



**UNIVERSITY  
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Turku School of  
Economics

# **Leveraging Organizational Structure to Achieve Ambidexterity as a Dynamic Capability in Service Organizations**

International Business / Turku School of Economics

Master's thesis

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This thesis investigates how service firms can achieve organizational ambidexterity as a dynamic capability for sustained competitive advantage. Through 7 semi-structured expert interviews in the German real estate industry, key characteristics of the service sector influencing ambidexterity are identified, along with factors shaping organizational structure. These factors are grouped into organizational, individual, project and process, as well as external factors. Three main Models are presented. First, for the overall mechanisms and interaction of strategy, organizational ambidexterity, dynamic capabilities, and innovation, leading to a sustained competitive advantage. Second, for the mechanisms of characteristics of service firms and factors that influence organizational structure leading to a sustained competitive advantage, and third for a hybrid form of organizational structure to achieve organizational ambidexterity. Those findings contribute theoretical insights, offering a nuanced view of ambidexterity for service firms while providing a foundation for future research in related fields. Practical implications guide service firm managers and managers in real estate. Overall, the thesis unveils comprehensive models and insights to navigate the balance between exploitation and exploration in the dynamic service sector.

**Keywords:** Organizational Ambidexterity, Dynamic capabilities, Competitive advantage, Strategy, Innovation, Organizational Structure, Service, Real Estate.

Masterarbeit

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Diese Arbeit untersucht, wie Dienstleistungsunternehmen organisatorische Ambidextrie als dynamische Fähigkeit für einen nachhaltigen Wettbewerbsvorteil erreichen können. Anhand von 7 semi-strukturierten Experteninterviews in der deutschen Wohnungswirtschaft werden zentrale Merkmale des Dienstleistungssektors, die Ambidextrie beeinflussen, sowie Faktoren, die die Organisationsstruktur beeinflussen, identifiziert. Diese Faktoren werden in Organisations-, Individuelle-, Projekt- und Prozess- sowie externe Faktoren eingeteilt. Es werden drei Modelle vorgestellt. Erstens für die allgemeinen Mechanismen und die Interaktion von Strategie, organisationaler Ambidextrie, dynamischen Fähigkeiten und Innovation, die zu einem nachhaltigen Wettbewerbsvorteil führen. Zweitens für die Mechanismen der Merkmale von Dienstleistungsunternehmen und Faktoren, die die Organisationsstruktur beeinflussen und zu einem nachhaltigen Wettbewerbsvorteil führen, und drittens für eine hybride Form der Organisationsstruktur, um organisatorische Ambidextrie zu erreichen. Diese Ergebnisse tragen zu theoretischen Erkenntnissen bei und bieten eine differenzierte Sicht auf die Ambidextrie von Dienstleistungsunternehmen und bieten gleichzeitig eine Grundlage für künftige Forschung in verwandten Bereichen. Praktische Implikationen unterstützen die Manager von Dienstleistungsunternehmen und Unternehmen in der Wohnungswirtschaft. Insgesamt stellt die Arbeit umfassende Modelle und Erkenntnisse vor, um das Gleichgewicht zwischen Exploitation und Exploration im dynamischen Dienstleistungssektor zu gestalten.

**Schlüsselwörter:** Organisatorische Ambidextrie, dynamische Fähigkeiten, Wettbewerbsvorteil, Strategie, Innovation, Organisationsstruktur, Dienstleistung, Immobilien.

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# 1 Introduction

## 1.1 Success of firms through organizational ambidexterity and dynamic capabilities

In today's fast-changing business environment, agility and innovation are key drivers for a company's competitiveness and therefore its success. Organizational structure, as part of the concept of organizational design (Nadler et al. 1997, 32), and an organization's capabilities play a critical role in shaping behaviours and activities within an organization, which in turn impact the innovativeness and competitiveness of a firm. It is generally accepted, that a firm must capitalize on the current success of a business model while at the same time preparing for future competitiveness. The concept addressing the balancing act between exploitation and exploration is called organizational ambidexterity (see, for example, O'Reilly & Tushman 2004, 75-76). One element of organizational ambidexterity concerns organizational structure (O'Reilly & Tushman 2013, 327), i.e., to use organizational structure to achieve organizational ambidexterity. Several studies suggest that organizational ambidexterity can lead to increased performance (see, for example, Birkinshaw & Gibson 2004; O'Reilly & Tushman 2013; He & Wong 2004; Raisch & Birkinshaw 2008). Organizational ambidexterity can become a dynamic capability (see, for example, O'Reilly & Tushman 2008; Fernández-Mesa et al. 2013; O'Reilly & Tushman 2011), which is how firms deal with changing environments (Barreto 2010, 256). Dynamic capabilities can create a sustained competitive advantage for the respective firms in fast-changing environments (see, for example, Teece 2007; Eisenhardt & Martin 2000; Wang & Ahmed 2007). Therefore, in this thesis, organizational ambidexterity is viewed through the lens of dynamic capabilities<sup>1</sup>.

As the investigation into organizational ambidexterity continues, it becomes clear that there is a significant gap in knowledge regarding how different organizational structures can best facilitate the balance between exploration and exploitation, especially in service firms.

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<sup>1</sup> "The appropriate lens through which to view ambidexterity remains that of dynamic capabilities" (O'Reilly & Tushman 2013, 332)

## 1.2 Research gap

Despite the importance and long history of research on organizational ambidexterity, there is still little known about the organizational structure most effective for establishing organizational ambidexterity (see, for example, Raisch et al. 2009, 685-686). This is supported by the following statement: “Although near consensus exists on the need for balance [between exploitation and exploration], there is considerably less clarity on how this balance can be achieved” (Gupta et al. 2006, 697). Generally, three approaches to organizing organizational ambidexterity through organizational structure are presented in literature: structural, contextual, and sequential ambidexterity (O’Reilly & Tushman 2013, 327). Hereby, a structural approach is the separation of exploitation and exploration into different organizational units whereas a contextual approach is on the contrary exploiting and exploring within the same unit (Raisch & Birkinshaw 2008, 389). A sequential approach is a temporal alternation between the two activities (Duncan 1976), which however seems impractical for most mature firms (Olivan 2019, 41). Mostly, these approaches have been looked at individually but there is a lack of integrated studies considering all or a combination of them (Ossenbrink et al. 2019, 1322).

Besides its strategic relevance, there is little known about in which industry or context which approach of organizational ambidexterity is more suitable (Fourné et al. 2019, 564; Ossenbrink et al. 2019, 1322). Fourné et al.’s (2019) meta-analysis finds that different approaches to organizational ambidexterity are more effective than others when the industry type changes (Fourné et al. 2019, 570-571). Specifically, they compare manufacturing and service firms. To investigate service firms is particularly relevant, as little research is yet done on service firms and organizational ambidexterity (cf. Blindenbach-Driessen & van den Ende 2014, 1089), even though service firms make the largest contribution to Western societies’ economies (approximately 60-80% of GDP) (World Bank 2023). The characteristics of service firms might be the reason for the need for a different organizational structure to become ambidextrous. For example, customer co-creation in services (see, for example, Haller & Wissing 2020, 10) could create the need for service firms to efficiently manage customer interactions and standardize processes while ensuring a consistent and personalized customer experience. At the same time, co-creation allows the involvement of customers in the innovation processes. Another characteristic of services is the simultaneity of consumption and production (see, for example, Weiber & Billen 2005, 94), which poses the need to ensure service quality

even in dynamic, simultaneous production-consumption environments, and at the same time new innovations can be experimented with in real-time.

Fourné et al.'s (2019, 572) findings suggest, that for service firms: “adopting the contextual or other approaches to balancing exploration and exploitation – ideally drawing on the same people or teams – seems recommendable”. It is however noteworthy that the authors did not explicitly test for contextual ambidexterity but rather implicitly assumed contextual ambidexterity to be present when structural ambidexterity was absent (Fourné et al. 2019, 573). Kortmann (2012, 107) found that contextual ambidexterity has a positive effect on innovative ambidexterity – the achieved ambidexterity – and therefore supports the assumptions made by Fourné et al. (2019). In contrast, Blindenbach-Driessen and van den Ende (2014, 1100) found that a separate innovation unit, and therefore following a structural approach, has a positive effect on exploitation and exploration performance, hence on organizational ambidexterity, in both manufacturing and service firms.

All three studies by Fourné et al. (2019), Kortmann (2012), and Blindenbach-Driessen and van den Ende (2014) test for one type of organizational ambidexterity, either structural or contextual. Also, all are comparing service with manufacturing firms (among other factors). Concerning service firms, they find contradictory results. Fourné et al. (2019, 564) analyse that “although both structural and contextual approaches to ambidexterity have received support in stand-alone primary studies, the conditions under which these different approaches are more or less viable solutions for balancing exploration and exploitation remain unclear”.

### **1.3 Research question and structure**

In this thesis, the call for more insights on organizational ambidexterity in service settings is answered (see, for example, Fourné et al. 2019, 572; Marabelli et al. 2012, 123). Considering the research gap, the research questions guiding this thesis are presented in this section.

The main research question, based on the research gap, is:

*How do service firms develop organizational ambidexterity as a dynamic capability to achieve sustained competitive advantage?*

In answering this research question, it is expected to gain an understanding of the concepts of sustained competitive advantage, organizational ambidexterity, and dynamic capabilities. The research gap can be bridged, and a theoretical and practical contribution can be made. As the research questions below address specifically the organizational structure for ambidexterity, the focus is put on this as well in the literature review and the findings.

To address the research gap more specifically, the following sub-research questions will be used to guide this thesis:

1. *How are competitive advantage, organizational ambidexterity, and dynamic capabilities related?*
2. *How are the key characteristics of service firms influencing organizational ambidexterity?*
3. *Under which conditions do structural-, contextual-, or hybrid forms of ambidexterity become a dynamic capability in service firms?*
4. *How does the organizational structure to achieve organizational ambidexterity as a dynamic capability lead to a sustained competitive advantage in service firms?*

The first sub-question is posed to gain a clear understanding of the concepts individually, as well as their connections. This is important to answer the main research question effectively, as it lays the foundations. Understanding the connections is also expected to contribute to academia, especially in the field of strategic management. The second sub-question connects the findings of the relations of the concepts concretely to service firms. Here, the specifics of service firms are combined with the findings of organizational ambidexterity. The third research question is expected to find under which conditions a structural separation or contextual approach is more effective in establishing ambidexterity in service firms. It also includes the possibility of a mixed form. In the fourth sub-question, the connection is drawn on how these insights can lead to a sustained competitive advantage. The questions are specifically targeting the investigation of service firms, which in this study is at the example of real estate firms. This choice is made because of the lack of understanding of ambidexterity in service firms elaborated on in the research gap section above.

As stated, in this thesis, real estate firms in Germany will be the subject of investigation. This is for several reasons: a) Real estate firms contribute approximately 10% of gross value added (excluding construction) to the German GDP (Statistisches Bundesamt [Federal Office of Statistics] 2023a, 61) and therefore making it particularly relevant for the economy to understand its current and future success, b) real estate firms are increasingly in need of innovation in a digitalization context (Vigren et al. 2022, 91), especially when considering that the real estate industry is lagging the technology curve by five years (Ullah et al. 2018, 2), and c) high price pressures are present in the industry due to increased construction and financing costs (Ifo Institute 2023), higher costs for renovation, and increased regulation, overall leading to fewer houses being built and renovated, causing increased market dynamics. For real estate firms in the context of dynamic markets, “dynamic capabilities [are needed] to meet the changing supply of services, to assimilate new technologies into the organization and to apply technologies to commercial ends” (Vigren et al. 2022, 91). For these reasons, the real estate industry is an interesting industry to study the research gap of ambidexterity in service firms.

## **2 Literature Review**

In this chapter, the literature relevant to the research questions is reviewed. It starts with competitive advantage and strategy, followed by dynamic capabilities and innovation. After that, organizational ambidexterity, the core concept of this thesis, is reviewed in depth. Here, connections to the other concepts are drawn and a theoretical framework is presented. Lastly, the service sector and organizational structure are introduced and the implications it can have for ambidexterity.

### **2.1 Competitive advantage through strategy**

The following section addresses the part of the research questions on how to develop and sustain competitive advantage. It is the goal or outcome of the activity of most firms. It is important to lay these foundations because organizational ambidexterity and dynamic capabilities have the goal of creating, enhancing, and sustaining competitive advantage (cf. Popadiuk et al. 2018, 641). Making choices between the allocation of resources between exploitation and exploration, i.e., organizational ambidexterity, is “a central concern of corporate strategy” (He & Wong 2004; O’Reilly & Tushman 2011, 9). Also, it can be argued that ambidexterity determines the effectiveness of strategy (Chaharbaghi & Lynch 1999, 45). Concluding: “Organizational ambidexterity is an emerging theme in the area of organizational strategy” (De Almeida Guerra & Camargo 2021, 99). This chapter and the research questions are also an answer to the call for integration of strategic management into the ambidexterity debate (Raisch & Birkinshaw 2008, 399). Hence, it is first relevant to understand the concept of strategy and competitive advantage more in-depth.

Strategy is rooted in various disciplines such as military, business, and management (Simeone 2020, 516). A general statement of strategy, concerning a business and management perspective, which is the view in this thesis, can be: “the core of strategy work is always the same: discovering the critical factors in a situation and designing a way of coordinating and focusing actions to deal with those factors” (Rumelt 2011, 3). The definition implies that strategy is dynamic, and the organizations need to address critical factors arising from external and internal environmental changes. The concept of competitive advantage introduced by Mintzberg (1978) is in line with this, while Porter (1996) has a slightly different perspective on the need for strategy to be dynamic. This

research is designed to deepen the understanding of the success of firms and therefore their competitive advantage, i.e., the strategic positioning of a firm compared to its competitors (Porter 1980). According to Porter (1991, 95), the study of the success of firms is the central question in strategy. Mintzberg (1978, 948) goes as far as to argue that “there is perhaps no process in organizations that is more demanding of human cognition than strategy formation”. A typical definition of strategy in management theory is: “the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals” (Chandler 1962, 13). This typical definition can be termed as “intended strategy”, because strategy is treated as “explicit, [...] developed consciously and purposefully, and [...] made in advance of the specific decisions to which it applies” (Mintzberg 1978, 935). This specification is made, because it can be argued that (realized) strategy is already present “when a sequence of decisions in some area exhibits a consistency over time” (Mintzberg 1978, 935). On the other hand, it can be argued that strategy is positioning in the market and is not, as frequently demanded, in need of constant change because of dynamic markets and technologies (Porter 1996, 37). Put simply: “Competitive strategy is about being different” and “it means deliberately choosing a different set of activities to deliver a unique mix of value” (Porter 1996, 39).

In this thesis, strategy is viewed as a dynamic concept. It is crucial to embed the dynamic capabilities and organizational ambidexterity into a coherent strategy, which can then lead to a sustained competitive advantage. The emphasis on long-term success in strategy makes the other concepts relevant as a current competitive advantage needs to be exploited while in a dynamic market, the firm constantly needs to explore new opportunities and future success, which can then become a competitive advantage that sustains over time. All in all, strategy, and its goal to achieve a sustained competitive advantage are relevant to the research questions. It is the frame, in which the other concepts act, especially considering management or leadership, who orchestrate strategy, which is also a key element of the other concepts, as will be seen in the next sections.

## 2.2 Dynamic capabilities needed to adapt to changes

### 2.2.1 Dynamic capabilities and the resource-based view

The resource-based view is a concept explaining competitive advantage and how it can be sustained while focusing on the internal organization (see, for example, Barney 1991, 101). Focusing on the internal organization and inter-firm differences in performance sets the resource-based view as a complement to the external-focused approach to competitive advantage (Lockett et al. 2009, 10). The main idea is to view the firm as a bundle of resources and capabilities, which can be tangible or intangible (Amit & Schoemaker 1993, 37). Resources are defined as “stocks of available factors that are owned or controlled by the firm” and capabilities “refer to a firm's capacity to deploy resources, usually in combination, using organizational processes, to effect a desired end” (Amit & Schoemaker 1993, 35). The resource-based view draws on the assumption that resources are heterogeneous and immobile (Barney 1991, 103). For resources to become a sustained competitive advantage, Barney (1991, 105-106) introduced the VRIN model, which defines attributes the resources must have. According to this model, the resources must be valuable, rare, inimitable, and non-substitutable. This model can set the conditions under which a resource gets strategic significance (Lockett et al. 2009, 11). Therefore, it could be argued that the VRIN model is a framework for strategy because the attributes can be used to be developed in a way to achieve a sustained competitive advantage.

