 1110–1111.

the external acquisition of knowledge has a greater impact than its counterpart³⁹⁸ and therefore may contribute significantly to the renewal of existing knowledge bases. An externalization of knowledge might be easier to achieve than internalization of knowledge because it bypasses potential problems associated with the trade-off between exploration and exploitation.³⁹⁹ However, externalization might not be an easy task due to the difficulty of integrating knowledge across firms.⁴⁰⁰ Nevertheless, this integration or absorption is vital since only then can a firm realize the potential of the external knowledge⁴⁰¹ and finally create organizational ambidexterity, for which exploration and exploitation need to be combined and strategically integrated to create value.⁴⁰² Unlike cyclical ambidexterity, however, this type requires respective managers to engage in relationships characterized by “ongoing information exchange, collaborative problem solving, joint decision making, and resource flows between the different units responsible for exploitation and exploration”.⁴⁰³

To summarize reciprocal ambidexterity, we can best define it as a synergy creating fusion of complementary units having their focus on either exploitation or exploration that occur across time and firms.

The reciprocal ambidexterity perspective was theoretically developed by researchers with a social network point of view of the firm, and they emphasized the role of arrangements between organizations for creating this type of ambidexterity.⁴⁰⁴ Lavie and Rosenkopf did an empirical study of U.S. software alliances and observed that firms tend to balance their focus on either exploration or exploitation, depending on their alliances or network of partners over time and across domains.⁴⁰⁵ These findings highlight the significance of alliances and networks between companies, leading to a combination of exploitation and exploration across time and units. Moreover, in a study of the logistics industry, Im

³⁹⁸ Rosenkopf/Nerkar (2001), p. 287.

³⁹⁹ Gupta et al. (2006), p. 699.

⁴⁰⁰ Benner/Tushman (2003), p. 247.

⁴⁰¹ Cohen/Levinthal (1990), p. 128.

⁴⁰² Cao/Gedajlovic/Zhang (2009), p. 781.

⁴⁰³ Simsek et al. (2009), p. 886.

⁴⁰⁴ See e.g., Lavie/Rosenkopf (2006), p. 797; Lin/Haibin/Demirkan (2007), p. 1645; Tiwana (2008), p. 251.

⁴⁰⁵ Lavie/Rosenkopf (2006), p. 814.

and Rai⁴⁰⁶ found support for the argument that exploratory and exploitive knowledge sharing in long-term inter-organizational relationships positively related to relationship performance. For implementing this path of ambidexterity, researchers see mechanisms such as knowledge integration among alliance partners as especially relevant. In 2008, Tiwana stated that a high degree of knowledge integration among the partnering firms in an alliance positively related to the level of organizational ambidexterity.⁴⁰⁷ Thus, top managers must successfully disseminate information across as well as within organizations to facilitate reciprocal information flow between the exploitive and exploratory units.⁴⁰⁸ Based on these findings, one assumes that reciprocal ambidexterity will more likely appear in complex environments with a depth of knowledge required for both explorative and exploitative activities.

As mentioned, there is still a certain lack of studies analyzing the general influence of reciprocal ambidexterity⁴⁰⁹. Hence, also its direct influence ambidexterity on firm performance has not been analyzed so far.

3.2.3. Harmonic Ambidexterity

Harmoniously combining exploration and exploitation in an organizational unit seems challenging because an inherent competition exists for scarce resources and consequently, conflicts, contradictions, and inconsistencies seem predictable.⁴¹⁰ Intertwining exploration and exploitation within the same unit needs ongoing operative and strategic activities from an organizational and cultural context.⁴¹¹

Grounded in this field of literature, organizational context means the surface level, or “artificial” manifestation of a culture based on dedicated systems, processes, and beliefs that unite the contradictory activities within an organizational unit. Hence, a sustainable optimal balance of exploration and exploitation in a single

⁴⁰⁶ For this and the following see Im/Rai (2008), p. 1281 ff.

⁴⁰⁷ Tiwana (2008), p. 252.

⁴⁰⁸ Mom/Van Den Bosch/Volberda (2007), p. 910.

⁴⁰⁹ Simsek et al. (2009), p. 887.

⁴¹⁰ Simsek (2009), p. 869.

⁴¹¹ Bartlett/Ghoshal (1990), p. 138; Burgelman (1991), p. 206; Bartlett/Ghoshal (1994), p. 79.

unit means “building a set of processes or systems that enable and encourage individuals to make own judgments about how to divide their time between conflicting demands.”⁴¹² Recent research in this field of harmonic ambidexterity especially focuses on “contextual” and “behavioral” explanations.⁴¹³

Contextual explanations involve a strong emphasis on performance as well as social support⁴¹⁴ to encourage individuals to make personal judgments on how to best divide their daily ties between the conflicting demands of aligning explorative and exploitative actions.⁴¹⁵ We can broadly define organizational context as the systems, processes, and beliefs that shape individuals’ behavior in an organization⁴¹⁶ and embrace such soft elements as culture and climate in a business unit.⁴¹⁷ However, more precisely, organizational context can be described by four interdependent attributes: discipline, stretch, support, and trust.⁴¹⁸ Discipline induces employees to voluntarily strive to meet all expectations by such measures as performance and behavioral standards, transparent feedback mechanisms, and consistent sanctioning. Creation of a collective identity and shared ambition among employees motivates them to voluntarily strive for more ambitious objectives (stretch). In addition, each employee should also be motivated on an individual basis by understanding that the individual’s contribution is valuable to the organization and by giving his work personal meaning.

Support induces employees to lend assistance to others. Such actions can be fostered by a non-authoritarian leadership managerial style, which assists and transfers responsibility to employees, giving them a free hand at lower levels. Further, mutual access to other employee’s resources is beneficial. Lastly, trust describes the idea of employees relying on each other’s commitments. This is attained by such actions as fairness and employees’ involvement in the decision-making processes as well as transparency and competence in staffing matters. Finally, context relates to a combination of difficult elements (discipline, stretch)

⁴¹² Gibson/Birkinshaw (2004), p. 210.

⁴¹³ Adler et al. (1999), p. 43; Corso/Pellegrini (2007), p. 333.

⁴¹⁴ See e.g., Bartlett/Ghoshal (1994).

⁴¹⁵ Gibson/Birkinshaw (2004), p. 211.

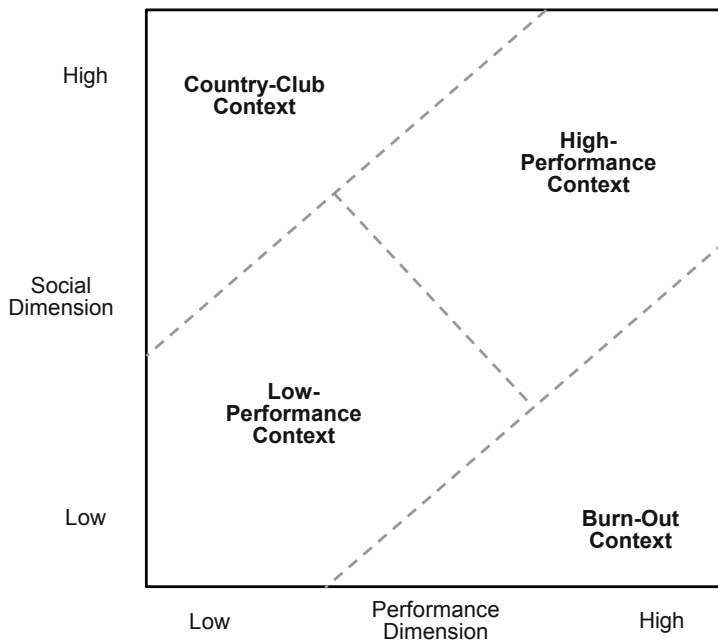
⁴¹⁶ Bartlett/Ghoshal (1994), pp. 91–92.

⁴¹⁷ Gibson/Birkinshaw (2004), p. 213.

⁴¹⁸ For this and the following see Bartlett/Ghoshal (1994), pp. 94–103.

that refer to a performance dimension and soft elements (support, trust) that relate to a social dimension. Of these, four different contexts might be created: a high-performance context, a low-performance context, a country club context, and a burn-out context (Fig. 17).

Figure 17: Harmonic Ambidexterity - Different Contexts



Source: On the basis of Birkinshaw/Gibson (2004), p. 7.