However, the constant change of the environment or a “Schumpeterian Shock” can cause current competitive advantages to vanish or even become irrelevant in a new industry structure (Barney 1991, 103). In this definition, a sustained competitive advantage is not determined by calendar time but by the inability of competitors to make the source of the competitive advantage vanish (Barney 1991, 102-103). Therefore, the resource-based view admits, that there is change in markets, however, it assumes a static set of resources. “In a dynamic environment firms cannot derive an SCA [sustained competitive advantage] from a static set of resources” (Kraaijenbrink et al. 2010, 354). The authors conclude that “a competitive advantage can be sustained only at the dynamic level through advantageous ‘dynamic capabilities’ [...], enabling the firm to adapt faster than its competition” (Kraaijenbrink et al. 2010, 354). Thus, dynamic capabilities deal with changing circumstances such as a “Schumpeterian Shock”, as dynamic capabilities are “intrinsically linked to market dynamism” (Wang & Ahmed 2007, 34). Therefore, by



taking on the resource-based view of the firm in a dynamic environment, developing dynamic capabilities can support the competitiveness of the firm (Leonard-Barton 1992, 123). Eventually, this can lead to a sustained competitive advantage (Eisenhardt & Martin 2000, 1106; Schoemaker et al. 2018, 18).

To achieve this, the dynamic capabilities need to be, like firms' traditional views on resources, valuable, rare, inimitable, and non-substitutable (Barney 1991, 105-106). This conclusion can be drawn because the resource-based view includes in essence resources and capabilities, where capabilities and dynamic capabilities are almost similar (Wang & Ahmed 2007, 32-33; Teece et al. 1997, 516). It can be said that dynamic capabilities have enhanced the resource-based view "addressing the evolutionary nature of firm resources and capabilities in relation to environmental changes and enabling identification of firm- or industry-specific processes that are critical to firm evolution" (Wang & Ahmed 2007, 35). Especially the aspect of inimitability poses the need for innovation if it can create positive synergies for the firm. Then it can lead to a sustained competitive advantage (Lengnick-Hall 1992, 400). This need for innovation is closely linked to exploration, to renew the business (offerings) in the long-term.

### 2.2.2 Features of dynamic capabilities

After the nature of dynamic capabilities and their connection to the resource-based view are outlined above, definitions are provided below to gain a better understanding (Table 1).

Table 1. Definitions of Dynamic Capabilities

<b>Author</b>	<b>Definition</b>
Teece et al. (1997, 516)	“The firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments”
Wang & Ahmed (2007, 35)	“A firm’s behavioural orientation constantly to integrate, reconfigure, renew and recreate its resources and capabilities and, most importantly, up-grade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage”
Eisenhardt & Martin (2000, 1107)	“The firm’s processes that use resources - specifically the processes to integrate, reconfigure, gain and release resources - to match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die”
Teece (2007, 1319)	“Dynamic capabilities can be disaggregated into the capacity (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets”
Barreto (2010, 271)	“A dynamic capability is the firm’s potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base”
Schoemaker et al. (2018, 17)	“Dynamic capabilities enable firms to identify profitable configurations of competencies and assets, assemble and orchestrate them, and then exploit them with an innovative and agile organization”

There are several similarities and differences between the definitions. The most basic similarity is that all definitions highlight the importance of dynamic capabilities for adapting to or creating change in the environment. Another similarity is the importance of the need for integration and reconfiguration of the firm’s resources, competencies, or capabilities. Most definitions include that this helps to gain, keep, or enhance the position in the market, i.e., to a sustained competitive advantage. It must be noted, however, that Eisenhardt and Martin (2000, 1108) still see commonalities or “best practices” across firms when it comes to dynamic capabilities. This contradicts the notion of a clear competitive advantage (Eisenhardt & Martin 2000, 1110; Di Stefano et al. 2014, 316). In this study, however, dynamic capabilities are viewed as a source of sustained competitive advantage, in line with a large amount of published research. This is because resources and capabilities are generally not allocated equally across firms (also admitted by Eisenhardt and Martin (2000, 1109): “The existence of common features among effective dynamic capabilities does not, however, imply that any particular dynamic capability is exactly alike across firms”), and this is used to expand one’s position in the market. This idiosyncrasy in details of dynamic capabilities in combination with their subject of

unequally distributed resources and capabilities, is believed to be a source of sustained competitive advantage. Other differences lie mainly in whether dynamic capabilities are viewed as inherent traits, i.e., capacities (Teece et al. 1997, 516; Wang & Ahmed 2007, 35; Teece 2007, 1319) or rather as processes and behaviours (Eisenhardt & Martin 2000, 1107; Barreto 2010, 271; Schoemaker et al. 2018, 17). Most definitions are broad in scope, while Barreto (2010, 271) specifically focuses on problem-solving and Schoemaker et al. (2018, 17) focus on innovation.

Based on this, the following (working) definition is developed and used in this research:

*Dynamic capabilities are the capacity to adapt to or initiate change in the external business environment through processes that enable the integration and continuous reconfiguration of a firm's internal resources, competencies, and existing capabilities to achieve a sustained competitive advantage.*

Key elements of dynamic capabilities can be adaption, absorption, and innovation capabilities (Wang & Ahmed 2007, 39). Hereby adaptive capability refers to the alignment of internal resources and capabilities with external environmental factors. Absorptive capabilities describe the intake of external knowledge and its combination with internal knowledge and using it internally. The innovative capabilities explain the link between a firm's resources and capabilities with the product market and therefore, the firm's inherent innovativeness to a competitive advantage. (Wang & Ahmed 2007, 39). Teece (2007) found similar elements of sensing, seizing, and reconfiguring (Figure 1).

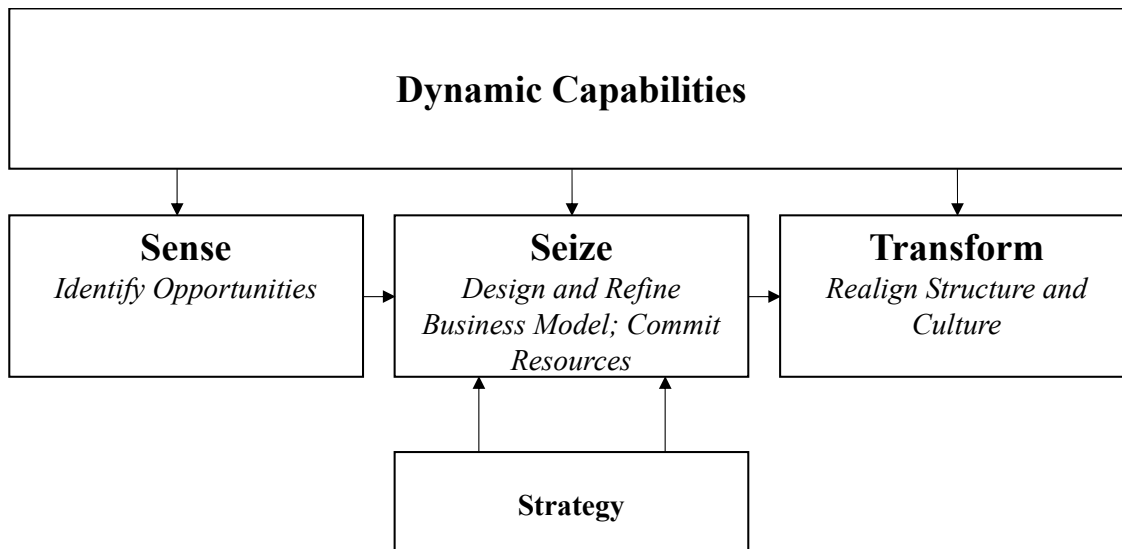


Figure 1. Simplified schema of dynamic capabilities, business models, and strategy (modified from Teece 2018, 44)

Sensing is the early detection of – at this stage usually weak – market signals (including regulation, technology, economy, and socio-political trends) (Schoemaker et al. 2018, 20). Teece (2007, 1322) describes sensing as a “scanning, creation, learning, and interpretive” activity. Seizing opportunities is the successful innovation and implementation of new systems to use the external changes to the firm’s advantage. Reconfiguring is the transformation of the firm itself and perhaps the ecosystem by renewing the organization periodically to take full advantage of new business models. (Schoemaker et al. 2018, 20-22). Renewing the business model and implementing change is connected to innovation and an important concept in the discussion of this thesis. Therefore, it will be introduced next.

### 2.2.3 Different types of innovation

Innovation was introduced as a concept in 1934 by Schumpeter (see, for example, Tzeng 2009, 373; Śledzik 2013, 89). He used the term “creative destruction” to describe the necessity of destroying the old when creating something new (Schumpeter 1934, 73). The concept of innovation is introduced because it serves the goal of long-term competitive advantage as well and it is a central concept in ambidexterity, which is introduced in the next sub-chapter.

A widely accepted and comprehensive definition of innovation is: “An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace

organisation or external relations” (OECD/Eurostat 2005, 46). Another definition, simplistic, yet precise is: “The process of successfully creating something new that has significant value to the relevant unit of adoption” (Assink 2006, 217). This definition breaks innovation down to its core: newness and usefulness.

Innovations can be put into four types: product innovations, process innovations, marketing innovations, and organizational innovations (OECD/Eurostat 2005, 47). Product innovation “is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics” (OECD/Eurostat 2005, 48). Process innovation “is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software” (OECD/Eurostat 2005, 49). Marketing innovation “is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing” (OECD/Eurostat 2005, 49). Organizational innovation “is the implementation of a new organisational method in the firm’s business practices, workplace organisation or external relations” (OECD/Eurostat 2005, 51).

While Schumpeter (1934, 73) assumed innovations to be always radical, there have emerged more granular definitions of the degree of innovativeness (Figure 2).

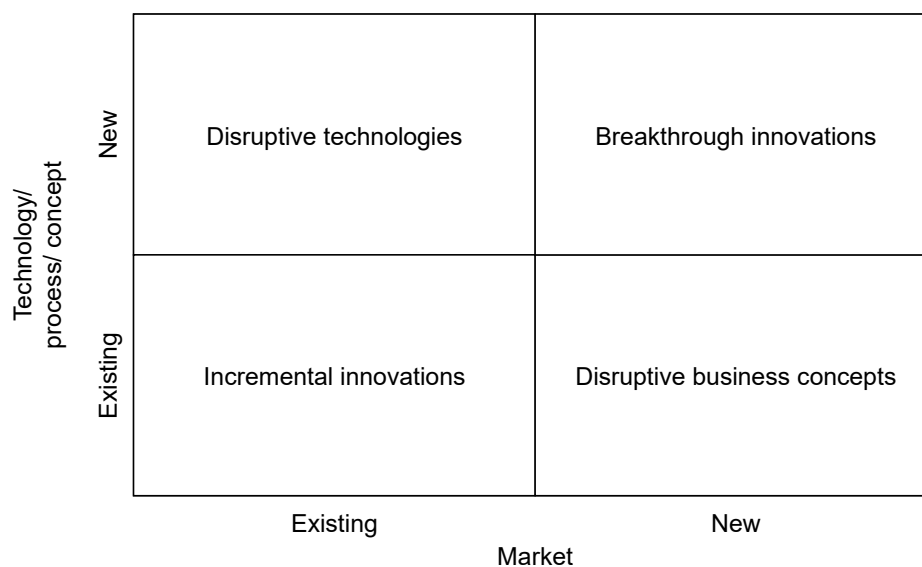


Figure 2. Innovation application space (modified in formatting and excluded risk from Assink 2006, 217)

The dimensions in Figure 2 also go a step further than the classic separation into incremental and radical innovations. An incremental innovation (Figure 2, lower left) is an improvement of already existing technologies, processes, or concepts in markets and is therefore a “continuous modification of previously accepted practices” (Norman & Verganti 2014, 82). A radical innovation is, on the other hand, defined as “a product, process or service with either unprecedented performance features or familiar features that offers significant improvements in performance or cost that transform existing markets or create new ones” (Leifer et al. 2001, 103). This describes disruptive technologies as well as disruptive business concepts (Figure 2, top left and bottom right) (Assink 2006, 218). If both, a new technology, process, or concept and a new market are created, it is a breakthrough innovation (Figure 2, top right). This can be linked back to “creative destruction” (Ahuja & Lampert 2001, 521).

### **2.3 Organizational Ambidexterity**

Closely linked to the above discussion is the debate of current success (i.e., competitive advantage) and future success (i.e., sustained competitive advantage), especially in fast-changing dynamic markets, and how both can be achieved. The concept of organizational ambidexterity is therefore first defined, and its evolution is described. Then, the balance itself is investigated and approaches to implement it in organizations are discussed. At the end of this section, connections are drawn to dynamic capabilities and innovation, which will serve as the basis for the model introduced in the next section.

#### **2.3.1 The definition and theoretical evolution of the concept of organizational ambidexterity**

Next to exploration activity, it is important to excel at the exploitation of current competitive advantages. This sets the foundations and provides necessary (financial) resources for exploration activity. The importance of exploitation as a pre-requisite for future success is stressed by the following statement: “The key advantage in chasing new opportunities is capitalizing on the past” (Eisenhardt & Brown 1998, 789). The balancing act between exploitation and exploration is called ambidexterity (see, for example, O’Reilly & Tushman 2004, 75-76). The first to use ambidexterity as a term was Duncan (1976) and the article that started the interest in the concept of research was March (1991). To get a better understanding of the concept, the following definitions are provided:

- “The ability to simultaneously pursue both incremental and discontinuous innovation and change results from hosting multiple contradictory structures, processes, and cultures within the same firm” (Tushman & O’Reilly 1996, 24)
- “An organization’s ability to be aligned and efficient in its management of today’s business demands while simultaneously being adaptive to changes in the environment” (Raisch & Birkinshaw 2008, 375)

In this thesis, organizations are particularly viewed as profit-seeking firms. The concept of ambidexterity is according to the definitions provided above a concept concerning organizational structure, culture, and processes in a firm (O’Reilly & Tushman 2004, 76) that deal with exploitation and exploration. This balancing act can create tensions and conflicting demands in an organization that need to be resolved or addressed (Raisch & Birkinshaw 2008, 375). March (1991, 71) originally posed the need for a balance of exploitation, which is described by elements of “refinement, choice, production, efficiency, selection, implementation, execution” and exploration, which is described as “search, variation, risk taking, experimentation, play, flexibility, discovery, innovation” in his seminal article.

Research streams of organizational ambidexterity include organizational learning, technological innovation, strategic management, organizational design, and organizational adaption (Kassatoki 2022, 2). Additionally, leadership theory and Marketing can be seen as separate research streams within the research of ambidexterity (in a business context) (Raisch & Birkinshaw 2008, 382-388). In Table 2 are the literature streams shown with the respective ambidexterity concept description and key challenges to successfully manage ambidexterity.

Table 2. Literature Streams of ambidexterity (modified in formatting and excluded information about “type” and key authors as well as the typology of ambidexterity from Kassatoki 2022, 3)

<b>Literature Stream</b>	<b>Ambidexterity concept</b>	<b>Key challenges for a successful ambidexterity management</b>
Organizational learning	Ambidexterity perceived as two types of learning (exploration–exploitation/ single loop-double loop) balanced for long-term organizational success	The more a manager obtains top down and bottom-up knowledge inflows, the higher the level of ambidexterity in which he engages.
Technological innovation	Ambidexterity reflects the challenges of the simultaneous pursuit of incremental (exploitative) and radical (explorative) innovations in the organizational setup	Combined exploration– exploitation innovations reflect complex capabilities that provide additional corporate advantage beyond those provided by each innovation separately
Strategic management	Ambidexterity includes variation-reducing (induced) and variation-increasing (autonomous) strategic processes, with their combination being the most beneficial for organizations	Leaders must make successful trade-offs between two strategic processes that compete for scarce resources, whereas the combination of these processes could be the most beneficial to organizations
Organizational design	Ambidexterity perceived as the challenge of the trade-off between efficiency (mechanistic/centralized/ hierarchical structure) and flexibility (organic/decentralized/autonomous structure) in a complex organizational design for short-term efficiency and long-term innovation.	Mechanistic and organic structures are difficult to achieve within a single firm, however their combined flexible structures lead to the generation and better employment of innovations
Organizational adaption	Ambidexterity comprised of long periods of convergence (evolutionary change) punctuated by short periods of discontinuous (revolutionary) change for long-term organizational success	Too many change actions may lead to organizational chaos, whereas the opposite could cause inertia

For this thesis, the literature streams of strategic management and especially of organizational design are relevant to answer the research questions. Nonetheless, a variety of prior research will be taken into account that prove helpful for the purpose of the research. Applying to all streams is the need for a balance between exploitation and exploration, which is introduced in the next section.

### 2.3.2 A balance between exploitation and exploration

Ambidexterity is achieved by a balance between exploitation and exploration (Figure 3). The balance does not need to be equal, but a company is not considered ambidextrous if almost only one type of activity, exploitation or exploration, is done.



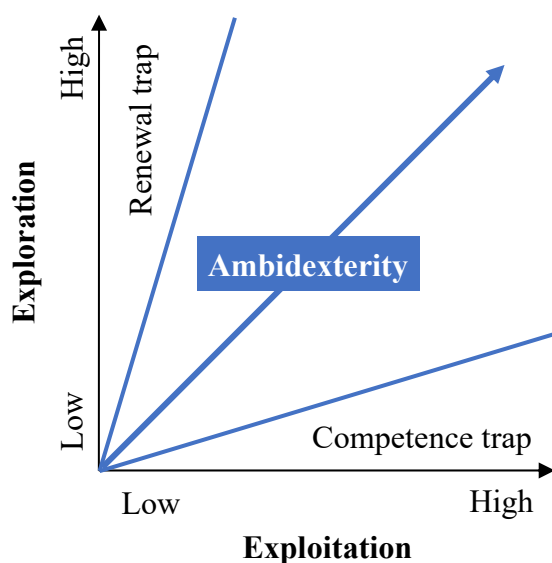


Figure 3. Balance of exploitation and exploration leads to ambidexterity (modified from Lackner et al. 2011, 26)<sup>2</sup>

Only focusing on exploitation activity leads to less flexibility or the “competence trap” (March 1991, 71; Ahuja & Lampert 2001, 522; Leonard-Barton 1992, 121-122; Birkinshaw & Gibson 2004, 47). In the words of Levintal and March (1993, 105): “An organization that engages exclusively in exploitation will ordinarily suffer from obsolescence”. This might increase the short-term performance but is not necessarily sustainable (see, for example, Kassotaki 2022, 1). On the other hand, only exploration activity lacks the gain or benefit of experimentation (March 1991, 71; Birkinshaw & Gibson 2004, 47), which Volberda and Levin (2003, 2127) call the “renewal trap”. Levintal and March (1993, 105) state: “An organization that engages exclusively in exploration will ordinarily suffer from the fact that it never gains the returns of its knowledge”. These traps highlight the importance of a balance between the two activities of exploitation and exploration.

Studying ambidexterity, i.e., the balance of exploitation and exploration, is particularly interesting because there is evidence for increasing firm performance in the short- and long-term (see, for example, Fu et al. 2016, 9; He & Wong 2004, 490; Marín-Idárraga et al. 2022, 323). In Table 3 the differences of exploitation and exploration are shown for relevant dimensions.

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<sup>2</sup> Original source: Güttel, W.H. - Garaus, C. - Konlechner, S. - Lackner, H. - Müller, B. (2011) Heads in the clouds ... feet on the ground: A process perspective in organizational ambidexterity. Working Paper. Johannes Kepler University Linz, Austria.

Table 3. Ambidexterity or ambidextrous behaviour (modified in formatting from Olivan 2019, 34)

	<b>Exploitation</b>	<b>Exploration</b>
Strategic Target	Cost, Profit, fulfil short-term customer wishes	Innovation, Growth, fulfil long-term customer wishes
Critical Fields of Action	Efficient & effective processing of existing products and businesses; incremental innovation	Creative and adaptive development of new products and businesses; radical innovation
Employee competencies	“Doers”, Specialists	Entrepreneurs, Generalists
Organizational Structure	Formal, routine, mechanical	Flexible, non-routine, organic
Measures	Margins, productivity	Milestones, growth
Culture and Behaviour	Efficiency, low-risk, stability, high quality	Risk-taking, speed, flexibility, experimentation
Leadership	Authoritarian, top-down	Visionary, involving

As can be seen in the above table, the two elements of exploitation and exploration are logical within. However, achieving the balance that ambidexterity describes is challenging (Smith & Lewis, 2011, 388). The paradoxical nature of the combination of the two elements is stressed in literature (see, for example, Lewis 2000, 760; Jansen et al. 2008, 1). It is important to highlight that ambidexterity is viewed as a paradox in recent literature and this study, i.e., “contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith & Lewis 2011, 386). This is to be distinguished to duality, a dilemma, and dialectic. It is to be seen as a paradox allowing for simultaneous exploitation and exploration. (Andriopoulos & Lewis 2009, 710). In the words of Smith and Lewis (2011, 388): “Without exploration, there is no organizational knowledge to exploit. Likewise, without exploitation, firms lack the foundational knowledge that enables absorptive capacity and fuels experimentation”. The “innovator’s dilemma” on the contrary, argues that exploitation and exploration cannot be conducted simultaneously in times of disruptive change and can therefore not be solved (Christensen 1997). However, several studies oppose this viewpoint and see ambidexterity as a way to solve the dilemma (see, for example, O’Reilly & Tushman 2008, 202; Fourné et al. 2019, 571). There seems to be no trade-off between alignment and adaptability but there is the ability of business units to simultaneously develop the capacities (Gibson & Birkinshaw 2004, 221). Hence, the way this combination can be achieved is an integral question of organizational ambidexterity and ultimately of (sustained) competitive advantage research.

To resolve the paradoxical needs of exploitation and exploration (see Table 3), a cooperation strategy is needed to make the balance work dynamically (Tempelaar 2010, 5). Sustained performance is a result of attending to and dealing with strategic contradictions such as exploitation and exploration. Also, the senior leader and the entire top management team play an important role in this process. (Smith & Tushman 2005, 533). How this can be achieved is presented in the next section.

### 2.3.3 Differentiation and Integration through structural and contextual ambidexterity

Two patterns are presented for balancing exploitation and exploration: the differentiation view and the integration view (Brix 2019, 339). In the differentiation view, exploitation and exploration are seen as incompatible because they are competing for the same resources (see, for example, O'Reilly & Tushman 2004). In contrast, the integration view stresses the interdependence of the two paradoxical activities and their complementary benefits to learning (see, for example, Gibson & Birkinshaw 2004; Andriopoulos & Lewis 2009). This discussion is important particularly for this thesis because it also argues for different organizational structures, which can, under certain circumstances, lead to higher performance through exploitation and exploration (Marín-Idárraga et al. 2022, 326). The “differentiation view argues that exploration and exploitation have to occur across units (or organizations) and the integration view argues that the processes can coexist within the same unit” (Brix 2019, 339).

For organizational structures, structural and contextual solutions as well as leadership-based solutions that enable ambidexterity in organizations are identified (Raisch & Birkinshaw 2008, 389). A structural approach is the separation of exploitation and exploration into different organizational units (see differentiation view). A contextual approach is on the contrary exploiting and exploring within the same unit (see integration view). In the leadership-based solution, the top management is responsible for the balance of the two activities. (Raisch & Birkinshaw 2008, 389). It can however be argued that the importance of leadership is already implicitly integrated into the structural approach, as different organizational units are usually governed by (top-) management. This is also to be seen in Table 3, in which decision-making and the importance of top management, which is generally responsible for leading the organization, is already integrated (Birkinshaw & Gibson 2004, 50). Also, contextual ambidexterity has the importance of

leadership integrated into its approach already. Sometimes, especially in the early years of ambidexterity research, there is also the solution of a temporal separation between exploration and exploitation presented (Duncan 1976). A graphical illustration of the different separation types of ambidexterity is shown in Figure 4.

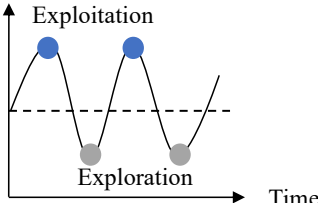
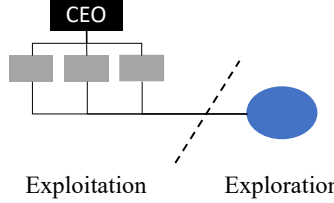
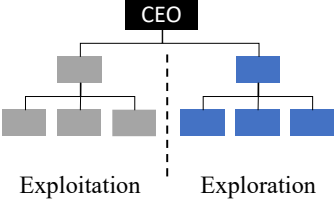
<b>Temporal separation</b> Duncan 1976	<b>Contextual separation</b> Birkinshaw & Gibson 2004	<b>Structural separation</b> O'Reilly & Tushman 2004
 <ul style="list-style-type: none"> <li>• Temporal alternation between the organizational frameworks</li> <li>• Exploitation and exploration are perceived sequentially instead of simultaneously</li> </ul>	 <ul style="list-style-type: none"> <li>• Companies create network structures to expand the primary organization, e.g., with project groups</li> <li>• Employees switch between the two organizational frameworks depending on their tasks. The same employees work on both tasks, which have different organizational frameworks</li> <li>• Exploitation and exploration are performed simultaneously</li> </ul>	 <ul style="list-style-type: none"> <li>• Companies are divided into two (or more) separate units with different organizational frameworks</li> <li>• Exploitation and exploration are carried out simultaneously in the company</li> <li>• Different employees are deployed for each task because employees and organizational units are specialized in only one task and organizational framework</li> </ul>

Figure 4. Separation solutions of ambidexterity (modified in formatting from Olivan 2019, 40)

On the left side, the temporal separation is shown, which Duncan (1976) introduced first and saw as a way to overcome the paradox. As ambidexterity is especially relevant in mature firms (Piaskowska et al. 2021, 3-4), a temporal “switch” between exploitation and exploration activity in such firms seems impractical (Olivan 2019, 41). Therefore, the two types of ambidexterity, structural and contextual, will be further investigated in this study and described in the following (Table 4).

Table 4. Structural and contextual ambidexterity (modified in formatting from Birkinshaw & Gibson 2004, 50)

	<b>Structural Ambidexterity</b>	<b>Contextual Ambidexterity</b>
How is ambidexterity achieved?	Alignment-focused and adaptability-focused activities are done in separate units or teams	Individual employees divide their time between alignment-focused and adapt- ability-focused activities
Where are decisions made about the split between alignment and adaptability?	At the top of the organization	On the front line — by salespeople, plant supervisors, office workers
Role of top management	To define the structure, to make trade-offs between alignment and adaptability	To develop the organizational context in which individuals act
Nature of roles	Relatively clearly defined	Relatively flexible
Skills of employees	More specialists	More generalists

A structural approach to ambidexterity, i.e., separating exploitation and exploration in different units, is, according to O'Reilly and Tushman (2004, 76-77), superior to other forms of structure to achieve a balance between exploitation and exploration. They reason that with structural separation the units can support each other without contaminating each other and allowing for different processes, structures, and cultures. The exploitation unit is hereby not distracted by introducing new products and can focus on improving operations and products as well as serving its customers. In contrast, the exploration unit is not distracted by daily business. (O'Reilly & Tushman 2004, 77). Separation of the units is most beneficial in a relatively certain market environment with clear options and a high (perceived) distance of the opportunities from the organizational culture and capabilities (Ossenbrink et al. 2019, 1338-1339). The leadership takes on a prominent role in the coordination of both units (O'Reilly & Tushman 2004, 77). Leadership's importance in structural ambidexterity is also supported by the argument that the tension between exploitation and exploration is usually resolved one level down in the company hierarchy (Raisch & Birkinshaw 2008, 396). Strategy and leadership in ambidexterity are stressed: "separate units are held together by a common strategic intent, an overarching set of values, and targeted structural linking mechanisms to leverage shared assets" (O'Reilly & Tushman 2008, 193). For top management, managing exploitation and exploration effectively requires the ability to engage in paradoxical cognition (Smith & Tushman 2005, 533).

In structural ambidexterity, the exploration can also be structured in a network structure to take into consideration the different needs and characteristics of exploitation and

exploration (see Table 3). This is an advantage of the structural approach, as optimal environments can be created for the respective solution for organizational ambidexterity. It can however pose the risk of isolating the units and lead to little cooperation. (Lang-Koetz et al. 2023, 97). Another benefit of using a structural approach is the speed with which the introduction of change can be initiated and acquiring new capabilities necessary in the changing market, which might have not been needed for the old business model (Ossenbrink et al. 2019, 1328).

Contextual ambidexterity is defined as “the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit. Alignment refers to coherence among all the patterns of activities in the business unit; they are working together toward the same goals. Adaptability refers to the capacity to reconfigure activities in the business unit quickly to meet changing demands in the task environment”. (Gibson & Birkinshaw 2004, 209). Therefore, the individual employees deliver value to existing customers (exploitation), while at the same time looking for changes in the task environment and discovering them (exploration). By focusing on the individual employee for the balance, it is expected to get rid of the coordination costs in the other approaches. (Gibson & Birkinshaw 2004, 211). The advantage of the contextual approach is a high amount of dynamism and flexibility and the ability for employees to switch between tasks depending on (current) needs. The balance of exploitation and exploration is not necessarily optimal when equally distributed but can change due to the complexity of stimuli from the environment – in which the contextual approach has an advantage. In high levels of complexity in the environment, exploration must be emphasized more, and in lower levels of complexity, exploitation must be emphasized more. (Havermans et al. 2015, 194). In an uncertain environment with numerous possibilities and a low (perceived) distance of the environment from the existing business and culture, contextual ambidexterity seems favourable (Ossenbrink et al. 2019, 1338-1339). For this, one challenge is that each employee must be trained in a large variety of different methods (Lang-Koetz et al. 2023, 98). Thus, contextual ambidexterity has been described as the most complex approach to ambidexterity (Kortmann 2012, 143). Zhou et al. (2023) found no clear distinction between activities of exploitation and exploration, but only in outcomes. This could be another indication for using a contextual approach.

Additionally, leadership and culture play a crucial enabling role for contextual ambidexterity (Havermans et al. 2015). Their main task is to create an environment and

incentives for the employees to be able to flexibly switch between exploitation and exploration (Ossenbrink et al. 2019, 1322). To achieve this, an organizational design, which includes structures, practices, culture, and climate, supporting both exploitation and exploration, must be installed (Simsek 2009, 604; Ossenbrink et al. 2019, 1322). This calls for decentralized decision-making (Kortmann 2012, 144). This switching between activities could be difficult, as immediate needs (i.e., daily business and exploitation) might win over long-term goals (cf. Schoemaker et al. 2018, 19).

Although most of the previous research has focused on either contextual or structural ambidexterity and which characteristics of the firm or market (size, nature of innovation, environment, etc.) lead to which type of ambidexterity to be preferred, this could mean a change in the type of ambidexterity due to changes in the aforementioned characteristics over time (Ossenbrink et al. 2019, 1323). The two types of ambidexterity can be seen rather as complementary than two alternatives. But to bring them together, there is also the option of changing from structural to contextual ambidexterity over time. Hence, structural and contextual ambidexterity are viewed to have different advantages to be useful at different times, for example when introducing a new initiative, a structural approach can be helpful. The authors do not combine the approaches. (Birkinshaw & Gibson 2004, 55).