Gibson and Birkinshaw argue that senior executives play a critical role in establishing a high-performance context (high extent of fulfillment of the four characteristics mentioned earlier) to achieve organizational ambidexterity.⁴¹⁹ This occurs in a high-performance context that stimulates people to deliver high-quality results and at the same time provide them social support and security to do this consistently over a long period of time (the exact opposite being true for a low-

⁴¹⁹ Gibson/Birkinshaw (2004), p. 223.

performance context).⁴²⁰ The burn-out and country-club contexts lack a high degree of either one of the two dimensions. The former provides a results-driven orientation but fails to also provide social support so that people perform well for a limited time and leave the firm more often. The latter features a strong social support but a weak performance orientation so that employees tend not to perform well. Following Gibson and Birkinshaw's argument, senior managers have a responsibility to develop processes and systems that define such a supportive, high-performance context.⁴²¹ However, this is not achieved by the mere static presence of the four characteristics, but, rather, these should shape the organizational context over time.⁴²² This in turn enables individuals to judge themselves to the extent they engage in exploration and exploitation so that they can exploit the current business and customers and adapt to changes in the task environment at the same time.⁴²³ This makes them more "generalists" regarding their capabilities (in contrast to "specialists" that concentrate on only one activity at a time as in the case of structural ambidexterity).⁴²⁴ Therefore, employees can pursue both activities simultaneously and in the same unit.⁴²⁵ Not the organization designers but, rather, employees are then the decision makers of how to allocate efforts towards exploratory and exploitative activities.⁴²⁶ Therefore, coordination costs do not rise, but costs for the implementation of systems and processes that define the supportive context do.

Beyond this, literature emphasizes practices and routines that promote organizational ambidexterity, such as meta-routines, job enrichment, and task partitioning.⁴²⁷ Adler, Goldoftas, and Levine for example, point to meta-routines that transform non-routines such as the innovation process into more routine tasks and job enrichment schemes that enable workers to become more innovative and flexible even in the course of their routine tasks so as to create ambidexterity.⁴²⁸

⁴²⁰ Birkinshaw/Gibson (2004), pp. 7–11.

⁴²¹ Gibson/Birkinshaw (2004), pp. 212–215; Burpitt (2009), pp. 228–229.

⁴²² Bartlett/Ghoshal (1994), p. 108; Brown/Eisenhardt (1997), p. 31.

⁴²³ Gibson/Birkinshaw (2004), pp. 210–211.

⁴²⁴ Birkinshaw/Gibson (2004), p. 50.

⁴²⁵ Gibson/Birkinshaw (2004), p. 209.

⁴²⁶ For this and the following see Gibson/Birkinshaw (2004), pp. 210–212.

⁴²⁷ Simsek (2009), p. 599.

⁴²⁸ See for this and the following Adler et al. (1999), pp. 45–46.

Furthermore, training, trust, and leadership feature in the context to support these. In contrast, others refer to organizational systems such as a culture that supports change and open communication and human resource practices that promote creativity⁴²⁹ as well as socialization, a shared vision, and team-building practices to help individuals think and act ambidextrously.⁴³⁰ Researchers view a context that provides psychological safety for employees and fosters openness to diverse opinions as well as participation in decision making as favoring ambidexterity.⁴³¹ Furthermore, the notion of the paradox of exploration and exploitation and its acceptance by employees may be energizing and help individuals to act ambidextrously.⁴³² In addition, a broad skill base among employees, a heterogeneous level of background knowledge, and common frame of reference also increase support.⁴³³ Lastly, a newer opinion states that inconsistencies between the formal and the informal context of an organization, which arise, for instance, during reorganizations, support ambidexterity.⁴³⁴ From a managerial perspective, however, the leader needs complex behavioral characteristics, requiring a portfolio of leadership roles for managers to apply.⁴³⁵ From a resource-based view, a context simultaneously stimulating explorative and exploitative activities might be considered a rare and valuable source that is hard to imitate and, thus, the source of a competitive advantage.⁴³⁶ Recently, scholars have noted that such capabilities are “complex, causally ambiguous, widely dispersed and quite time consuming to develop.”⁴³⁷

Empirical research in the field of harmonic ambidexterity continues to emerge, and we have reasons to expect positive performance outcomes from its pursuit.⁴³⁸ More specifically, the simultaneous combination of exploration and exploitation is associated with an improved stakeholder satisfaction, especially among customers

⁴²⁹ Bierly/Daly (2007), p. 4.

⁴³⁰ Jansen/George/Van Den Bosch/Volberda (2008), pp. 998–999.

⁴³¹ Nemanich/Vera (2009), p. 28.

⁴³² Ingram/Lewis/Andriopoulos/Gotsi (2008), p. 3; Sarkees/Hulland (2009), p. 53.

⁴³³ Gätzel/Konlechner (2009), p. 165.

⁴³⁴ Gulati/Puranam (2009), pp. 4–5.

⁴³⁵ Hooijberg/Hunt/Dodge (1997), pp. 377–380; Raisch/Birkinshaw (2008), p. 391.

⁴³⁶ Barney (1991), p. 101.

⁴³⁷ Gibson/Birkinshaw (2004), p. 210.

⁴³⁸ For this and the following see Simsek (2009), p. 869–882.

and upper-level managers. While Gibson and Birkinshaw⁴³⁹ confirmed that this ambidextrous context positively influences the subjective ratings of a business unit's performance by middle and senior managers, a later study by Hill and Birkinshaw⁴⁴⁰ observed higher performance of a unit in four ways applying a context that fosters harmonic ambidexterity: creating breakthrough innovations, investing in disruptive technologies, developing strategic relationships with key external stakeholders, and providing funding for internal venturing activities.⁴⁴¹ Despite these positive effects, costs for implementing the systems and processes, as well as the managerial efforts to achieve this level of ambidexterity represent countervailing factors.⁴⁴²

Although harmonic ambidexterity might become a critical capability for firms and may lead to competitive advantages,⁴⁴³ there exist a number of criticisms regarding this concept. Some claim greater tension arising from the simultaneous pursuit of exploration and exploitation as even more severe within the same unit⁴⁴⁴ and, as in the case of maintaining dual business models within the same unit, threaten the successful execution of both.⁴⁴⁵ Other criticism focuses on individuals who act ambidextrously. Individuals rely on the same basic experiences, values and capabilities to carry out both exploration and exploitation, making it difficult to carry on both simultaneously.⁴⁴⁶ This is especially true as many individuals who concentrate on creativity (exploration) even differ in personal characteristics from those who focus on implementation (exploitation).⁴⁴⁷

As described, several studies analyzed the influence of harmonic ambidexterity on various factors, such as stakeholder satisfaction, breakthrough innovations, or customer capital.⁴⁴⁸ However the direct influence of cyclical ambidexterity on firm performance has been neglected.

⁴³⁹ Gibson/Birkinshaw (2004), pp. 212–215.

⁴⁴⁰ Hill/Birkinshaw (2006), p. 2.

⁴⁴¹ Gibson/Birkinshaw (2004), p. 215.

⁴⁴² Yang/Atuahene-Gima (2007), p. 6.

⁴⁴³ Gibson/Birkinshaw (2004), p. 222.

⁴⁴⁴ Simsek et al. (2009), p. 868.

⁴⁴⁵ Hill/Rothaermel (2003), p. 267.

⁴⁴⁶ Gupta et al. (2006), p. 696.

⁴⁴⁷ Sternberg (1999), p. 290.

⁴⁴⁸ Simsek et al. (2009), p. 882.

3.2.4. Partitional Ambidexterity

We define partitional ambidexterity generally as the “ability to simultaneously pursue both incremental and discontinuous innovation that result from hosting multiple contradictory structures, processes, and cultures, within the same firm.”⁴⁴⁹

Hence, an organization must design structural mechanisms to cope with the competing demands it faces.⁴⁵⁰ The two most common concepts here include spatial separation and parallel structures.

Spatial separation

Spatial separation means solving the paradox of exploration and exploitation by implementing it in different parts of the organization, for example, in structurally independent units.⁴⁵¹ The construct of spatial separation gained general acceptance through Tushman and O'Reilly, who suggested that organizations should establish structurally independent units integrated into the existing management hierarchy.⁴⁵² According to this view, new, exploratory units should be separate from traditional, exploitative units, with each one having its own processes, structures, and cultures so that they do not conflict.⁴⁵³ This allows a separation of variance-decreasing actions (exploitation) from those for which variation is even necessary (exploration).⁴⁵⁴ Exploratory units should be small and decentralized, having loose processes and an open culture, whereas exploitative units tend to be larger, rather formal, and centralized with tight processes.⁴⁵⁵ In this way each unit can maintain competencies according to its required task (exploration or exploitation).⁴⁵⁶ Other researchers agree. Porter said creating stand-alone units with tailored activities can achieve growth,⁴⁵⁷ and others have stated that a

⁴⁴⁹ Tushman/O'Reilly III (1996), p. 24.

⁴⁵⁰ Gibson/Birkinshaw (2004), p. 211.

⁴⁵¹ For this and the following see O'Reilly III/Tushman (2004), p. 75.

⁴⁵² Tushman/O'Reilly III (1996), p. 24; O'Reilly III/Tushman (2004), pp. 75–76.

⁴⁵³ Tushman/O'Reilly III (1996), p. 24.

⁴⁵⁴ Benner/Tushman (2003), p. 251.

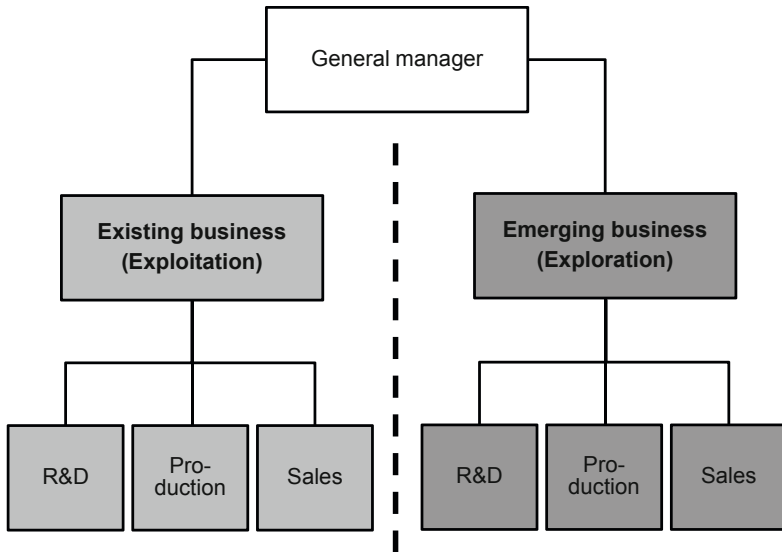
⁴⁵⁵ Benner/Tushman (2003), p. 247.

⁴⁵⁶ Tushman/O'Reilly III (1996), pp. 17–18, 24.

⁴⁵⁷ Porter (1996), p. 77.

mainstream business should create independent units to successfully innovate.⁴⁵⁸ A representation of the aforementioned concept might look as depicted in Figure 18.

Figure 18: *Partitional Ambidexterity - Spatial Separation*



Source: On the basis of Raisch/Birkinshaw (2008), p. 485.

Although structurally independent, the units require coordination with respect to exploratory and exploitative activities to actually achieve organizational ambidexterity since, to some extent, they remain organizationally inter-dependent. The mere coexistence of exploitative and explorative activities in differentiated organizational units is not a sufficient condition for organizational ambidexterity.

However, there still exists considerable discussion among scholars on what such mechanisms might look like. One view stated that units should be buffered strongly against each other and only weakly integrated.⁴⁵⁹ O'Reilly and Tushman went a step further and suggested that structurally and culturally separated

⁴⁵⁸ Bower/Christensen (1995), pp. 44–45.

⁴⁵⁹ Levinthal (1997), p. 949.

subunits should be tightly coupled at the senior management level.⁴⁶⁰ This coupling also includes respective incentives for managers as well as a strong cross-unit corporate culture and vision so as to share important resources such as cash, knowledge, and customers. A number of other researchers proposed similar mechanisms such as an active and credible integrator,⁴⁶¹ strong shared values and a shared vision that unites employees,⁴⁶² transfer of people, inter-group training, cross-divisional teams, and open communication,⁴⁶³ and incentive systems that encourage cooperation between the two units.⁴⁶⁴ Moreover, others suggested the exchange of brand names, assets, expertise, and processes.⁴⁶⁵ Raisch referred to similar activities termed nurturing and sharing processes, whereby nurturing relates to the parent company's support of the innovative unit by transferring know-how and expertise, and sharing refers to sharing assets between exploitative and exploratory units to realize synergies.⁴⁶⁶ Lastly, some have alleged that operational autonomy should be granted to the exploratory unit, for example, by a certain control of value-chain activities.⁴⁶⁷ At the same time however, synergies should be exploited by ensuring that some value-chain activities are shared across units, e.g., by a centralization of strategic and financial controls.⁴⁶⁸ Since the actual achievement of organizational ambidexterity is dependent on a successful integration of the units, the concept of spatial separation carries a risk of isolation and failure of the units to couple their efforts productively.⁴⁶⁹ In addition, integration of mechanisms come at certain coordination costs.⁴⁷⁰

⁴⁶⁰ For this and the following see O'Reilly III/Tushman (2004), p. 77; O'Reilly III/Tushman (2007), p. 22.

⁴⁶¹ Gilbert/Bower (2002), p. 100.

⁴⁶² Ghoshal/Gratton (2002), pp. 35-36; Markides/Chu (2008), p. 2.

⁴⁶³ Markides/Chu (2008), p. 2.

⁴⁶⁴ Mahmoud-Jouini/Charue-Duboc/Fourcade (2007), p. 5.

⁴⁶⁵ Govindarajan/Trimble (2005), p. 63.

⁴⁶⁶ Raisch/Birkinshaw (2008), p. 495.

⁴⁶⁷ Raisch/Birkinshaw (2008), p. 493; Markides/Chu (2008), p. 2.

⁴⁶⁸ Markides/Chu (2008), p. 2.

⁴⁶⁹ O'Reilly III/Tushman (2007), p. 191.

⁴⁷⁰ Gibson/Birkinshaw (2004), p. 210.

Parallel Structures

Creating parallel structures offers another way to achieve partitional ambidexterity. Such structures allow employees to move back and forth between two types of structures, depending on the respective tasks required.⁴⁷¹ This type has a formal, primary structure in place for the fulfillment of routine tasks and ensures efficient operations and stability.⁴⁷² In addition, the process creates supplementary structures (such as project teams or quality circles) flexible enough to support innovative activities. Therefore, both structures together ensure efficiency and flexibility—even within a single business unit and by the same employees (however, of course, in different structural settings).⁴⁷³ Figure 19 shows a representation of the concept.

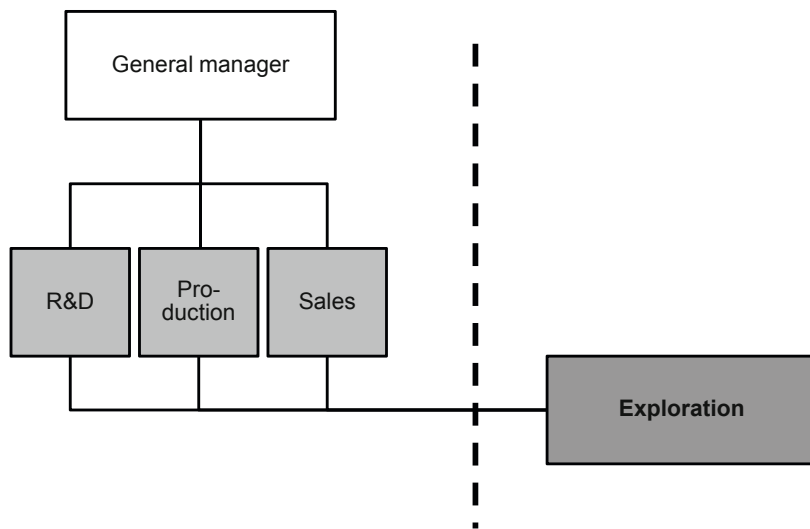
However, some critics have claimed that parallel structures better suit incremental rather than radical innovation since the same employees do the shifting between the two structures and rely on the same experiences, values, and capabilities, making especially exploratory activities difficult to achieve.

Compared to the previously introduced types, research on partitional ambidexterity is the most advanced, what is also underlined by the number of empirical studies. Thus, scholars confirm the positive influence of this type on innovation performance, the number of new products in development, or the launch of breakthrough products. Furthermore, three studies explicitly analyzed and confirmed the positive influence of partitional ambidexterity on financial performance.

⁴⁷¹ Adler et al. (1999), p. 46; McDonough III/Leifer (1983), pp. 733–734.

⁴⁷² For this and the following see Raisch/Birkinshaw (2008), p. 497; McDonough III/Leifer (1983), pp. 733–734; Goldstein (1985), p. 505.

⁴⁷³ Raisch/Birkinshaw (2008), p. 485.

Figure 19: *Partitional Ambidexterity - Parallel Structures*

Source: On the basis of Raisch/Birkinshaw (2008), p. 485.

3.3. Recapitulating Evaluation on Organizational Ambidexterity

We can trace the idea of organizational ambidexterity to the seminal times of strategic management research. As early as 1967 Thompson called attention to one central paradox of business administration: a firm's parallel striving for certainty and flexibility.⁴⁷⁴ Nevertheless, researchers neglected the idea over the following decades as research and practice followed the path of strategic focus on either efficiency or flexibility.⁴⁷⁵ Today's globalization of markets, rapid technological change, and shortened product life cycles have led to highly competitive business environments in many industries, requiring firms increasingly to act flexibly and rapidly.⁴⁷⁶ This situation necessitates firms to "engage in enough exploitation to ensure [the organization's] current viability and, at the same time, to

⁴⁷⁴ Thompson et al. (1967), p. 190.

⁴⁷⁵ March (1991), p. 71.