Adler et al. (1999, 50) studied an organization in which flexibility and efficiency can be achieved simultaneously, i.e., organizational ambidexterity, by using elements of both structural and contextual ambidexterity. They observed that the firm had individual employees switch from routine to non-routine tasks (contextual ambidexterity) as well as special units for either routine or non-routine tasks (structural ambidexterity) (Adler et al. 1999, 50). The environment of a firm seems to have a strong effect on the choice of an ambidexterity approach. Research suggests the existence and effectiveness of a “hybrid ambidexterity”, which includes elements of structural and contextual ambidexterity. Such a model seems most beneficial in a market environment with numerous and uncertain opportunities and a high (perceived) distance from the current business (especially culture and capabilities). (Ossenbrink et al. 2019, 1338-1339). It seems that the approaches can not only be used separately, but a combination of the ambidexterity approaches is also possible (Vahlne & Jonsson 2017, 59; Raisch et al. 2009, 687). In practice, examples of such a hybrid approach can be “ideation hybrids”, “incubation hybrids”, and “integration hybrids”. In “ideation hybrids”, such as idea competitions or crowdsourcing initiatives,

all employees can be called upon to submit ideas (close to contextual approach) and at the same time have a separate entity coordinating the process (structural approach). For “incubation hybrids” the authors provide the example of a start-up accelerator, where frontline employees from the existing business units use parts of their time (contextual approach) to work in a separate organizational entity to work on new business ideas (structural approach). “Integration hybrids” can provide an example for frontline employees in addition to their daily business (contextual approach) to be part of a separate unit for specific projects such as a new digital platform. (Ossenbrink et al. 2019, 1332-1333). The important difference of these hybrids is that the current employees divide their time between exploitation in their own business unit and exploration in a separate business unit, in which some of the members also might be working “full-time”.

In this thesis, ambidexterity is viewed on the organizational level. However, achieving ambidexterity on the organizational level has also implications for lower levels like business units, teams, and individuals (Kortmann 2012, 23). “Choices about how to resolve the tension at one level of analysis are often resolved at the next level down” (Raisch & Birkinshaw 2008, 396). Structural ambidexterity can move through the levels top-down until the individual level is reached (Kortmann 2012, 23). Nevertheless, structural approaches stop at the individual level and most employees (except a few top managers who must exhibit ambidexterity on an individual level) focus on either exploitation or exploration (Raisch et al. 2009, 687). At an individual level, people must utilize their cognitive abilities to effectively transition between seemingly contradictory tasks (Kortmann 2012, 24). The individual level is particularly relevant in contextual ambidexterity, where ambidexterity “manifests itself in the specific actions of individuals throughout the organization” (Gibson & Birkinshaw 2004, 211). Thus, “individuals are important sources of organizational ambidexterity” in contextual approaches, and at the same time do “organizational factors affect individuals’ ability to act ambidextrously” (Raisch et al. 2009, 687).

All in all, the benefits of the approaches of structural and contextual ambidexterity depend on a large variety of factors, such as size, industry, and market environment, among others. A structural approach can be helpful as it allows the creation of distinct cultures, structures, and processes with leadership keeping the balance. In contextual ambidexterity, the expertise of current employees is used flexibly to balance between



exploitation and exploration. Also, similarly to balancing exploitation and exploration, it can also be beneficial to balance the approaches to achieve organizational ambidexterity.

#### 2.3.4 Ambidexterity as a dynamic capability

A crucial, if not the most crucial, dynamic capability is a firm's ability to reach ambidexterity (O'Reilly & Tushman 2008, 190; Raisch & Birkinshaw 2008, 393; Raisch et al. 2009, 689). The reasoning is that ambidexterity is a dynamic capability because "the ability of a firm to simultaneously explore and exploit enables a firm to adapt over time" (O'Reilly & Tushman 2008, 185). This is also supported by a model where efficiency-focused capabilities are constantly reflected on and therefore enable change, if necessary (Schreyögg & Kliesch-Eberl 2007, 930), i.e., dynamize the capabilities. In other words, "the interaction of exploitation and exploration is [...] assumed to become a full-blown dynamic capability over time" (Raisch & Birkinshaw 2008, 401)<sup>3</sup>.

Ambidexterity can be seen as a dynamic capability on the organizational level because ambidextrous organizations need a dynamic capability that enables the mobilization, coordination, and integration of the competing activities of exploitation and exploration (Jansen et al. 2008, 10). In structural ambidextrous organizations, dynamic capabilities need to allow the firm to "allocate, reallocate, combine, and recombine resources and assets across dispersed exploratory and exploitative units" (Jansen et al. 2008, 10). These arguments go along with the finding that ambidexterity is especially important in highly dynamic markets to increase performance (Simsek 2009, 617), as are dynamic capabilities. The alignment and adaptability of organizational ambidexterity (Gibson & Birkinshaw 2004, 209) are also highly overlapping with the elements of adaption, absorption, and innovation capabilities in dynamic capabilities (Wang & Ahmed 2007, 39) A framework on when organizational ambidexterity becomes a dynamic capability is shown in Figure 5.

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<sup>3</sup> This quote is based on Schreyögg, G. – Kliesch-Eberl, M. (2007, 919) How dynamic can organizational capabilities be? Towards a dual process model of capability dynamization. *Strategic Management Journal*, Vol. 28 (9), 913–933.

**Dynamic Cycles of  
Paradoxical Activities**

		no	yes
Simultaneity of Paradoxical Activities	yes	Organizational Ambidexterity	Organizational Ambidexterity & Dynamic Capability
	no	Neither Organizational Ambidexterity nor Dynamic Capability	Dynamic Capability

Figure 5. Organizational ambidexterity and dynamic capabilities framework (modified from Kortmann 2012, 35)

An ambidextrous organization is, by definition, pursuing the paradoxical activities of exploitation and exploitation simultaneously. If those activities are dynamized in cycles, organizational ambidexterity becomes a dynamic capability. Otherwise, it is either of the two organizational ambidexterity or a dynamic capability or neither.

O'Reilly and Tushman (2008, 202) bring in another factor, which is senior management. According to them, senior leadership can create dynamic capabilities, which in turn can support to establish exploration and exploitation at the same time. Ochie et al. (2022) also demonstrate that ambidexterity is a dynamic capability and highlight the importance of leadership shaping a firm's culture.

In Table 5 are the components of ambidexterity combined with the elements of dynamic capabilities as well as on which organizational level these are executed in the different ambidexterity approaches. The "ambidexterity approach" column is extracted from Birkinshaw et al. (2016, 55) and matched to the ambidexterity components and dynamic capability elements table by Popadiuk et al. (2018, 652), enriching their view with ambidexterity approach dimensions.

Table 5. Relationship between Ambidexterity and Dynamic Capabilities (modified and merged from Popadiuk et al. 2018, 652 and Birkinshaw et al. 2016, 55)

Ambidexterity Approach	Ambidexterity Components	Elements of Dynamic Capabilities		
		Sensing	Seizing	Reconfiguring
Structural Ambidexterity respective units Contextual Ambidexterity across entire organization	Exploration	The company's capability in using local and nonlocal resources, assets, sources of knowledge, and innovation.		
	Exploitation		The company's capability to constantly evolve. This is observed through internal movements of the company, resulting in economies of scale, efficiency in the orchestration of assets and resources, and others.	
Structural Ambidexterity Resource-linking capability (top-executive level) Contextual Ambidexterity Context-shaping capability (top-executive level)	Organizational Structure	The company's capability to organize itself to integrate and allocate new resources, assets, knowledge, and innovation.		The company's capability to organize itself to meet the improvements required by exploitation.
	Organizational Context	The company's capability to build a context that fosters the awareness of environmental opportunities and threats, as well as to perceive the need for exploration and exploitation.	The company's capability to absorb needed change.	The company's capability to constantly be attentive to the changes in the context required by new resources, assets, knowledge acquisition, and improvements.
	Manager and Employee roles	The top management team's capability to know where and when to search for assets, resources, knowledge, and innovations, as well as to identify allies who support and help during this search.	The capability of the manager to connect previous movements with the organization's goals and strategies. The manager acts as a pivot, engaging people and implementing changes required in the organization.	Manager capability to keep teams motivated to pursue agreed-upon actions.

In this view, exploration can be equated with sensing and exploitation with seizing (Birkinshaw et al. 2016, 39). While sensing and seizing can be viewed as lower-level capabilities, reconfiguring can be viewed as a higher-level capability, which orchestrates or balances the two lower-level capabilities (Birkinshaw et al. 2016, 39-40; Teece 2007, 1335-1336). Therefore, as the elements of dynamic capabilities fit into the exact definition of ambidexterity, ambidexterity itself can be seen as a dynamic capability. While for exploitation and exploration, the front line is important (in a structural approach the respective units and in a contextual approach the entire organization)<sup>4</sup>, top management plays a key role in the orchestration (reconfiguring). They shape the structure, context, and employees of the organization.

All in all, there is strong evidence provided above, to view ambidexterity as a dynamic capability and is viewed as such in most of the existing literature (Popadiuk et al. 653).

<sup>4</sup> In Birkinshaw et al.'s (2016, 39) original paper, they call the mode to balance exploitation and exploration in one unit "behavioral integration". In this thesis, the term "contextual ambidexterity" has been used for this and is therefore used in the model as well.

### 2.3.5 Ambidexterity to achieve innovation

Dynamic capabilities and the different dimensions of innovations are interrelated, which are exploiting and exploring at the same time, ergo ambidexterity (Ancona et al. 2001, 658). Therefore, ambidexterity as a dynamic capability is closely linked to innovation. In exploitation, incremental innovations are a critical task whereas in exploration, breakthrough innovations are such (O'Reilly & Tushman 2004, 80; Tushman & O'Reilly 1996, 24). This applies to product and process innovations (Reischl et al. 2022, 2). In section 2.3.1., the different types of innovations are already included in the definition of organizational ambidexterity (Tushman & O'Reilly 1996, 24), showing their close relation.

The types of innovations, incremental and radical, also have an impact on the choice of the ambidexterity approach and thus organizational structure. "When it came to launching breakthrough products or services, [structurally] ambidextrous organizations were significantly more successful" (O'Reilly & Tushman 2004, 76). This is in line with Ossenbrink et al.'s (2019, 1339) findings, as "radical innovations, [...] by definition require capabilities that are far from those the firms possess, thus favoring a structural approach over a contextual one". To overcome the "old" system, a structural separation might be useful because deep beliefs of the old system can be ingrained in the culture (Ossenbrink et al. 2019, 1328). Therefore, a structural approach could be called for in radical innovations. Contextual ambidexterity does not consider how radical forms of innovations can be conducted in the same unit while also focusing on exploitation, therefore arguing for a structural approach in such contexts (Kauppila 2010, 286).

To complement, in contextual ambidextrous organizations exploitation activity can be combined with exploitation tasks, such as improving processes, job changing, and experimentation to achieve lower cost, better performance, and quality in a contextual approach (Adler et al. 1999). Hence, a contextual approach seems to be better suited for incremental innovations whereas a structural approach seems to be better suited for radical innovations.

## 2.4 Sustained competitive advantage through organizational ambidexterity as a dynamic capability

A model of the connections and relationships of strategy, ambidexterity, dynamic capabilities, and innovation leading to a sustained competitive advantage is shown in Figure 6. This provides an answer to the sub-research question “What is the relationship between competitive advantage, ambidexterity, and dynamic capabilities?”.

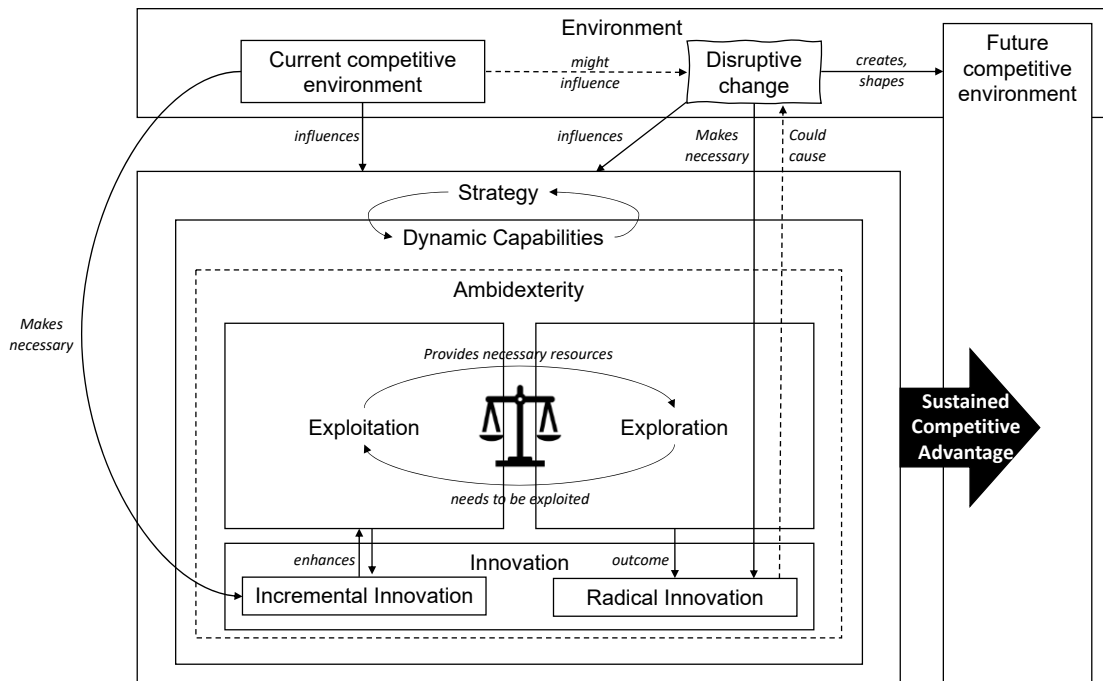


Figure 6. Model of sustained competitive advantage through strategy, dynamic capabilities, ambidexterity, and innovation

The proposed framework includes all concepts of ambidexterity, dynamic capabilities, and strategy. Because innovation is a central concept in ambidexterity and the advantage it can create in the competitive environment is essential for strategy, it is also included in the model.

Starting with the large box “Strategy”: this provides the frame for the entire (internal) model. The strategic position of a firm compared to its competitors is the essence of strategy (Porter 1980). As this position must be dynamic, to be able to respond in case of change, “Dynamic Capabilities” are shown within “Strategy”. These concepts are intertwined because strategy can on the one hand dictate which dynamic capabilities to build, on the other hand, especially in times of fast change, dynamic capabilities are the foundation for competitiveness, enabling the design of new business models that are closely linked to strategy (Teece 2018, 44). Additionally, the inside of the “Strategy” box,

refers to the internal factors within a firm, which is an important part of strategy. “Ambidexterity” is the box within “Dynamic Capabilities” because it is viewed as a dynamic capability (see, for example, O’Reilly & Tushman 2008, 190; Raisch & Birkinshaw 2008, 393;), and it consists of the balance between “Exploitation” and “Exploration” (see, for example, O’Reilly & Tushman 2004, 75-76). As organizational ambidexterity is seen as a dynamic capability, the line is shown as dotted.

The current environment, which is viewed as being in a rather stable state, influences the entire strategy as well, as it makes incremental innovation, including product and process innovation (Reischl et al. 2022, 2), necessary to exploit current competitive advantages (O’Reilly & Tushman 2004, 80; Adler et al. 1999). This helps to provide sufficient resources for exploration activities (see, for example, Smith & Lewis 2011, 388), which in case of a disruptive change in the market can help to be prepared with radical innovation (see, for example, O’Reilly & Tushman 2008, 190). In some cases, the radical innovation by the firm could disrupt the market in the first place (O’Connor & Rice 2013, 3), shown in a dotted line because it is a possibility. A firm introducing radical innovation to the market, the “Future competitive environment” is created.

It could be said that the competitive advantage is sustained, as in this model, exploitation and exploration support each other. This is at the heart of the model, as exploitation provides the necessary resources for exploration, and exploration in turn creates new business models to be exploited. With this dynamic capability, embedded in the firm's strategy, it can stay constantly ahead of the competition and keep the competitive advantage (even though the advantage itself might change). In the end is ambidexterity as a dynamic capability not itself the source of competitive advantage, but it facilitates the configuration of resources which in turn can offer a sustained competitive advantage (Popadiuk et al. 2018, 646; O’Reilly & Tushman 2008, 196). The model is also in line with the findings of Clauss et al. (2021, 210-211), showing that addressing exploitation and exploration together with strategic agility – the capacity to stay competitive by objective orientation and being responsive to changes in the business context (Clauss et al. 2021, 204) – can positively influence competitive advantage.

## **2.5 Organizational structure to achieve ambidexterity in service firms**

In this section, organizational structure and the service sector are introduced. This serves as a foundation for the qualitative research conducted.

### 2.5.1 Organizational structure

To understand how an organization can develop organizational ambidexterity as a dynamic capability, it is necessary to understand organizational structure. This is reflected in sub-research questions 3 and was empirically studied in this thesis. “An organizational structure defines how job tasks are formally divided, grouped and coordinated” (Robbins et al. 2016, 430). The formal structure of an organization plays a crucial role in determining its reporting lines and establishing the number of hierarchical levels within the organization. Additionally, it helps to define the extent of control wielded by managers over their subordinates. This structure is essential for a sound and efficient organizational framework. The organizational structure additionally determines the position of individuals within the organization in a unit and therefore divides the entire organization into units. The design of systems to ensure effective coordination between all units is a crucial factor of the organizational structure. (Ahmady et al. 2016, 456). Organizational structure is influenced by environmental circumstances. Leaders make decisions about centralization, formalization, and control, based on their perceptions and preferences. These decisions impact the company's effectiveness and ability to adapt. Leaders must carefully consider these factors to ensure the organization thrives in a changing business environment. (Tran & Tian 2013, 232).

The organizational structure can take on various forms such as functional, divisional, matrix, or process structure (Society for Human Resource Management 2011, 15). For illustration purposes the divisions and names of functions are examples and not to be seen as exhaustive in Figure 7.

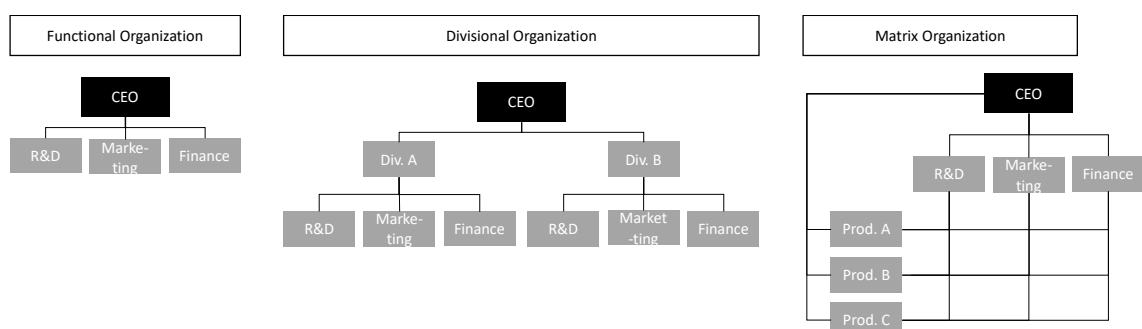


Figure 7. Organizational structures

The functional organization, also called the “simple structure” is a relatively flat organization with little vertical levels and a centralized decision-making (Robbins et al.

2016, 430). A divisional organization or “bureaucracy” is a structure with high standardization and specialization of work tasks while different divisions are divided into different departments (Robbins et al. 2016, 436-437). The matrix organization combines functional and product as two forms of departmentalization, in which coordination is a key concern (Robbins et al. 2016, 437-438). There are also more organizational structures not depicted in Figure 7, such as the virtual, modular, network, or the boundaryless organization (Robbins et al. 2016, 439-440; Anand & Daft 2007). The approaches to implement ambidexterity into an organization, structural and contextual ambidexterity, are both assuming a “classic” organizational structure (functional, divisional, and matrix) and therefore only those are investigated further. In Table 6 are the key questions asked and the related elements of organizational structure.

Table 6. Key design questions and answers for designing the proper organizational structure (modified from Robbins et al. 2016, 430)

<b>The key question</b>	<b>Element</b>
To what degree are activities subdivided into separate jobs?	Work specialization
On what basis will jobs be grouped together?	Departmentalization
To whom do individuals and groups report?	Chain of command
How many individuals can a manager efficiently and effectively direct?	Span of control
Where does decision-making authority lie?	Centralization and decentralization
To what degree will there be rules and regulations to direct employees and managers?	Formalization

For functional organizations, the work specialization is rather high, they have a low degree of departmentalization, wide spans of control, centralized authority, and formalization is low. Divisional organizations are characterized by high specialization and departmentalization, short chain of command and low spans of control, centralized decision-making, and very formalized. In matrix organizations, specialized workers are put together in functional and product departments, while the chain of command is difficult, as the employees report in two different structures, i.e., a “dual chain of command”, which also makes span of control controversial. It is a centralized decision-making with lower formalization. (Robbins et al. 2016, 435-438).

### 2.5.2 Service sector

To be successful in service business, the structural design must be addressed (Bustinza et al. 2015, 54). Specific characteristics in the service sector seem to make the right approach



for ambidexterity different from other industries (Fourné et al. 2019; Kortmann 2012). To understand and test which of the characteristics have an impact, and therefore deepening the research for service firms, the foundations of service firms and their specific characteristics are analysed in the following.

Service firms are a very important sector for the economy, contributing approximately 60-80% to GDP in Western societies' economies (World Bank 2023). The share of contribution of services to GDP has been constantly increasing from 48% in 1970 to 69% in 2022, for example in Germany (Statistisches Bundesamt [Federal Office of Statistics] 2023b, 58). One main industry in the service sector is the real estate industry with a contribution of 10% to the total German GDP (excluding construction) (Statistisches Bundesamt [Federal Office of Statistics] 2023a, 61).

The increase in services is due to several factors: an aging (Western) society, a change in values, and Digitization among others. One example of the change in values is the phenomenon of "End of Ownership", which describes the strive towards a need-based, easy usage of goods without owning them. (Haller & Wissing 2020, 4). This is also reflected in the low ownership rate of flats in Germany at 47% (Statistisches Bundesamt [Federal Office of Statistics] 2018).

The importance of services is increased further by the "digital servitization" of manufacturing firms, which describes the increase of services offered by traditional manufacturing firms while using digital technologies (Gebauer et al. 2021). As the ambidexterity approaches seem to differ for service companies (see, for example, Fourné et al. 2019, 573), the servitization further increases the need to close the research gap. General characteristics of the service sector and their application to the real estate industry, as the subject of investigation in this thesis, are outlined.

Services can be defined as "the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself" (Vargo & Lusch 2004, 2). One characteristic of services is the immateriality or intangibility. However, most services are a combination of material and immaterial components, and often the material part is even predominant (Haller & Wissing 2020, 9-10), for example in taxis, restaurants, or residential houses. Another characteristic of services is the integration of the external factor, which describes the co-creation of a service by the customer or by an object owned by the customer. The external factor is

thereby not the customer, but the co-operation of the customer. For this, there are different types of participation, namely the contribution of goods from the outside, and passive and active participation. (Haller & Wissing 2020, 10; Frietzsche and Maleri 2006, 202-203). A third important characteristic of services is the simultaneity of consumption and production (see, for example, Weiber & Billen 2005, 94).

The service-dominant logic has been introduced opposing the goods-dominant logic – in which the central concepts are tangible output and discrete transactions – and focuses on intangible resources, co-creation of benefits, the process of the transaction, and relationships (Vargo & Lusch 2004, 1-2). The underlying logic of the service-dominant view is, that value can only be created by the consumption of the customer, inevitably making him a co-producer (Vargo & Lusch 2004, 11; Gummesson 1998, 247). Value creation is hence a joint value creation between producers and consumers (Grönroos 2011, 290). Therefore, companies can only offer a value proposition if the consumer has a benefit from the consumption, which in turn can only be created through his participation, the co-creation. The customer's perceived benefits become the central concern and shift the focus towards relationships, making the markets customer-centric (Vargo & Lusch 2004, 12). Vargo and Lusch (2004, 15) conclude: “The focus is shifting away from tangibles and toward intangibles, such as skills, information, and knowledge, and toward interactivity and connectivity and ongoing relationships. The orientation has shifted from the producer to the consumer”. Taking on the service-dominant logic makes the investigation of the sustained success of service firms more important.

Despite the compelling arguments made by the service-dominant logic, in this thesis, a classic view of services is used. This is due to the specific question of services businesses and their optimal balance of exploitation and exploration, which will be investigated further in the next section. Characteristics of the service sector described by the service-dominant logic are nevertheless used further.

### 2.5.3 Organizational ambidexterity through structure in service firms

Until now, there has been little research on organizational ambidexterity and which approach of organizational structure is most effective for service firms (cf. Blindenbach-Driessen & van den Ende 2014, 1089; Fourné et al. 2019, 572). The features of service delivery systems differ significantly from those of production systems (Baines & Lightfoot 2014). The research that exists is ambiguous: Some studies have suggested a

contextual approach to be more effective (Fourné et al. 2019, 571; Kortmann 2012, 107), while others found evidence for structural ambidexterity to be more effective (Blindenbach-Driessen & van den Ende 2014, 1100).

There are several explanation theories for the effectiveness of a contextual approach in service firms. First, the closeness to the customer in value creation makes the separation of activities difficult (Fourné et al. 2019, 572; Kortmann 2012, 135). Second, the tacit knowledge from other units might not be easily accessible or understandable because they might be far apart or have different cultures. Third, the innovation process in service firms is less structured. For this, the self-organization of the employees can achieve a balance of exploitation and exploration when a supportive context is provided. (Fourné et al. 2019, 572). Importantly, the decentralization of operational decision-making is influencing the ability of service firms to be ambidextrous and therefore its overall strategic orientation (Kortmann 2012, 136). This ensures flexibility, which is particularly important in service firms (Kortmann 2012, 144).

In contrast, the support for a structural approach by Blindenbach-Driessen and van den Ende (2014, 1103) in service firms is more general, reasoning that separation has clear advantages for efficient resources for innovation activity and the focus on it. This is however not due to specifics of service firms but true for manufacturing and service firms (Blindenbach-Driessen & van den Ende 2014, 1103).

To answer the research questions, a model is created in Figure 8.

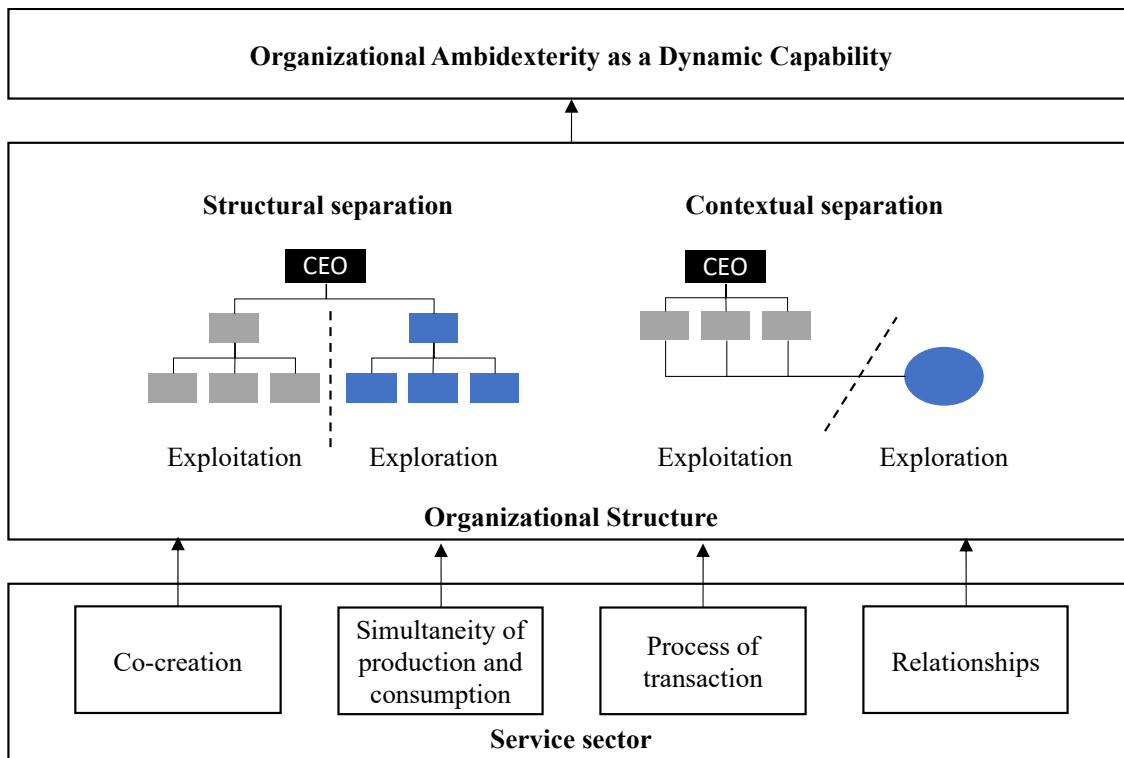


Figure 8. Model of service sector characteristics influencing organizational structure to achieve organizational ambidexterity as a dynamic capability (structures from Olivan 2019, 44)

The characteristics of the service sector seem to influence the choice of organizational structure to achieve organizational ambidexterity as a dynamic capability. The factors of co-creation, simultaneity of production and consumption, the process of transaction, and relationships could have an influence. Additionally, other factors of service businesses could influence it as well. This makes either a structural separation, a contextual separation, or a combination more suitable. Then, the goal of an organizational ambidexterity as a dynamic capability can be reached.

Concluding, the results of the studies on the effectiveness of structural or contextual ambidexterity in service firms are ambiguous. Additionally, they lack a clear link to the characteristics of service firms.

### **3 Research design**

The research design chosen for this thesis was a qualitative study. This chapter explains the methodology theoretically and how it was applied as well as justification for the choice of expert interviews. First, the research approach, including research philosophy, is explained, followed by data collection and analysis, and finalized by an evaluation of the study and ethical considerations.

#### **3.1 Research approach**

Due to its explorative character, qualitative research was conducted. To ensure comparability, companies of the same industry and similar size (large German housing companies) were investigated. This was expected to focus on the effects of industry type and sector characteristics and rather neglect other effects such as size, age, or technology intensity, which has been shown to influence ambidexterity as well (see, for example, Fourné et al. 2019). Additionally, ambidexterity is most relevant for mature firms (Piaskowska et al. 2021, 3-4), which is the reason those should be studied. Generally, the service sector includes the industries of transportation, communication, public utilities, wholesale and retail trade, finance, insurance, real estate (excluding construction), and other personal and business services (Kutscher & Mark 1983). In this thesis, real estate firms in Germany were the subject of investigation.

Before going into detail about the method applied, it is important to outline the underlying philosophical assumptions (Morgan & Smircich 1980, 491; Eriksson & Kovalainen 2008) because they influence the adequacy and interpretation of the methodology used. In this thesis, the ontological and epistemological stance of critical realism was followed. Ontologically, critical realism posits the existence of an objective reality that is separate from human perception and comprises structures and mechanisms that are observable to variable degrees. (Eriksson & Kovalainen 2008). This reality is classified into three different domains: the empirical (events that are observable), the actual (events that take place irrespective of observation), and the real (underlying mechanisms responsible for those events) (Bhaksar & Lawson 1998, 5). Epistemologically, critical realism recognizes the mediated nature of human understanding. It asserts that while there is an objective reality, our access to it is always shaped by various socio-cultural, linguistic, and individual factors. This perspective allows for a more nuanced approach to the acquisition

and validation of knowledge, combining elements of both objectivity and subjectivity. In this respect, it shares some similarities with subjectivism in recognizing the role of interpretation and context in understanding reality, while also aligning with positivism in the quest for objective knowledge. These views were taken in this research because the experts in service firms were expected to have their own subjective experiences in their organizational context, which was expected to serve the purpose of the research questions well.