⁴⁷⁶ Grant (1996), p. 375; Volberda (1996), p. 359.

devote enough energy to exploration to ensure its future viability."⁴⁷⁷ We can describe firms that can manage this conflict as ambidextrous organizations.⁴⁷⁸ However, establishing such a balance might prove difficult as exploration and exploitation activities require substantially different, often conflicting, structures, processes, capabilities, and cultures.⁴⁷⁹ Unsurprisingly, scholars turned to the idea of ambidexterity and its studies, and thus, ideas on how to overcome the paradox and create organizational ambidexterity increased.⁴⁸⁰

Regardless of the way a company selects to become ambidextrous, organizational ambidexterity is generally believed to improve performance⁴⁸¹ and regarded as the key driver of firm performance in the long run, since a focus on either exploratory or exploitative activities ultimately leads to a failure or competence trap.⁴⁸²

However, reviewing the four fields of organizational ambidexterity unveils the fact that this way of thinking still resides on a more conceptual level and that today's scholars especially try to figure out different ways in which companies can create a high level of ambidexterity in the firm. Moreover, only a few researchers have measured the level of ambidexterity in a firm in a large-scale empirical way. Even worse, most of them have used different approaches for assessing the level of ambidexterity in the firm, making an overall comparison even more complicated. While scholars have analyzed different antecedents and outcomes of organizational ambidexterity, only a few have focused on its influence on a firm's financial performance. Nevertheless, these rare studies found organizational ambidexterity positively associated with firm performance in the described settings.⁴⁸³

⁴⁷⁷ Levinthal/March (1993), p. 105.

⁴⁷⁸ Burgelman (1991), p. 256.

⁴⁷⁹ Tushman/O'Reilly III (1996), p. 24; Sheremata (2000), p. 389.

⁴⁸⁰ Raisch et al. (2009), p. 685.

⁴⁸¹ See e.g., O'Reilly III/Tushman (2004), pp. 76–77.

⁴⁸² Levinthal/March (1993), p. 106.

⁴⁸³ Gibson/Birkinshaw (2004), p. 219; He/Wong (2004), p. 491; Lubatkin et al. (2006), p. 665; Schulze/Heinemann/Abedin (2008), p. 4; Han/Celly (2008), p. 335; Markides/Chu (2008), p. 23.; Yu/Patterson/De Ruyter (2008), p. 227; Sarkees/Hulland (2009), p. 45.

4. Organizational Ambidexterity and Strategic Fit

As shown in the previous chapters, both the idea of organizational ambidexterity and the concept of fit share a common goal: to identify factors to achieve a successful organization in the long run.⁴⁸⁴ However, looking at the earlier detailed reviews, it seems that they lead to fundamentally different recommendations. As empirical evidence exists for both concepts, this chapter first discusses similarities and differences of both concepts to give a concrete statement on whether they are in fact as contradictory as it would seem. Then, hypotheses are developed to analyze how today's firms can achieve a sustainable competitive advantage and thus long-lasting high performance. The chapter ends with a summary of these ideas in a sophisticated research model.

4.1. Similarities and Differences

Over the past decades, scholars in the field of strategic management have argued that companies will perform better if they align their organizational behavior with their strategic orientation.⁴⁸⁵ Thus, we assume that organizations that can align their behavior to the chosen strategic orientation to a high degree perform better than those that do not create such a fit. While researchers also address a combination of efficiency and flexibility in certain situations,⁴⁸⁶ in essence they postulate a clear focus on either explorative or exploitative behavior.⁴⁸⁷ While this traditional approach recommended that organizations focus on one or the other, several recent studies on organizational ambidexterity have shown that today's firms do indeed perform better in the long run, if they succeed in becoming ambidextrous.⁴⁸⁸ Ambidexterity stands for the combination of both explorative and exploitative activities and describes the behavior of an organization that succeeds

⁴⁸⁴ See e.g., Kim/Mauborgne (2009), p. 73; Markides/Oyon (2010), p. 25.

⁴⁸⁵ For this and the following see Miles/Snow (1984), pp. 10–16.

⁴⁸⁶ For example the analyzer type in the Miles & Snow typology or the outpacing type in Porter's generic strategies, can be seen as hybrid between the extreme poles.

⁴⁸⁷ Doty/Glick (1994), pp. 231–236.

⁴⁸⁸ Simsek (2009), p. 597.

in managing these conflicting demands in its task environment.⁴⁸⁹ This allows the organization to be efficient in its management of today's business demands, while also showing the needed flexibility to adapt to new challenges and opportunities in the environment.⁴⁹⁰

To summarize, while the concept of ambidexterity claims that organizations need to build up capabilities for both exploitative and explorative behavior to succeed, the concept of fit literature argues that organizations should focus on themselves. Only if they manage to create a fit between one dedicated strategic orientation and an aligned behavior will they outperform their competition. Consequently, at first view, these two concepts seem to lead to fundamentally different recommendations for managers. To further explore this finding, we will take an analytical look at the fields of Simsek's typology of organizational ambidexterity (cyclical, reciprocal, harmonic, partitional) and the ways to implement a fit between a firm's strategy and structure according to Miles and Snow's typology (prospector, defender, analyzer), as this is the most used operationalization of this concept in strategic management research.⁴⁹¹

4.1.1. Cyclical Ambidexterity and Fit between Strategy and Structure

In the field of cyclical ambidexterity, researchers describe organizations as having long periods of exploitation, interrupted by detached periods of exploration.⁴⁹² This type of ambidexterity is consequently created by sequentially allocating resources and timewise exploration and exploitation; we can find this especially in technology-oriented firms having an S-shaped investment curve.⁴⁹³ The beginning of this curve reflects early-stage efforts and its required investments, until a dominant design is explored.⁴⁹⁴ Here, firms pursue exploratory activities, with decentralized structures to facilitate innovations in products and technologies. An

⁴⁸⁹ See e.g., Gibson/Birkinshaw (2004), p. 209; Simsek et al. (2009), p. 597; Tushman/O'Reilly III (1996), p. 24.

⁴⁹⁰ Benner/Tushman (2003), p. 238.

⁴⁹¹ Simsek (2009), p. 597 ff; Miles et al. (1978), pp 550–558; Hambrick (2003), p. 116.

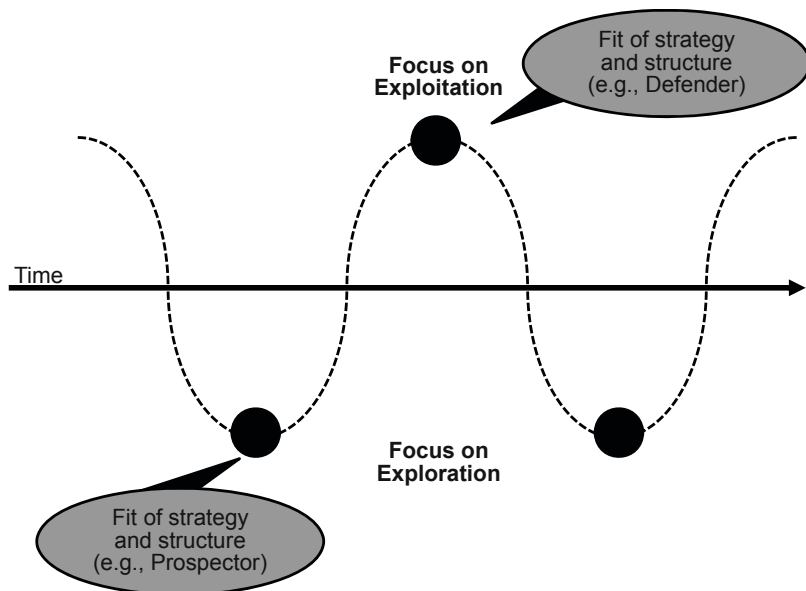
⁴⁹² Simsek (2009), p. 868.

⁴⁹³ Tushman/Anderson (1986), p. 460; Tushman/O'Reilly III (1996), p. 24.

⁴⁹⁴ Chen (2005), p. 231.

increase in production and an exploitation of the innovation follows this period. Accordingly, firms focus on exploitative activities, using more centralized structures that support efficiency and allocate resources to the particular task.⁴⁹⁵

Figure 20: Cyclical Ambidexterity and Fit



Source: Author

Consequently, in each period, the company aligns its strategy and structure to the dedicated goal and thus creates a fit to run the firm most successfully during the respective period. Thus, while during one period we can describe the company as a prospector type, focusing on exploration, the next period will lead to defender-like behavior with an exploitative orientation. In case of a move from one position (e.g., from exploration to exploitation) due to a strategic change, a misfit will appear. Once in the position of misfit, the firms will change back to a fit by adopting a new organizational structure, to better fit the strategy and thus build a basis for maintaining high performance (Fig. 20).

⁴⁹⁵ Simsek et al. (2009), p. 882.