Applying the epistemology practically is the concern of methodology (Eriksson & Kovalainen 2008). The methodology applied was the sensitizing concept, balancing a predetermined theoretical commitment with an excessively open-minded approach (Flemmen 2017, 85). "Sensitizing concepts enable an empirically oriented approach to theorizing without denying that observations are theory dependent" (Flemmen 2017, 92). An "interactive-cyclical" process including abduction, deduction, and induction is used (Reichertz 2014, 78; Strübing 2014, 459). Instead of doing data collection, data analysis, and theory building in a linear process, all are done in parallel (Strübing 2014, 461-462). This was partly applied to this thesis. The data analysis and theory building were only done when transcribing and identifying the first codes because the researcher did not want to guide the next interviews too much and stick with the operationalization table developed. The methodology focuses on the methods that can be used. Often, those are divided into data collection and data analysis (Eriksson & Kovalainen 2008), which are represented, and described in the next sections.

### **3.2 Data collection**

The method chosen for this study was semi-structured expert interviews. Generally, research starts with data collection, which can either be primary research, in which data is collected by the researchers, or secondary research, in which existing data is used (Thommen et al. 2020, 75-77). In this thesis, due to the lack of previous research and specific data available, primary data collection was used. For this, there are generally two study approaches available: quantitative and qualitative. An "open survey" was used in this qualitative thesis, which is to be differentiated from a standardized survey used in quantitative research. Open surveys can take various forms such as guided, expert, journalistic, or narrative interviews. (Baur & Blasius 2014, 53-55). Qualitative research aims to reveal subjective truths and social structures of meaning, which can be

particularly useful in dynamic environments (Helfferrich, 2014, 561), in line with the research philosophy adopted and the subject of research. It was therefore expected that experts of service firms can give valuable insights from their experience of balancing exploitation and exploration and what influences the decisions on the organizational ambidexterity.

### 3.2.1 Semi-structured expert interviews

When conducting interviews, a guided interview approach can be used to increase comparability between different interviews. A guided or semi-structured expert interview was applied in this research and is the most commonly used method for data collection in this type of study (cf. Gibbs et al. 2007, 541). This approach is characterized by its unique flexibility to research specific dimensions while leaving space for new meanings to be added by the participants (Galletta 2013, 1-2). Therefore, based on the literature review, a guide for the interviews was developed and used. This guide can help to use the understanding of the concepts of organizational ambidexterity as a dynamic capability and how organizational structures can be established to achieve it and eventually lead to a sustained competitive advantage and which characteristics of the service sector are influencing this.

The guide used can include a "question-answer" or "narrative prompt-narrative scheme" format, as well as other stimuli to obtain desired reactions or opinions. (Helfferrich 2014, 565). Guided interviews can be standardized, structured, or non-structured. In a standardized interview, the wording and sequence of questions remain the same, while a structured interview uses a list of questions as a guiding basis. Non-structured guided interviews are open-ended with no set questions. (Thommen et al. 2020, 77). For exploratory research questions, such as in the present thesis, a semi-structured interview seemed to be the most suitable approach. It provides flexibility to use concepts studied and help the participant if they cannot think of anything, but at the same time leaves freedom to go further into an interesting thought of the participant.

When it comes to open surveys, expert interviews are another valuable method to consider. In this approach, individuals are selected as interview partners based on their status as experts. This categorization is often associated with specialized knowledge and training in a particular area. Although the focus of an expert interview is on their knowledge and experience, it is worth noting that this does not necessarily equate to an

objective opinion. (Helffferich 2014, S. 570). The experts in the real estate industry were chosen based on their experience and knowledge of how organizational ambidexterity can be achieved in service firms. Expert interviews are usually conducted as guided interviews, which include specific factual questions. Additionally, experts may be asked to provide their input on a particular issue or case. Overall, expert interviews can be a useful tool for gaining insights and understanding complex topics. (Helffferich 2014, 571-572).

### 3.2.2 Interview guide

For the interviews, first, a guide was created for the basis of the interviews (Appendix 1). For this, the insights gained from the literature review were used. The primary goal of the interview questions is to answer the research question, i.e., "translating the research question(s) into interview questions" (Kaiser 2014, 52). The principle used for the guide and questions was to be as open as possible and as structured as necessary (Helffferich 2014, 566). The basic structure for the guide was: Introduction, themes and questions, and closing. In the introduction, the researcher introduced himself and presented the overall purpose of the study, as well as some general information that was asked for from the participant. Before a new concept comes up in a question in the themes and questions section, it seemed important to clarify key concepts of the study: ambidexterity, dynamic capabilities and sustained competitive advantage. The explanations are derived from the literature review and for practical reasons kept fairly simple. Therefore, discussing the research topics studied and avoiding misunderstandings was ensured.

The first sub-question, *What is the relationship between competitive advantage, ambidexterity, and dynamic capabilities?*, is mainly answered based on the literature review and the derived model presented in section 2.4. However, the interview targets all concepts, on which the model is built and could therefore also provide insights into this.

To answer the research questions in a structured way, an operationalization framework was created (Table 7).



Table 7. Operationalization table for semi-structured expert interviews

Research Questions		Theme	Interview Questions
Main Research Question	How do service firms develop organizational ambidexterity as a dynamic capability in order to achieve sustained competitive advantage?	1: Understanding of ambidexterity	<ul style="list-style-type: none"> <li>- Please provide an overview of your perspective on organizational ambidexterity in service firms.</li> <li>- How do you balance exploitation and exploration?</li> <li>- What are your experiences and insights on how service firms develop this capability?</li> <li>- Which strategies and practices have proven successful?</li> </ul>
	Sub-Question	How are the key characteristics of service firms influencing organizational ambidexterity?	2: Factors influencing ambidexterity
Under which conditions are structural and/or contextual ambidexterity needed to become a dynamic capability in service firms?		3: Characteristics of service firms and ambidexterity	<ul style="list-style-type: none"> <li>- What affects your firm's ability to achieve a balance between exploitation and exploration? Are there specific characteristics of a service firm? Examples?</li> <li>- Are there any challenges related to these characteristics?</li> <li>- Are they any advantages related to these characteristics?</li> </ul>
		How does the organizational structure to achieve organizational ambidexterity as a dynamic capability lead to a sustained competitive advantage in service firms?	4: Organizational Structures for Ambidexterity
		5: Sustained Competitive Advantage through Organizational Ambidexterity	<ul style="list-style-type: none"> <li>- Which metrics do you use to determine success in the short term?</li> <li>- How is the organizational ambidexterity helping you to achieve a competitive advantage in the short term?</li> <li>- Which metrics do you use to determine success in the long term?</li> <li>- How is the organizational ambidexterity helping you to achieve a competitive advantage in the long term?</li> <li>- Do you see any general barriers to developing ambidexterity in service firms?</li> <li>- Do you see any general or success factors for developing ambidexterity in service firms?</li> <li>- Can you provide best practices for developing ambidexterity in service firms?</li> </ul>

In the first theme, the start of the main part of the interview, the participant was given a lot of freedom to express experiences, feelings, insights, etc. (cf. Helfferich 2014, 566). In the second, third, fourth, and fifth themes, aspects were investigated that are not yet sufficiently covered in research (see research gap) (Helfferich 2014, 566). In the second theme “factors influencing ambidexterity”, it was important to find out more about the antecedents or settings in a firm that make ambidexterity possible. In literature, important aspects of ambidexterity are leadership and culture (see, for example, O’Reilly & Tushman 2004, 76), and for service firms, customer relationships seem particularly important (Fourné et al. 2019, 572; Kortmann 2012, 135). Those are used as stimuli if the participant could not think of anything, in accordance with the openness principle stated above. For the third theme, “characteristics of service firms”, the aspects were narrowed to service firms and to find whether there are specifics of the service sector that influence organizational ambidexterity as suggested by former research. In theme 4, answering sub-questions 3, the interview questions targeted the different approaches of contextual and structural ambidexterity. Openness was established in so forth, that the question explicitly also included hybrid forms. The service sector was also included, to get a clear setting for answering the research questions. The participant was asked which approach they have used and why it seems successful or why another approach is not or also could be. In theme 5, competitive advantage was investigated and how it can be achieved through organizational ambidexterity. Short- and long term were included to make a differentiation between “only” a competitive advantage in the current market or a sustained competitive advantage also including success in future markets. Asking about metrics can help to understand how the firm views success compared to organizational ambidexterity.

Generally, the aim was to let the participant do most of the talking and guide them through. Examples were asked for in every theme, as they can help with the understanding.

### 3.2.3 Selection of participants

After the creation of the guide, participants for the interview were be selected. In qualitative studies, generalizability is not the aim and therefore it is not necessary to have a representative sample (Kaiser 2014, 71). An expert can be defined as someone who has domain-specific knowledge based on (many years of) experience (Mieg & Brunner 2004,

209). The following criteria can be used to assess the choice of an expert (Gläser & Laudel 2006, 113):

1. Which expert has the relevant information?
2. Which of these experts is most likely to be able to provide precise information?
3. Which of these experts is most likely to be willing and available, to provide this information?

Considering these criteria, specific criteria for this thesis were developed to choose experts:

- The expert works in the real estate industry
- The expert is in a strategic position, also referred to as “management”, in which exploitation and exploration need to be considered
- The expert has a formal education in business administration or a related field and/or has several years of experience in management

To ensure comparability and reduce some of the complexity, only experts from one industry were interviewed from firms of similar size (large German housing companies). This was done because previous research has shown several factors influence ambidexterity, such as size, age, or technology intensity (see, for example, Fourné et al. 2019). It is also important that the expert is in a management position where considerations and the balance between exploitation and exploration are relevant, i.e., a strategic position. Additionally, this takes into account the importance of leadership in ambidexterity (see, for example, Havermans et al. 2015).

The acquisition of expert interview partners is a big practical hurdle (Kaiser 2014, 70). The researcher was thus supported in this regard by a German management consulting firm for the European real estate market, which made it much more effective to get access to relevant interview partners, especially given the criteria of management level. Due to limited resources and difficulty in getting managers to attend interviews, this seemed a suitable approach. As for high acceptance rates to attend the interviews, this proved to be true. In “theoretical sampling” it is important to choose participants based on previous analysis – who is to be thought of to bring more or different insights - and can therefore not be done all at once. In practice, this can be difficult, as it is not clear beforehand, what the content of the interview will be. (Strübing 2014, 464-465). To get a rather full picture

of the companies and different approaches for organizational ambidexterity, experts were contacted from structural and contextual firms. The consultancy helped to make this first assessment in advance. This led in total to 7 interviews, conducted in a period of 4 weeks from late September until early November 2023. The length of the interviews was between 50 and 70 minutes. After about 5 interviews, at least two experts from companies from a structural approach as well as a contextual approach were interviewed, themes started to repeat, and few new ones were added. Therefore, a sixth one, which was already scheduled, was conducted. The 7<sup>th</sup> interview was then done with a management consultant who has been working with all interviewed companies. This was expected to give more insights and help reflect on the interviews by taking on a meta-level view. The other experts who participated were all in the real estate industry and held management or senior positions as head of strategy, head of innovation, (operational) division manager, and innovation manager.

The experts were contacted first by employees of the consulting firm who are acquainted with the experts via telephone or e-mail. Here, a short description of the research purpose was given, and a time was scheduled for a video interview. A video interview was chosen mostly for practical reasons, as it does not limit the experts to be located in an acceptable travel distance from the researcher and recording is possible.

### 3.2.4 Ethics

Ethics are a key element of research generally and therefore also for qualitative expert interviews. It is the responsibility of the researcher to ensure that ethical standards are followed. Ethics are particularly important in this thesis, as the interviews were recorded. Generally, four areas are important: The protection of personal rights or personal data, "informed consent", confidentiality, and the integrity and professionalism of the researcher. In protecting the personal data of the interview partners, no data is gathered, used, or displayed in the research, which is not necessary for answering the research question. In the case of usage of personal data, they are anonymized to ensure that no inference to the interview partner can be made. "Informed consent" is ensured, as the participant is given information about the content of the interviews in advance, the intended publication, and written consent is taken from the participant. Confidentiality is important in cases where the participant highlights the information to be such. In such cases, the researcher did not include this information or in such an abstract form, that all

privacy rights of the participant and related company are kept. In cases where this information is not critical in answering the research question(s), the information particularly labelled as “confident”, is disregarded, and not used. The integrity and professionalism of the researcher are ensured as there is no information intentionally left out which can change the meaning or any information added. (Kaiser 2014, 46-49). The participants received two documents before conducting the interview: Informed consent (Appendix 4) and Privacy Notice (Appendix 2). Additionally, to ensure the ethics described above a data management plan is followed (Appendix 3). Six experts agreed to a video recording, while one expert refused video or audio recording. In this case, extensive notes were taken by the researcher while conducting the interview, including some literal quotes. One expert also did not consent to using a pseudonym or impersonal attribution. Therefore, no table of functions or backgrounds of the experts could be provided, nor could there be an indication of which expert made which statement.

### **3.3 Data analysis**

After the data was collected, i.e., the interviews were held, the interviews were transcribed, which was then used as the database for the analysis (Kaiser 2014, 89). A selection of the rules for the transcription by Kuckartz et al. (2008, 27-28) are used and are the following:

- Literal transcription (without dialect)
- Speech and punctuation are smoothed out slightly and vocalizations (e.g. "um", "aha", "yes") deleted
- Anonymize all data that can be traced back to a person or company would allow
- The interviewer is identified with an “I”, the expert with an “E”
- The transcription is divided into sections. When there is a change of speaker a new paragraph starts

The primary transcription was done with the digital tool MS Teams. To ensure correctness, the researcher made manual changes afterward together with anonymizing. Because of the setting, all interviews were held in German. The codes are done in English but based on the German versions. For the findings, literal translations are done with the online tool “DeepL” and adjusted by the researcher only if there is a clear error in translation.

For a study using the method of sensitizing concept, a data analysis according to Strübing can be used, compared to more sequential approaches (Baur & Blasius 2014, 52). The parallel approach means that with the first case, in this thesis an interview, the analysis starts, and theoretical statements can be derived (Strübing 2014, 462). This choice of a parallel approach is made because, for either contextual or structural ambidextrous approaches, the insights from one interview can help to guide the next interview in more depth and lead to new insights compared to if all interviews are done without analysing in between. As described, this was done while transcribing. The “theoretical sampling” puts the researcher in an important position to find similarities and differences with the existing literature (Strübing 2014, 463). The comparison process goes until “theoretical saturation” – “when additional analysis no longer contributes to discovering anything new about a category” – is reached (Strauss 1987, 21).

Coding is an essential element in the analysis of qualitative research (Eriksson & Kovalainen 2008). The NVivo software application was used for coding. The first step in coding for this thesis is axial coding. This is finding concepts, and sub-concepts “around the axis” of central categories and derive a “network of meaning” from it. It is however not the goal of this phase to answer the research question(s) but to explain different phenomena. (Strübing 2014, 467-468). Selective coding was used as a second step to answer the research question(s). It includes finding connections and selecting the most central concepts to answer the research question(s). This re-adjustment or re-coding of the codes derived from the first phase of axial coding helps to ensure consistency in finding answers to the research question(s). (Strübing 2014, 468-469).

In the first phase of coding, the four themes of the operationalization framework were used to categorize the emerging codes. Additionally, in theme 4, concerning organizational structure, structural, contextual, and hybrid forms of ambidexterity were used to categorize. In the coding process, it became clear that for all structures, similar or almost the same codes apply. Contextual and structural ambidexterity are both dealing with the same factors; however, they often appeared to be the “flipside of a coin”. Hybrid ambidexterity was thus the approach of several experts and their organizations, to overcome the downsides of structural or contextual ambidexterity and create the most suitable form of ambidexterity for themselves. Therefore, the choice was made to present each factor for structural and contextual ambidexterity together and then lead into the

hybrid form as a form of resolving some of the issues. Once the coding process was done, they were clustered into four categories.

### **3.4 Evaluation of the study**

In this section, quality criteria for qualitative research are discussed. The “classic” quality criteria of research, reliability (the stability of data and results throughout multiple studies), (internal) validity (how directly a variable can be measured without the influence of other variables), and objectivity (independence of researcher) cannot be applied as such in qualitative research (Flick 2014, 412-413). One solution is transparency of procedures – to make sure the research methodology is well understood. This includes precise and complete research documentation, in which the choice of method is recorded in detail, which decisions were made in the research process, how coherent they are in relation to each other, etc. (Flick 2014, 420-421). This is done by this extensive chapter “3 Research design” and the appendix with additional information.

Additionally, the widely used criteria of trustworthiness of research of credibility, transferability, dependability, and confirmability are used (Lincoln & Guba 1985, 300). The credibility of a researcher is determined by their capacity to produce research results that accurately reflect reality (Lincoln & Guba 1985, 296). When evaluating the credibility of research, it is important to consider whether there are strong logical links between observations and categories. Additionally, one should ask whether the data collected are sufficient to merit the claims made and whether another researcher could come relatively close to the interpretations or agree with the claims based on the materials used. (Eriksson & Kovalainen 2008). Therefore, the research design with the applied method, data collection, and analysis are explained extensively. Additionally, literature as the basis of the knowledge before the empirical study uses widely accepted and highly cited scientific articles to support credibility. The interview guide is also drafted carefully by drawing on established procedures and the literature review to ensure high quality. An additional factor for credibility is concerning the interview participants. As high standards of anonymity were kept and promised to the participants beforehand, it can be expected that the answers are given more honestly and detailed.

The concept of transferability assesses the extent to which research findings are probable and applicable (Lincoln & Guba 1985, 296-297). This means, that (some of) the findings must be connected to previous findings (Eriksson & Kovalainen 2008). The research

questions in combination with the method are thus designed in a way to produce new insights which can however be linked closely to the existing literature. Not the companies in which the participants work are subject of the research but how they experience or view the applicability of structures to achieve organizational ambidexterity. Nevertheless, the companies studied, especially when it comes to organizational structure, have a significant influence on the results and therefore transferability because it is an entire system that is built around achieving each companies' individual goals. Additionally, the high standards of anonymity that led to higher credibility of the data, can also lower the transferability because the individuals and their companies are not mentioned.

Dependability refers to the production of a truthful and reliable image of the phenomenon studied (Lincoln & Guba 1985, 299). Information must be presented that the research process is logical, traceable, and documented (Eriksson & Kovalainen 2008). For dependability, the chapter on research design carefully describes the process of the research.

Objectivity in deducting findings from the data gathered is confirmability (Lincoln & Guba 300). Others must be able to easily understand how interpretations were made and why (Eriksson & Kovalainen 2008). Therefore, findings are carefully drawn on the transcripts of the interviews and extensive use of direct quotes was made to underline the confirmability.



## 4 Findings

In this chapter, the findings of the empirical study are presented. It is divided into three parts: the characteristics of service firms influencing organizational ambidexterity, which organizational structures can be used to achieve organizational structure, and the effects or goals for competitive advantage.

### 4.1 Service firm characteristics influencing organizational ambidexterity

In the data analysis, seven themes were identified as characteristics of service firms that influence organizational ambidexterity. Those are namely (im)materiality, market dynamics, customer co-creation, simultaneity of production and consumption, customer demand for service-level, and service network. In general, the experts were clear in stating a difference between the real estate industry or service sector in general and the “classic” producing industry. As one expert said:

*“We do not [have] any significant research and development activities because we are not a chemical company [example of “classic” industry], because we are not a product-oriented company, but we really do see ourselves as a service company and therefore we do not have that [R&D] in state of the art in an industrial company”*

The expert did say, they are doing research projects, but they are not comparable to an industry company. This is an example of the self-view of a service company.

The experts named the **materiality**-bound nature of their services as a characteristic of the housing industry that has an influence on organizational ambidexterity. This is in line with the characteristic of immateriality in service industries which in most cases includes a materialistic product to go along with it (Haller & Wissing 2020, 9-10). One expert puts this seemingly paradox like this:

*“As a housing industry, our product is perhaps something in the middle [of materialistic and immaterial], because we still have a bit of the apartment, but the apartment itself is not a product that you work with, you do everything around the apartment. That means the whole rental issue is clear, even if you have something like refurbishment or renovations, but it's still not a product, it's purely a process”*

Others stated the struggle for innovation in such a product-bound environment, even if they see themselves as a service company. One expert indicated multiple instances, for example, online banking, media, and pharma where the immateriality is stronger and not as product-bound as in the housing industry. In the expert's words:

*“Wherever I have intangible goods and my success depends on them, I have to make sure that I always have new ideas on how to produce new intangible goods, because intangible goods have a very short expiry date or, conversely, a very short half-life. And where I have tangible goods, fixed goods, and real estate is probably one of the most tangible and fixed things I can have as a product, then I don't have these problems. So, I can build a house, if I maintain it reasonably well, then I can ultimately rent it out for hundreds of years”*

In this statement, the importance of the immateriality of services becomes clear especially the need for innovation. This need for innovation is accordingly more present in companies with (more) immaterial services therefore leading to a stronger need for exploration activities next to exploitation. In the housing industry, the **market dynamics** seem to be low, especially because of the long product life cycle of a house. For this, two statements of experts are provided:

*“We've never really had to improve [our product], apart from having to maintain it, of course, so we've probably had to somehow ensure a certain quality over the last hundreds of years, as long as it's been around. But I don't think there have ever been any requirements to be innovative. So that hasn't really been a requirement in business as it is in [the “classic”] industry” adding, “I don't have to completely reinvent my product and I think that's the main difference. [...] And I think the [“classic”] industry is positioned very differently in this respect, at least in my opinion. You at least have to improve your product, you may have missed out on developing a new product where someone else was quicker, but we don't run that risk and that's why I don't think we've ever attached so much importance to being innovative or recognizing developments in advance because it was just a safe product that was always sold”*

*“I think a housing company can survive if it never does anything new and only ever responds to pressure. That makes it particularly difficult for us [as innovators]”*

These (perceived) low dynamics in the market make the experts' firms focus strongly on exploitation. The housing industry seems to be located on the lower end of the "barrier" (lower blue line) of where it would still be considered ambidextrous organizations and already inside of the "competence trap" (Figure 9). The housing industry's location is shown in light orange and the figure is considered schematic.

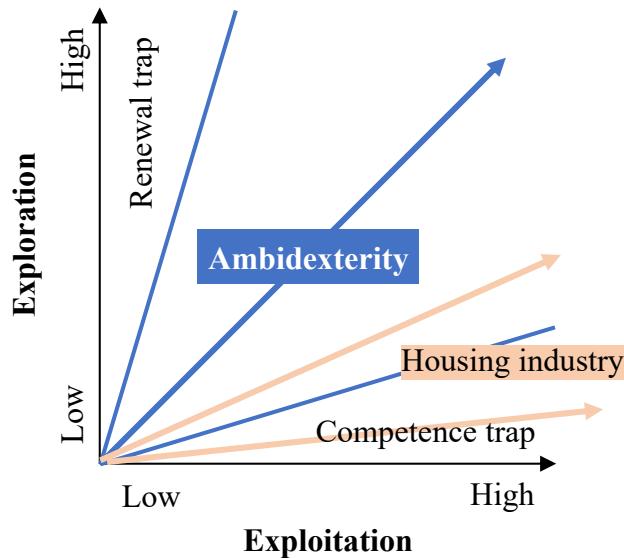


Figure 9. Balance between exploitation and exploration in the real estate sector (based on Lackner et al. 2011, 26)<sup>5</sup>

For low market dynamics, this seems acceptable. It would also be beneficial for such a certain market environment to call for structural ambidexterity (Ossenbrink et al. 2019, 1338-1339), as many of the experts are setting the balance in such a way in the context of the present market dynamics.

If market dynamics change however, this could lead to a disadvantage due to the "competence trap" (March 1991, 71; Ahuja & Lampert 2001, 522; Leonard-Barton 1992, 121-122; Birkinshaw & Gibson 2004, 47). In the words of Levintal and March (1993, 105): "An organization that engages exclusively in exploitation will ordinarily suffer from obsolescence". And the market dynamics in the housing sector currently seem to change with new regulations and higher costs due to rising interest rates. This has an impact on the market dynamics and the need for more change in the industry. As one expert said:

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<sup>5</sup> Original source: Güttel, W.H. - Garaus, C. - Konlechner, S. - Lackner, H. - Müller, B. (2011) Heads in the clouds ... feet on the ground: A process perspective in organizational ambidexterity. Working Paper. Johannes Kepler University Linz, Austria.

*“A lot of things are coming at us now, and that's why I think the organizations have to change too”*

In this statement, the expert explicitly calls for other ways to organize for the companies to respond to the challenges. One of the main ways to organize a firm is by its structure. One expert describes the development of the market in a way that in the past more incremental innovation was needed, due to cost pressure, while megatrends such as climate change and digitalization in the past years, created the need to expand the business activity to other areas. Those new business fields can be energy, insurance, craft services, and other, especially digital business models. This would indicate a shift from an entirely exploitation focus towards more focus on exploration.

**Customer co-creation** is a key characteristic of services (see, for example, Haller & Wissing 2020, 10). According to some experts, it is also a key characteristic that influences organizational ambidexterity in service firms. One expert called this a “continuing obligation” towards the tenants. As the expert says:

*“We do not offer products, but a ‘contract good’, we make a potential factor available for use. And in this context, I create the actual service, meaning the apartment in which the service itself can be provided “*

Therefore, the expert concludes that it is difficult to integrate product innovations. The only way to be innovative is, according to the expert, to improve the services connected to the “contract good”, for example in the onboarding of new tenants. This argumentation goes together with the **simultaneity of production and consumption** and is linked to the process of transaction in services. Also, the **demand for service-level** from consumers to be included more in the processes, especially in digital ways, is increasing:

*“It's all about the customer. We've also seen the digitalization towards the customer recently, but this is really driven by the customer because they know it from their daily business and then bring their expectations to us. 'Why isn't there an app here', 'Why isn't there a chatbot', 'Why can't I make inquiries via WhatsApp', 'Why do I always have to phone you'; availability is an issue. This really means that the customer's demands, which he knows from other industries and other topics, simply mean that we achieve the same level of service. That is the challenge”*

The aforementioned characteristics of co-creation, simultaneity of production and consumption, and increasing customer demand towards digitalization and service-level, have an impact on how value is created in everyday situations (exploitation) and challenge the companies to explore new ways of working and new offerings (exploitation).

Some experts also highlighted the importance of *service networks* as a service company. On the one hand, some networks go beyond one's industry, to get new insights, inspiration, and the possibility for collaboration for innovation. On the other hand, networks with direct service partners (for example craftsmen) are an important factor in improving efficiency and learning to do things differently. Literature supports this view of co-creation with various stakeholders to achieve innovations (see, for example, Karami & Read 2021, 13-14).

Differing from the model presented in Figure 8, the process of transaction and relationships were not explicitly named by the experts. Some connections could however be seen between the identified characteristics and the missing ones identified from literature. The process of transaction is partly integrated in the simultaneity of production and consumption. Relationships on the other hand relate to the service network. Therefore, the findings do not contradict literature but rather enhance them with new characteristics and in the cases described above refine the characteristics.

All in all, service firms have some distinct characteristics that influence organizational ambidexterity. According to the data collected, those are: (im)materiality, market dynamics, customer co-creation, simultaneity of production and consumption, customer demand for service-level, and service network. Market dynamics seem to be influencing the balance between exploitation and exploration. In other words: in low market dynamic industries, the need for exploration is lower than in higher dynamic industries. Immateriality seems to have an impact on this and therefore leads to the need for more exploration. Customer co-creation and service networks are suggested as possible ways to deal with organizational ambidexterity and to achieve its balance. The low exploration efforts of some companies might need to change as market dynamics are increasing due to regulation and decarbonization. To achieve this balance, organizational structure is one crucial element that was researched and is discussed in the next section.

## 4.2 Organizational structure in service firms to achieve organizational ambidexterity

Achieving organizational ambidexterity through structure is a central topic of organizational ambidexterity research (He & Wong 2004, 481; O'Reilly & Tushman 2013). In this section, sub-research question 3 (*Under which conditions does structural-, contextual-, or a hybrid form of ambidexterity become a dynamic capability in service firms?*) is investigated. First, the findings of the expert interviews concerning the approaches of structural and contextual ambidexterity are presented and discussed. Within each factor, this is followed by hybrid forms of the approaches presented by the experts, if there were any mentioned. In the synthesis, a later chapter, the insights, especially of hybrid form as a way to resolve the difficulties, are used to create an organizational structure optimal for service firms (in the real estate industry) based on the data collected. Generally, four themes have been identified to influence organizational structure in service firms to achieve organizational ambidexterity: organizational factors, individual factors, process and project factors, and external factors (Table 8).

Table 8. Coded themes influencing organizational structure to achieve organizational ambidexterity

<b>Organizational factors</b>	Culture
	Leadership
	Coordination
	Acceptance/change
	Size
	Internal network
	<b>Individual factors</b>
	Knowledge/expertise
	Motivation
	Openness to new
	Accountability
	Self-conception
	Job variety
<b>Process and project factors</b>	Incremental vs. radical innovation
	Distance to the business
	Capacity/time
	Project duration
	Speed
	Daily routine
	Complexity
<b>External factors</b>	External input
	External network

In the table above, codes were identified and then clustered into four categories. In the next sections, the codes are presented in detail.

#### 4.2.1 Organizational factors

In organizational factors, culture, leadership, coordination, acceptance/change, size, and internal network have been identified as influencing factors for organizational ambidexterity and how it can be achieved through organizational structures.

**Organizational culture** is an important factor to achieve organizational ambidexterity (see, for example, O'Reilly & Tushman 2004, 77; He & Wong 2004, 481). One expert argues that the separation of cultures is important:

*“Because outside of that [the innovation unit], the culture is not so innovation-friendly here. So, if you say that you need a continuous culture of innovation, that's nonsense, yes, we don't have that, yes, and it still works [...] This tension between this core business and this topic of shaping the future is simply so blatant that it only works if there is a protective space for it”*

The expert argues for structural ambidexterity to be beneficial because it allows different cultures within the separate units for exploitation and exploration. The need for different cultures for exploitation and exploration is also highlighted in literature (O'Reilly & Tushman 2004, 80). While exploitation needs a culture of discipline, no failure, and process focus, exploration needs risk and experimentation and therefore involves a culture of failure and learning (Tushman & Euchner 2015, 18). Another expert defines the different cultures in the following way:

*“There are often such clearly different cultures. The topic of innovation is often closer to a start-up culture, whereas the culture in housing companies [exploitation units] is still very different”*

The separation would therefore make sense and allow two different cultures to explore and exploit in parallel. A third expert supports this, by arguing that the separate units can be free from daily business and “think outside the box”.

In contrast, one expert believes there should be a failure culture in the exploitation units. This could support the inclusion of explorative activity in the operative units. Another explains the difficulties included in establishing such a culture in exploitation units:

*“I think that's more of a challenge, it was a long process for me, but I've managed it well in the meantime to let them [employees in exploitation units] do it. And then not always to regulate and then intervene, but also to have the trust and let them do it, and they will come if there are open questions and if they are unsure. Ultimately, it's exactly the same as I learned from my management, they let me do it and trusted that they could assess the situation and know when things were getting bumpy. And that was a process that I had to learn”*

This expert's view already includes some aspects of leadership that are important to foster culture, which will later be discussed. It seems possible to establish a culture of exploration within exploitation units, however, it comes with hurdles and therefore seems to contradict the “nature” of exploitation in a way. Trust plays an important role in the culture in contextual ambidexterity, as to be seen in the statement and literature (Gibson & Birkinshaw 2004, 213). Another aspect that could make it difficult for a team member in an exploitation unit to work on exploration is how this is viewed by others in this unit:

*“If, as a lone wolf within my department, I am perhaps looked at strangely by other colleagues because I am the one who has been selected for innovation. So, there are quite a few things that speak against it”*

However, this could change if the overall culture calls for such behavior of single employees or entire (exploitation) units.