To summarize this section, a company using the concept of cyclical ambidexterity will create a focused fit between its organizational structure for every period and thus can follow the recommendations for either the defender or the prospector profile of Miles and Snow's typology. Due to actual requirements during each period, a switch between explorative (prospector) and exploitative (defender) behavior will occur, resulting in an overall ambidextrous orientation for the firm.

4.1.2. Reciprocal Ambidexterity and Fit between Strategy and Structure

A firm achieves reciprocal ambidexterity through the efficient specialization of exploitation and exploration across an inter-organizational network.⁴⁹⁶ Scholars argue for that interplay within and between organizations, in case firms cannot achieve this within one organization.⁴⁹⁷ Thus, they recommend externalizing either one of the activities (exploration or exploitation) by outsourcing or establishing alliances.⁴⁹⁸ Significantly, the externalization of knowledge might be easier to achieve than its internal creation since potential problems associated with the trade-off between exploration and exploitation are bypassed.⁴⁹⁹ Hence, the company will identify itself as a more prospector- or defender-oriented firm and align its strategy and structure according to Miles and Snow's recommendation to ensure maximum effectiveness and a high firm performance.⁵⁰⁰

The company finally achieves organizational ambidexterity as explorative output from unit A becomes the input for exploitative unit B and output of unit B cycles back to become the input of unit A,⁵⁰¹ resulting in a combination of exploitation and exploration across time and units.⁵⁰² Consequently, the different units in this network can follow the recommendations for the prospector or defender profile, as only a limited number of potential structures will benefit the selected focus.⁵⁰³ Thus, the better a unit manages to create a fit between its strategy and its

⁴⁹⁶ Holmqvist (2004), p. 70; Baden-Fuller/Volberda (1997), pp.97–99.

⁴⁹⁷ Jansen (2005), p. 37; Holmqvist (2004), p. 72.

⁴⁹⁸ Rosenkopf/Nerkar (2001), p. 287.

⁴⁹⁹ Gupta et al. (2006), p. 699.

⁵⁰⁰ Miles/Snow (1984), pp 10–11.

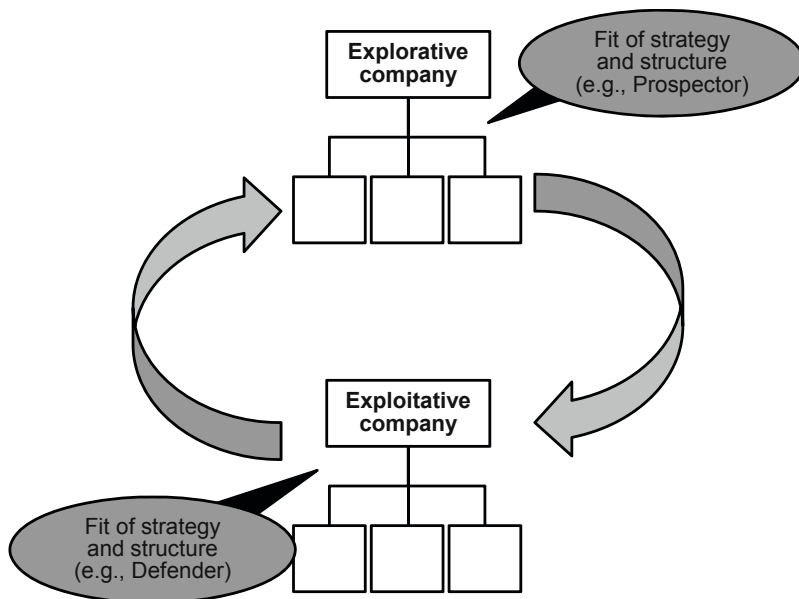
⁵⁰¹ Thompson et al. (1967), p. 190.

⁵⁰² Lavie/Rosenkopf (2006), p. 797.

⁵⁰³ Miles/Snow (1984), p. 10 ff.

structure, the better it will perform.⁵⁰⁴ Nevertheless, the integration of the units represents the key to realize the potential of the external knowledge⁵⁰⁵ to create organizational ambidexterity (Fig. 21).

Figure 21: Reciprocal Ambidexterity and Fit



Source: Author

Thus, we can say that every company in the network focuses on its individual strength and achieves a fit of strategy and structure and processes as either a defender type (focus on exploitation) or prospector type (focus on exploration). The overall interaction finally leads to organizational ambidexterity. Hence, a fit in every single unit in the network marks a prerequisite of reciprocal ambidexterity.

⁵⁰⁴ Doty/Glick (1994), p. 231.

⁵⁰⁵ Cohen/Levinthal (1990), p. 128.

4.1.3. Harmonic Ambidexterity and Fit between Strategy and Structure

Harmonic ambidexterity, defined as intertwining exploration and exploitation within the same unit, requires ongoing operative and strategic activities from an organizational and cultural context as the predictable conflicts, contradictions, and inconsistencies due to the different required structures and processes of exploration and exploitation occur.⁵⁰⁶ Thus, it requires “contextual” and “behavioral” influences.⁵⁰⁷ A combination of hard elements (discipline, stretch) that refer to a performance dimension and soft elements (support, trust) that relate to a social dimension can comprise contextual elements.⁵⁰⁸ Behavioral elements imply meta-routines, job enrichment, and task partitioning.⁵⁰⁹ Furthermore, organizational systems such as culture, communication, and human resource practices that promote creativity⁵¹⁰ can enable individuals to think and act ambidextrously.⁵¹¹

Researchers of the concept of fit argue that companies will perform better if they align their organizational behavior to their strategic orientation, and they must have as a prerequisite, a true focus to either exploration or exploitation.⁵¹² This alignment of strategy and structure would require putting all effort to one activity and supporting it by the respective context and leadership behavior. To do so, companies have to select one of the extreme poles of Miles and Snow’s typology of aligning strategy and structure and thus commit to becoming a prospector or defender type of firm. However these focused contexts will not enforce the creation of harmonic ambidexterity, as contextual and behavioral influences should enable both orientations in the firm, and no clear focus for the firm’s structure and processes is given. Nevertheless, for companies to build up organizational ambidexterity by the creation of a cultural context, Miles and Snow’s analyzer profile seems the right approach, as in this case the overall goal of the company is

⁵⁰⁶ See, e.g., Bartlett/Ghoshal (1994), p. 79; Burgelman (1991), p. 206.

⁵⁰⁷ Adler et al. (1999), p. 43; Corso/Pellegrini (2007), p. 333.

⁵⁰⁸ Birkinshaw/Gibson (2004), pp. 5–6.

⁵⁰⁹ Adler et al. (1999), p. 43.

⁵¹⁰ Bierly/Daly (2007), p. 4.

⁵¹¹ Jansen et al. (2008), pp. 998–999.

⁵¹² See e.g., Lukas et al. (2001), p. 409; Olson et al. (2005), p. 49; Venkatraman/Prescott (1990), p. 1.

to create hybrid structures and processes to enable parallel explorative and exploitative activities.

Hence, in the case of harmonic ambidexterity, the profiles aligning strategy and structure according to a clear focus (prospector and defender) will not work to build-up ambidextrous capabilities. However, we can view the profile of the analyzer type, a hybrid of these two extreme positions, as the adequate guide from Miles and Snow's typology for this kind of organizational ambidexterity.

4.1.4. Partitional Ambidexterity and Fit between Strategy and Structure

In the field of partitional ambidexterity, the ability to simultaneously pursue both incremental and discontinuous innovation results from hosting different structures and processes within one company⁵¹³ while structural mechanisms enable the organization to cope with the competing demands it faces at the same time.⁵¹⁴ By spatial separation, e.g., implementing structural independent units in the organization, firms can solve the paradox of exploration and exploitation in the firm.⁵¹⁵ By applying this concept, firms can establish both small and decentralized exploratory units, having loose processes and an open culture, following Miles and Snow's prospector profile and thus creating a fit between strategy and structure. On the other hand, they can run another part of the firm with a more defender-like profile with rather formal and centralized exploitative processes.⁵¹⁶ As every unit has its own processes, structures, and cultures no conflict arise,⁵¹⁷ and each unit can set up its structures and processes according to the required strategy (exploration or exploitation).⁵¹⁸ Thus, the better the firm manages to create a fit between its strategy and its structure in every independent unit, the better it will perform.⁵¹⁹ Organizational ambidexterity in this case depends on a successful integration of

⁵¹³ Tushman/O'Reilly III (1996), p. 24.

⁵¹⁴ Gibson/Birkinshaw (2004), p. 211.

⁵¹⁵ For this and the following see O'Reilly III/Tushman (2004), p. 75.

⁵¹⁶ Benner/Tushman (2003), p. 247.

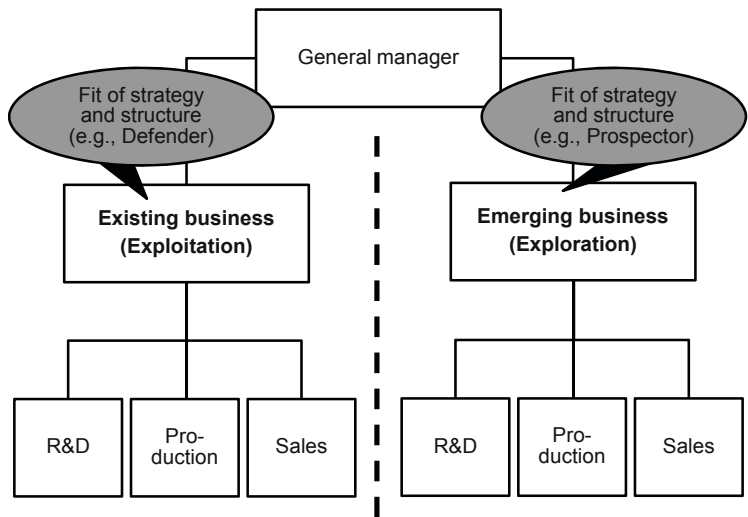
⁵¹⁷ Tushman/O'Reilly III (1996), p. 24.

⁵¹⁸ Tushman/O'Reilly III (1996), pp. 17–18, 24.

⁵¹⁹ Doty/Glick (1994), p. 231; Miles/Snow (1984), p. 10.

the units, as this idea of structural separation brings a certain risk of isolation and failure to the units.⁵²⁰

Figure 22: Partitional Ambidexterity and Fit



Source: Author

Thus, the entire firm becomes ambidextrous by setting up different business units with unique structures, processes, and cultures that can either focus on explorative activities (and thus follow the prospector profile) or exploitative activities (and consequently follow the defender profile). In this way, in each independent unit the dedicated strategy and structure align to achieve the highest performance by following Miles and Snow’s profiles for creating a fit between strategy and structure.

4.1.5. Recapitulating Evaluation on Similarities and Differences

At first glance, the concept of fit and the idea of organizational ambidexterity seem highly contradictory, as the classical interpretation of concept of fit argues that

⁵²⁰ Kleinbaum/Tushman (2008), p. 191.

firms will perform better if they align their structure to their strategy but in practice this mostly leads to a focus on either explorative or exploitative activities.⁵²¹ However, having analyzed the four fields of Simsek's typology and its interaction with Miles and Snow's profiles of strategy-structure fits in detail, it becomes clear that we can view a fit of strategy and structure and the concept of organizational ambidexterity as complements rather than contradictions, as firms have several ways to combine exploitation and exploration and thus create ambidexterity, while also maintaining a fit of strategy and structure to a selected focus.⁵²²

As the detailed analysis of both approaches show, while the concepts of fit and organizational ambidexterity share the same roots, research and practice in the past decades mostly interpreted the concept of fit as either explorative or exploitative behavior (e.g., prospector or defender). Moreover a hybrid strategy, combining both extremes (e.g., analyzer) and thus being more complex to implement, was believed to have similar performance outcomes as the focused forms.⁵²³ However, due to the increasing needs of practice, today's researchers have developed suitable concepts for implementing organizational ambidexterity, including simpler ways toward implementation and thus more reasonable ways to overcome the paradox situation.

In the case of cyclical ambidexterity, the company aligns its strategy and structure to either an explorative (prospector) or exploitative (defender) focus, depending on the goal of the respective period; it thus creates a fit of strategy and structure according to Miles and Snow's typology timewise. Due to the separation of the business units, having a clear focus on either explorative (prospector) or exploitative (defender) activities and thus an alignment of strategy and structure enhancing the performance of the single unit, the case of partitional ambidexterity shows another possibility of combining a fit of strategy and structure and organizational ambidexterity. Lastly, in the case of reciprocal ambidexterity, the units in the network can align their strategy and structure according to their part in the value chain and their respective explorative (prospector) or exploitative

⁵²¹ Miles et al. (1978), p. 448.

⁵²² Gibson/Birkinshaw (2004), p. 209; Simsek (2009), p. 597; Tushman/O'Reilly III (1996), p. 24.

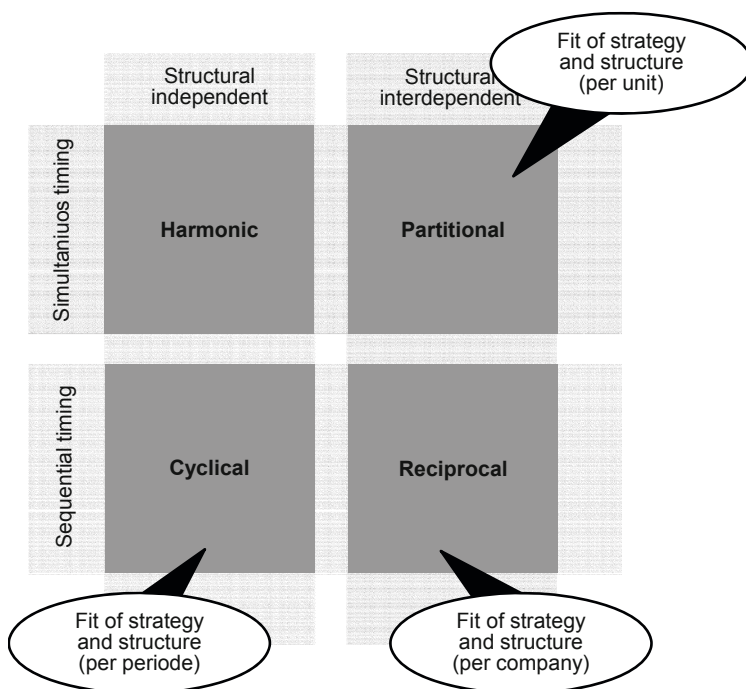
⁵²³ Desarbo et al. (2005), p. 51.

(defender) activity. Again, creating a fit of strategy and structure will lead to better performance per unit. We can see harmonic ambidexterity, however, as the most complex way for a company to become ambidextrous. Here, only a fit of strategy and structure is given if the company defines itself as an analyzer type, using the company culture or dedicated ways of communication and leadership to promote ambidexterity.⁵²⁴

To summarize, we can say that in three cases, namely partitional, cyclical, and reciprocal ambidexterity, companies will be able to create a fit of strategy and structure focused on either explorative or exploitative activities and thus follow Miles and Snow's defender or prospector profile to become ambidextrous. In the case of harmonic ambidexterity, a fit between strategy and structure will only be possible if the company follows Miles and Snow's analyzer profile. Hence, companies creating organizational ambidexterity can use the results from research and practice from the past decades and implement the respective fit of strategy and structure in the best possible way. However, actual research on ambidexterity shows that companies have to re-interpret the classical paradigm of fit and not only focus on either exploration or exploitation solely but also become ambidextrous in the long run (Fig. 23).

⁵²⁴ Jansen et al. (2008), pp. 998–999; Bierly/Daly (2007), p. 4.

Figure 23: Types of Organizational Ambidexterity and Fit



Source: Author

4.2. Development of Hypotheses

While the earlier part of this chapter focused on the synthesis of the two main concepts of this study, the fit between strategy and structure and organizational ambidexterity, the next section points out its relationships to each other and thus possible implications for research and practice. Thus, for every relationship hypotheses will be formulated for empirical validation later.

In general, this section will analyze three main relationships. First, the relevance of the concept of fit and its influence on a firm's performance is discussed. The next section focuses on organizational ambidexterity and firm performance. Then, an

examination of different relationships of organizational ambidexterity and Miles and Snow's types of fit between strategy and structure follows. Finally, the control variables and their influence on the described relationships are explained. All developed hypotheses from the mentioned relationships are summarized in the research model at the end of the chapter.

4.2.1. Fit and Performance

In Miles and Snow's typology, to operationalize the concept of strategic fit organizations can choose between two contrary, focused strategy-structure options, namely defender and prospector.⁵²⁵ In any of these cases, theory states that the firm should align its structure to the chosen strategic orientation to create a fit and ultimately finally perform better than those that do not strive for this fit.⁵²⁶ Thus, choosing the defender approach requires a clear focus on efficiency and centralized decision making on the part of the firm. If the company conversely aims to apply the prospector approach, it must create new opportunities by giving flexibility to the organization through decentralized decision making.⁵²⁷

However, research on organizational ambidexterity shows that given the intensified competition and today's pace of change in the markets, firms increasingly face a growing need to exploit existing competencies and explore new ones,⁵²⁸ operate in multiple timeframes,⁵²⁹ create and sustain competitive advantages,⁵³⁰ and be capable of changing and stabilizing.⁵³¹ These severe changes lead to certain constraints on the selection of the two extreme strategy options, defender and prospector. As early as 1993, Hamel and Prahalad argued that the idea of creating a fit of strategy and structure is not wrong, but in certain cases unbalanced:

⁵²⁵ Miles et al. (1978), p. 448.

⁵²⁶ Miles/Snow (1984), pp. 10–16.

⁵²⁷ Doty/Glick (1994), p. 231.

⁵²⁸ March (1991), pp. 71–72.

⁵²⁹ Gavetti/Levinthal (2000), p. 113.

⁵³⁰ Grant (1996), p. 375.

⁵³¹ Volberda (1998), p. 26 ff.

Every company must ultimately effect a fit between its resources and the opportunities it pursues, that resource allocation is a strategic task, and that managers must often countenance risk and uncertainty in the pursuit of strategic objectives all go without saying. But the predominance of these planks in corporate strategy platforms has obscured the merits of an alternative frame in which the concept of stretch supplements the idea of fit, leveraging resources is as important as allocating them, and the long term has as much to do with consistency of effort and purpose as it does with patient money and an appetite for risk.⁵³²

Today, a sole focus on explorative activities (as in the prospector case) does not lead to a firm's success in the long run since this constant renewal of the knowledge stock leads to a failure trap—an endless cycle of search and unrewarding change.⁵³³ We can assume a similar scenario for a strong focus on exploitative activities (as in the defender type). In the latter case, exploitation refers to incremental innovations of existing products. Although the exclusive pursuit of this activity may result in short-term performance enhancements due to increased efficiency, it ultimately leads to a competency trap. Due to the focus on the current environment (and non-adaptation to significant environment changes), skills and knowledge get outdated over time and thereby long-term performance diminishes.

Thus, a firm, designing its business with either an explorative or exploitative focus only and therefore creating a fit of strategy and structure will not succeed in today's market environment in any sustainable way. This leads to the first set of hypotheses:

Hypothesis 1a:

Being a defender-type company, focusing only on exploitative activities and creating a fit between strategy and structure will not positively influence firm performance.

⁵³² Hamel/Prahalad (1993), p. 75.

⁵³³ For this and the following see Levinthal/March (1993), p. 95.

Hypothesis 1b:

Being a prospector-type company, focusing only on explorative activities and creating a fit between strategy and structure will not positively influence firm performance.

While it seems that a clear focus and a fit of strategy and structure for defender and prospector types no longer provides long-term success due to the previously described shortcomings, we need to examine the analyzer type differently. Over time, different scholars have discussed the challenge of managing two different business models in the same industry at the same time, leading to a certain “hybrid” situation.⁵³⁴ Hence, a strategic type like Miles and Snow’s analyzer, combining both efficiency and flexibility, could overcome the danger implied by both the failure and competency trap. Thus, creating a fit of strategy and structure in the case of the analyzer type seems a reliable option for companies, leading to the following hypothesis:

Hypothesis 1c:

Being an analyzer-type company, fostering both exploitative and explorative activities and thus creating a fit between strategy and structure will positively influence firm performance.

4.2.2. Ambidexterity and Performance

Considering the described changes in the environment,⁵³⁵ the development of the markets,⁵³⁶ the shortening of product life cycles, and ever-shifting customer preferences,⁵³⁷ a logical consequence follows that today’s companies have to react. Even worse, as the literature on organizational ambidexterity shows,

⁵³⁴ Porter (1985), p. 17.

⁵³⁵ Grant (1996), p. 375.

⁵³⁶ D’aveni/Gunther (2007), p. 83.

⁵³⁷ Bettis/Hitt (1995), p. 7.

companies that still focus on either explorative or exploitative behavior tend to fall into a failure or competency trap, risking the overall existence of the company.⁵³⁸

As today's managers understand challenges from external and specific industry environments, they need a certain level of flexibility to quickly adapt to changes, while on the other hand they need to maintain stability to reduce ambiguity by managing current affairs.⁵³⁹ These contradictory demands necessitate firms to build up organizational structures and strategies, enabling a duality of these opposite poles of flexibility and efficiency.⁵⁴⁰ As a consequence, companies start moving away from a focused strategy by building up ambidextrous capabilities. As the comparison of different concepts on organizational ambidexterity has shown, companies have different paths to follow in creating ambidexterity, such as creating dual structures or switching from periods of exploration to periods of exploitation. Regardless of the approach, the move from one particular focus towards organizational ambidexterity signifies one of the toughest of all managerial challenges, as it requires exploring new opportunities while exploiting existing capabilities simultaneously.⁵⁴¹

While companies start building capabilities to create organizational ambidexterity using very different approaches, the result is generally believed to be the key driver of firm performance in the long run.⁵⁴² Empirical studies on financial performance of ambidextrous firms and researchers in the field have found organizational ambidexterity positively associated with firm performance,⁵⁴³ thus confirming this assumption of company leaders.

Recapitulating the described developments, one can say that in sum, an ambidextrous firm can achieve higher performance and sustainability, avoid major or sudden changes, avert organizational inertia, and benefit from changes beyond its control because it remains in anticipation mode, open to take action and to shape

⁵³⁸ March (1991), p. 71 ff.

⁵³⁹ Leana/Barry (2000), p. 753.

⁵⁴⁰ Brown/Eisenhardt (1997), p. 1.

⁵⁴¹ Tushman/O'Reilly III (2002), p. 178.

⁵⁴² March (1991), p. 71.

⁵⁴³ Birkinshaw/Gibson (2004), p. 219; He/Wong (2004), p. 491; Lubatkin et al. (2006), p. 665; Schulze et al. (2008), p. 4; Han/Celly (2008), p. 335; Markides/Chu (2008), p. 23; Yu et al. (2008), p. 2501; Burpitt (2009), p. 227; Sarkees/Hulland (2009), p. 45.

its own future.⁵⁴⁴ While several empirical studies on ambidexterity have shown that organizations certainly perform better if they succeed in building up contradictory capabilities, recent studies highlight that organizations that can achieve a high-level balance between both will succeed more than others.⁵⁴⁵ Hence, the building of ambidextrous capabilities allows the organization to be efficient in the management of its business, while also having the needed flexibility to adapt to new challenges and opportunities in the environment.⁵⁴⁶ This leads to the next hypothesis:

Hypothesis 2:

For every company, the higher the level of organizational ambidexterity, the better the firm performance.

4.2.3. Ambidexterity versus Fit

Reviewing the literature of strategic fit and organizational ambidexterity has shown that both streams share a common understanding of factors important for the success of an organization. Moreover, it became clear that generally, the idea of a fit between strategy remains valid, but a focus on either exploitative or explorative activities will lead to certain traps, diminishing the firm's success in the long run. A first call for ambidexterity could be found in the earliest discussion in the strategic management literature and has been operationalized as the analyzer type in Miles and Snow's framework. However, as recommendations for implementing this paradox approach were rare, scholars first basically argued that a balanced approach would benefit a firm, but it is hard to achieve.⁵⁴⁷ However, the practical needs from the changing environment and March's contribution made the concept popular again, so today's literature offers diverse ways to implement ambidextrous capabilities in a firm. Thus, we can say that in line with recent studies on organ-

⁵⁴⁴ Tushman/O'Reilly III (2002), p. 3.

⁵⁴⁵ He/Wong (2004), pp. 481–494; Lubatkin et al. (2006), pp. 646–672.

⁵⁴⁶ For this and the following see Benner/Tushman (2003), pp. 238–256; Gibson/Birkinshaw (2004), pp. 209–226.

⁵⁴⁷ Miles/Snow (1984), pp. 10–16.

izational ambidexterity, one could argue that both high capabilities for exploitation and exploration in a high degree are important to ensure long-term success.

On their way to achieve a high level of organizational ambidexterity, companies should still apply proven profiles (such as those of Miles and Snow's typology), and thus temporarily or partially create a fit of strategy and structure. Nevertheless, to have a sustainably high performance, companies have to move from the classical paradigm of focusing on either explorative or exploitative behavior and become an ambidextrous organization. Thus, we can conclude that an ambidextrous orientation has become a more important driver of success than a total alignment of the strategy and structure of an organization on either efficiency or flexibility. This notion leads to the final hypothesis of this study:

Hypothesis 3:

In a direct comparison, exclusively defender and prospector type companies implementing only the classical, focused interpretation of the concept of fit will find less success than those with established ambidextrous capabilities.

4.2.4. The Right Level of Exploration and Exploitation

Despite investing significant resources, some companies remain unsuccessful in their efforts to become ambidextrous.⁵⁴⁸ While today's companies need to become ambidextrous instead of focusing on one strategic orientation solely, as postulated previously,⁵⁴⁹ today's managers still can apply the recommendations and ideal types towards a focused orientation of the Miles and Snow typology (defender, prospector), operationalizing a fit between strategy and structure. In fact, a variety of different ways exists to develop ambidextrous capabilities while also using the insights from creating a fit between strategy and structure. This is especially

⁵⁴⁸ Markides/Oyon (2010), p. 25.

⁵⁴⁹ See especially the results of chapter 4.1 for ways to combine a fit between strategy and structure to one focus, while transitioning to an ambidextrous organization.

helpful as companies “born ambidextrous” (e.g., the analyzer type in Miles and Snow’s typology) represent a minority.⁵⁵⁰

Nevertheless, while current research has confirmed a positive relationship of ambidexterity and firm performance, it seems that only a few firms can balance the recommended and needed high degree of efficiency and innovation.⁵⁵¹ Thus, O’Reilly and Tushman postulated that focused firms should make small, incremental changes finally leading to this revolutionary change.⁵⁵² Consequently, today’s companies strive to develop missing compatibilities and move stepwise away from a focus on either explorative or exploitative activities.

As presented in the previous chapter of this dissertation, a defender-type company, for example, could set up a second business unit with a more prospector-type orientation and by doing so create partitional organizational ambidexterity. Prospector-type firms, on the other hand, could shift to more operational efficiencies as soon as an innovative product becomes ready for marketing, allowing a reinvestment in new products. Here, timewise changes between prospector and defender behavior creates cyclical organizational ambidexterity. In these three cases, namely, partitional, cyclical, and reciprocal ambidexterity, companies can create a fit of strategy and structure, focused on either explorative or exploitative activities and thus follow Miles and Snow’s defender or prospector profile, to become ambidextrous.

However, as a 2005 survey of global executives highlighted, the existence of internal battles for resources with an emphasis on efficiency or on innovation, but rarely both, exists within many firms.⁵⁵³ Organizational inertia makes firms stick to a particular path: taking into consideration the different starting points of firms, due to their originally selected strategy (a defender will start with a high level of exploitative capabilities, while a prospector will start with a high level of explorative

⁵⁵⁰ The literature shows that in classical samples analyzer types are always less represented as defender or prospector types; see, e.g., Zahra/Pearce (1990).

⁵⁵¹ See Lubatkin et al. (2006), p. 655–657. Researchers continue to discuss whether ambidexterity is a product of exploration and exploitation or if it should be calculated in a different way.

⁵⁵² Tushman/O’Reilly III (2002), p. 178.

⁵⁵³ Accenture (2005), pp. 2–3.

capabilities), we can assume that different combinations of exploration and exploitation will result.

Porter's 1985 discussion about being "stuck in the middle" offered a similar situation, defined by a strategic move from an organization with a clear focus to a hybrid position.⁵⁵⁴ Porter's typology—similar to Miles and Snow's—suggested selecting either a differentiation or cost-price-leadership strategy. He also described the advantages of an outpacing position, combining the advantages of both positions. Nevertheless, he warned companies about the risk of giving up the focused position and trying to move to the hybrid corner. A comparable situation is true for organizations deciding to move from a focused position towards organizational ambidexterity; while a focused position may lead to a certain short-term performance⁵⁵⁵, today's companies prefer a basis for sustainable performance and will build up to ambidextrous capabilities. However, by starting to move, they risk a situation that shows a lower performance level than their initial position.

In case the company decides to use the approach of reciprocal ambidexterity, for example, a shift made too quickly from explorative and exploitative behavior might confuse the employees, as routines may not develop to a sufficient level in the allotted time; thus, in every period the company reaches neither a high level of exploration nor a high level of exploitation.⁵⁵⁶ In this case, the consequence results in a change from the original position, but the company fails in its ultimate goal of arriving at ambidexterity. Instead, the implemented changes lead to a contradictory outcome, as expected, as the firm neither has a clear focus nor has it become an ambidextrous organization. This leads to the next hypothesis:

Hypothesis 4:

Companies implementing only medium levels of exploration and exploitation risk ending up with a lower performance than focused and high-level ambidextrous companies.

⁵⁵⁴ Gulati/Puranam (2009), pp. 4–5.

⁵⁵⁵ Levinthal/March (1993), p. 95; March (1991), p. 78.

⁵⁵⁶ Simsek et al. (2009), p. 889.

4.2.5. Control Variables

To this point, this paper has paid no particular attention to the structural differences of the firms; the previous hypotheses treated them as a homogenous species. This section now discusses how specific firm characteristics may affect the prevalence of the traits investigated and their described relationships. Reviewing strategic management literature and analyzing the fit between strategy and structure or organizational ambidexterity, it becomes obvious that company age and company size belong to the most frequently used control variables, as several arguments have supported their influence on firm performance.⁵⁵⁷ As not including a firm's size and age risks biased results, the research model integrated both,⁵⁵⁸ and transformed both by their square root, as the existing literature recommends.

Firm Age

Leading scholars believe firm age affects financial performance through its influence on the effectiveness of resource disposition, and I included it in this dissertation.⁵⁵⁹ Specifically, researchers consider mature companies more effective in their resource utilization compared to younger ones, as institutional routines and norms engender inertial behaviors.⁵⁶⁰ Consistent with previous research, I measured firm age based on the number of years the firm has existed.⁵⁶¹

Firm Size

Generally, firm size influences financial performance, as larger firms have the ability to access capital for lower costs. Moreover, they profit from economies of

⁵⁵⁷ For this and the following see Xu et al. (2006), pp. 14–15; Amburgey/Dacin (1994), pp. 1440–1441; Lubatkin et al. (2006), pp. 658–659.

⁵⁵⁸ Day/Lord (1988), p. 456.

⁵⁵⁹ See, e.g., George (2005).

⁵⁶⁰ Tushman/Romanelli (1985)

⁵⁶¹ Brouthers/Nakos (2005)

scale.⁵⁶² On the other hand, this variable has been often associated with inertia. Larger companies might have difficulty in processing information related to a change and fail to adapt quickly.⁵⁶³ Therefore, I measured firm size based on the number of full-time employees as studies that included performance as a dependent variable included this factor typically as a control variable.

Industry

While company age and size might influence the results of a company in a certain individual way, we can find another potential performance influence for whole groups of firms in the industry itself. This cross-sectional study covers many different industries that temporarily might have more positive or negative results compared to other industries. This could influence the results of the study and thus was controlled in the research model. Nevertheless, while the inclusion of industry context remains important, its implementation proved difficult. I used the Federal Statistical Office's "Classification of Economic Activities (WZ 2008)" to access the needed information.

Pre-Performance

Finally, previous studies have suggested inclusion of control variable pre-performance to capture only the performance effect of the selected relationship, such as fit of strategy and structure or organizational ambidexterity.⁵⁶⁴ In this present study pre-performance signified a relevant dimension, especially when directly comparing fit and ambidexterity effects.

We can summarize by saying that the derived research model on the influence of a fit between strategy and structure and organizational ambidexterity on company performance included company age, company size, pre-performance, and the main industry as control variables.

⁵⁶² Chang/Thomas (1989), Goerzen/Beamish (2005)

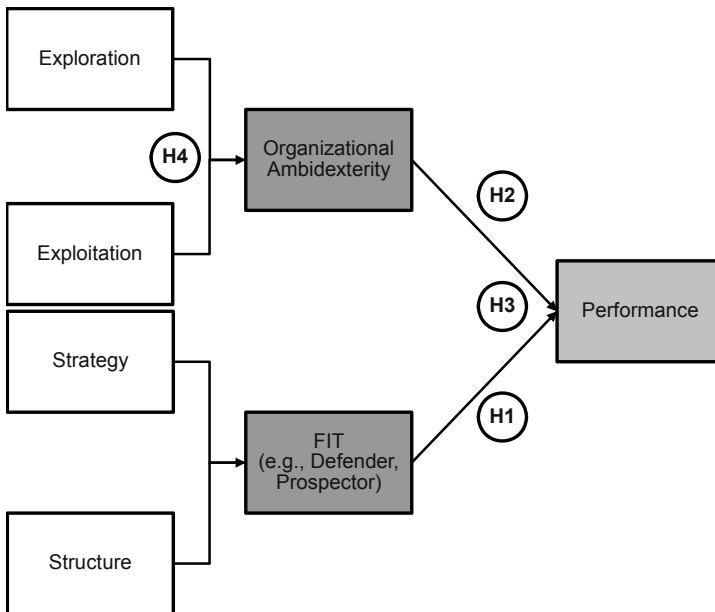
⁵⁶³ Hannan/Freeman (1989)

⁵⁶⁴ Giambattista/Rowe/Riaz (2005), p. 986; Bigley/Wiersema (2002), p. 717.

4.3. Development of the Research Model

The first parts of this chapter provided the theoretical framework and argumentation of the hypotheses for the empirical part of the study. In total, the paper highlighted four different relationships and developed different sets of hypotheses to provide up-to-date answers for research and practice. Figure 24 summarizes the full research model.

Figure 24: Summary of Hypotheses and Research Model



First, we analyze the influence of a fit of strategy and structure on a firm's performance. For the focused interpretation of this concept, namely, the defender and prospector type firms (Hypotheses 1a and 1b), we expect no positive influence on firm performance. For analyzer types (Hypothesis 1c), however, we can predict a fit of strategy and structure to influence firm performance positively.