One way mentioned by an expert to resolve this is to connect different departments:

*“I also believe that this enabling of effective project work in the company and also the creation of a culture of cooperation between different areas and departments, because on the other hand, the hurdle in the past was often silo thinking between different areas”*

Connecting in the company, be it between exploitation units and exploration teams or between several exploitation teams, can foster organizational ambidexterity.

Thus, the separation of units makes it easier to establish two different cultures between exploitation and exploration. If parts of a more explorative culture, such as failure and experimentation combined with trust by leaders, it can be beneficial in a contextual approach as well but comes with the hurdle of acceptance in the unit as well. One solution



could therefore be to connect the units in a rather hybrid approach. Several of these aspects are mentioned as separate factors in the following.

As mentioned, *leadership* is closely connected to culture. In the example above, it is serving to shape culture. This is also supported in literature. For structural ambidexterity, the senior leadership team is responsible for the establishment of the different cultures needed (Tushman & Euchner 2015, 18). Also, the leadership is responsible for resource allocation between exploration and exploitation units, called “ambidextrous leadership” (O’Reilly & Tushman 2011, 13). Overall, the experts seem to agree that exploration needs to be “fought for” more than for exploitation and that leaders play a critical role:

*“If there is not this one powerful person who can withstand and balance these extremes, then exploitation will always win, and exploration will fall short. What is meant by falling short is, it will simply not happen”*

A structural approach seems thus recommendable. Eventually, in a structural approach, ambidexterity is located within the leaders, who need to manage the balance (Raisch & Birkinshaw 2008, 396). Therefore, support from senior leaders seems critical for exploration activity:

*“In some cases, it is also a staff department within the Management Board that implements the strategy, brings innovations into the company and carries out innovation projects. This then usually has a little more weight than would otherwise be the case”*

This statement supports exploration to be close to senior leadership, as they can provide necessary importance to it and allocate resources to it. Another expert supports this when saying “certain assertiveness” was needed from senior leadership in a big innovation project. To locate exploration directly under the management board also makes sense from a thematic point of view according to another expert:

*“We get recommendations directly to the Executive Board. That's the next unit we report to. Reporting is also below the Management Board because corporate development or developing the company further and looking to the future tends to be the direct responsibility of the Management Board. In small companies, the Management Board still does this themselves, but in large companies, this is simply not possible. At least in our experience, these areas are often under the*

*Management Board or should be under the Management Board in order to have these short reporting and decision-making channels and simply because this is where they would normally be located thematically”*

This calls for a structural rather than a contextual approach. In such settings, leaders must provide protection to new ideas and let them be fostered outside of the daily business:

*“This puts [the senior leader] in a position where [he/she] can create this protective space and, when people from the right and left try to stick sticks in the spokes, [he/she] can give the relevant colleagues a gentle kick, bring calm, and I think that's simply very important, it needs this protective space.” [...] “But if [the leader] didn't exist as a board member, there would be no more Business Development. I believe that if [he/she] were no longer a member of the Management Board tomorrow, there would be no more Business Development the day after tomorrow. That's relatively fixed to the person”*

This makes leadership particularly important for exploration activity. However, it also seems to include risk because exploration is very much dependent on the leader. This might not be the case if exploration is part of the entire company, i.e., contextual ambidexterity.

Also, for contextual ambidexterity, leadership plays an important role (Havermans et al. 2015). An environment needs to be created by leaders (see also culture) for employees to have the ability to switch between exploiting and exploring (Ossenbrink et al. 2019, 1322). One expert brings this down to:

*“Leadership is the decisive factor. Freedom must be created, and this then leads to agility”*

Again, a close link is to be seen between leadership and culture. In some cases, the leaders take on the ambidexterity within themselves and lead the exploitation units while at the same time being part of exploration projects themselves. One expert answered on whether contextual ambidexterity is feasible also for more radical innovations:

*“I do think that this can certainly work, but of course, it is also a question of who the managers are. As a rule, it's very much manager-driven and in rare cases, especially in medium-sized companies, perhaps also with individual employees”*

In this case, contextual ambidexterity is only partly used in functional units and is located within the leaders. All in all, leaders play a crucial role and need to find a setup that allows for both activities. This can be to have a separate unit for exploration, best set up close to the management board, the leaders to take on some of the exploration activity themselves, or to foster a culture of exploration within the functional teams and encourage them to work on this as well.

Leaders also take on a key role in *coordinating* the different activities. Next to leaders, a separate unit for coordination can be helpful, which goes towards a structural approach or at least a hybrid model. The importance of coordination and the connection to strategy is stated by one expert in the following way:

*“In an environment that is characterized by increasing differentiation and dynamism, which I call complexity, it is expedient to have a clear line in order to be able to counteract the individual impulses that are pelting at them. Today, companies can also go down because they get caught up in every piece of nonsense that someone throws at them, [...] but losing sight of the big picture”*

This statement also supports the model in Figure 6, that ambidextrous behavior is part of the “clear line”, i.e., strategy. For this expert, this is a strong argument for structural separation, as the exploration department can keep the “strategic alignment”. Another expert supports this as well when claiming benefits of a strategic unit to support leaders in making decisions about resource allocation between exploitation and exploration. Accordingly, even for innovative topics coming from within the organization, there is a coordination and alignment instance. There seems to be a close link between exploration activity and strategy. O’Reilly and Tushman (2011, 9) support this need for strategic intent for the success of ambidexterity. Another expert supports this idea with the experience:

*“If you just throw it [projects] into the operational units, [...] it’ll just get stuck somewhere, it’ll get lost somewhere, because people are simply too busy and say, ‘that’s not my job’, ‘that’s something on top’ and it’s still relatively difficult to drive it forward. That’s why we decided to set up central departments, with corporate development, with innovation management relatively new, where we say we have a view of global adjustments in the company, what are major process changes, what are major restructurings”*

Next to the coordination in structural approaches, organizations with a contextual approach also feel the need for coordination on an organizational level. The reasoning is that otherwise, all units are doing different things which in the end might not match together, as one expert said. This opposes Gibson and Birkinshaw (2004, 211) who explicitly said that contextual ambidexterity is getting rid of coordination costs. One expert shares the experience in a contextual organization:

*"We actually founded the PMO [project management office], which didn't exist before, there was no professionalized project management. PMO means that we really had two or three people who simply helped to define the form of how a project runs, who provided a little support, defined and found the project stakeholders, initiated regular project meetings, and also established a process somewhere with the management in order to implement these projects"*

The mentioned project management office seems to serve to coordinate activities for exploration. Additionally, it implies different competencies/skills needed, which are discussed in individual factors. Generally, the experts stress leadership as a way to balance the trade-offs in organizational ambidexterity. This is in line with structural ambidexterity (Birkinshaw & Gibson 2004, 50). At the same time, the separate unit (if it is a strategy unit, for example) seems to be also able to take on some of the coordination and the trade-off between exploitation and exploration and support the leadership in its pursuit to balance the activities. Differing from literature, the experts mentioned the need for coordination in a contextual approach on an organizational level, at least calling for leaders to coordinate or a project management office. Therefore, a structural approach seems recommendable to coordinate.

A very important factor for organizational ambidexterity is ***acceptance and change*** according to the experts. Interestingly, organizational ambidexterity and change management have yet been studied relatively little in combination (Mitra et al. 2019, 2069). Mostly, the experts talked about how the organization, and therefore the operational units, accept change. One expert described the importance in the following way:

*"When an idea like this comes up, I don't think I can implement and decide it from my ivory tower, but I have to test it out and see which processes I can dock into, how I can manage accounting, for example. So, I think I can only do that with the*

*department, otherwise, there's a lack of acceptance and I think there's also a lack of assessment of what can or can't be a success”*

In this quote it is visible, that acceptance is a difficulty in structural approaches. This is evident in the next quotes of different experts as well:

*“Of course, the fact that acceptance within the company is difficult speaks against this [a structural approach]. [...] You take up something that you think is really great, you want to implement it, maybe you even have the support of the management, but you don't have the operational team behind you that actually has to implement it, so there's always the bottleneck”*

*“If I don't integrate them [the operational units], then we're done with the project and then they stand there like ‘an ox in front of a mountain’ and say what do you actually want from me, I didn't understand the whole process and then explain it to me again. So, in my world, I did it wrong”*

*“If an innovation department or an innovation staff unit is perceived as a foreign body, it is of course very difficult to achieve real success, especially with core process-related topics, if you don't receive the support you need from the departments”*

Resistance to change is also a factor discussed in literature when aiming to achieve organizational ambidexterity (Binci et al. 2020). Including operational teams in change projects led by a structural department appears to be of tremendous importance. If one includes operational teams, it can however also create problems in the long run:

*“Not all ideas are implemented, but relatively few ideas are implemented and we have seen that employees have also lost confidence in this tool, this pool of ideas, because either nothing happened with their ideas because it was too small-scale and they then stopped submitting ideas there”*

This highlights the importance of a clear process and transparency when involving employees from operational teams.

One expert described a slightly different approach than solely including the operational teams in a structural approach. The expert suggested using “exponentiators”, people who

have status and are widely respected in the organization, in the operational teams to spread excitement for change.

On the other hand, some experts also argued why it makes sense to locate the exploration activity in the operational teams:

*“The acceptance in the organization is significantly higher for change processes that come from the individual departments and the potential that all important opinions are actually heard and included is correspondingly higher”*

*“We know that conflicts can quickly arise between people and then a good project can fail, and we also know that specialist departments don't appreciate it when a ‘team project’ puts something in front of them”*

Thus, in contextual organizations, the issue of acceptance is, compared to a structural approach, not an issue, as this would mean resistance to one's own ideas. In contrast, one expert raised doubts about including operational teams in projects for innovation:

*“the [operational] department finds it extremely difficult to see something like this as an innovation, but usually only sees obstacles”*

According to this, it would slow down or erase such projects fully if operational teams are involved too much. Binci et al. (2020, 10) support this by having identified an “exploitation identity”, which describes strong opposition to change by employees in exploitation units. The logic is, if acceptance for change is high, initiating change is even more unlikely.

Overall, acceptance in operational teams for change is of crucial importance. Therefore, change can be coming from the operational teams themselves, which would probably keep resistance low, however, poses the risk of no change at all. For a structural approach, the exploitation units need to be involved in the process when a separate team is driving the projects to ensure acceptance of change. When including operational teams, it seems important to invest in expectation management.

**Size** might have an influence on ambidexterity in firms as well. While for example Fourné et al. (2019, 572) found that large and small companies benefit from structural separation, one of the experts is of a different opinion:

*“Size is a very decisive factor. [...] Simply, if you look at the results of companies, a separate department or a partially separate department only makes economic sense above a certain size. Here we are talking about company sizes of perhaps 5,000 to 10,000 units or more, below that it rarely makes sense, simply because the additional employee would probably be more valuable in one of the departments”*

The mention of whether an additional employee is more valuable in a functional team than in an explorational team however seems to be also a question of time-perspective, which will be discussed later in the findings.

The **internal network** is another factor in establishing ambidexterity in service firms. In contextually ambidextrous firms, this seems especially important:

*“Using digitalization as an example, we then founded this initiative, networked [within the company] and actually held these workshops and then initiated projects from the process, which we then wanted to implement across departments”*

The expert refuses in parts the need for central coordination and says this could be done via networking inside the company. Networking between leaders of functional teams is important in this expert’s opinion. Literature finds that an internal network between managers positively impacts organizational ambidexterity (Rogan & Mors 2014, 1872). For another expert in a contextually ambidextrous organization, internal networking is crucial, as it can help to get support for certain tasks from other teams or units quickly.

For a structural approach, internal networking also seems important as one expert says:

*“Everything that concerns the operational business is included in Corporate Development because that's where the relevant people are who have contact with the operational units, some of whom also come from the operational units”*

This is mainly for the reason of getting knowledge from these units, which will be discussed later in individual factors. Generally, networking is important between leaders and in the entire organization. This is true for structural and contextual ambidexterity.

#### 4.2.2 Individual factors

Individual factors influencing organizational ambidexterity in service firms are competences/skills, knowledge/expertise, motivation, openness to new, accountability, self-conception, and job variety.

**Competences and skills** were among the strongest arguments for structural ambidexterity in the interviews. Two experts said:

*“In my view, separation makes perfect sense because the topics are different and require different skills and competencies from the employees. So I have to look at how to get new business models on the road, how to write business plans and so on”*

*“If I am a very good call center employee or a call center manager, it doesn't mean that I necessarily have the qualifications to develop new digital business models and to know how to approach a business case design, how to assess customer needs, how can I somehow drive forward a product design and so on - these are also other skillsets that I need for this”*

There seems to be a large distinction of competences and skills needed for either of the tasks according to the experts and O'Reilly and Tushman (2008, 193). Thus, this supports a structural approach. The experts mention that exploration competences, such as business modeling, assessing customer needs, and product design, are all more strategic tasks. The competences needed for this might be analytical skills combined with a business education.

Some experts mentioned that they use the different skills needed for exploration compared to exploitation in a way that they have a central unit with a few employees who possess these skills to then help on a methodological level with the projects, but they are still mainly driven and designed by the employees in the operational units. As one expert said:

*“This is the conceptual framework, so to speak. This is the department that must be in a position to provide methodological tools, perhaps to give the right impetus, so to speak. Then it always goes over to the respective department and in the*



*department, it is always the case that not everyone is equally qualified or committed to driving forward more modern topics”*

This could be seen as a hybrid model between a structural and contextual approach. This model was widely used, especially because it matches well with **knowledge and expertise**, the next factor discussed. To implement any change, new products, or processes, most of the experts believed the knowledge and expertise of operational units are crucial (some made a distinction between radical and incremental innovation, but this will be discussed later). One expert explained the difficulty of a structural approach concerning knowledge and expertise:

*“There are companies that have a different organization and then have a staff that takes care of project development, which I find difficult because they are not familiar with the core topics and have to familiarize themselves with everything”*

This implies a contextual approach that might be more helpful. Another expert is of this opinion:

*They [employees in operations] know exactly what is good about their processes and what is not so good about their processes, and I worked with them to drive this project forward. Because they also know exactly whether it would be a relief for us if we did it this way or that, or whether it wouldn't be a relief or if you look at the software for it, but it doesn't fit with our processes here, then we have to change it again, i.e. they bring so much input from their day-to-day business, from their experience, that in my opinion things can be handled best there”*

Going along with the hybrid model mentioned in the factor above, some experts still believe in a structural separation but including the operational units to give input from their expertise and knowledge:

*“We [the structurally separate innovation unit] have come up with something and we are now challenging our concept with the operational units and collecting information: what are the points of criticism, what are the starting points that the operational units see in order to then adjust the whole thing and then have a coordinated version of this idea, so to speak, which we can then place in the company accordingly”*

This expert is of the opinion to develop innovation outside the operative teams, but to exploit the knowledge of the operative units. This is particularly true for projects closer to the current business and incremental innovation (Lavie et al. 2010, 114), which will be discussed later. Another expert adds to this, that the operational units have, next to their knowledge of the business itself, also knowledge of the customers:

*“Ultimately, we always have the customer, the tenant, in mind, but if I'm sitting in a central unit that is thinking about strategies and business models, then I don't have that contact, I don't have that proximity and I think I also need feedback on how the tenant would perceive something like that”*

This supports the suggestions made by Fourné et al. (2019, 572) and Kortmann (2012, 135) that closeness to the customer in value creation makes the separation of activities difficult. The units closest to the customers are needed to understand what is best for them. Here, a clear connection to the service characteristics described in 4.1. can be drawn.

**Motivation** was another individual factor mentioned by some experts. The instances for which motivation was mentioned, were operational employees being motivated to do something additional to their regular (operational) work. Some experts provided positive examples of motivation in these cases:

*“We are also seeing a bit of a trend that younger employees, who also have a bit of potential, are often included [in exploration] and make very positive contributions”*

*“You also have employees with different levels of motivation, and I have found that they are happy when they have a break from their day-to-day work and can simply take on other topics”*

This can be an indication of a contextual ambidextrous approach or a hybrid model. This is in line with literature, where an “enriched work design” can foster intrinsic motivation (cf. Parker 2014, 681). It seems that only certain employees in operations are suitable for this. Another expert maybe had the others in mind when saying:

*“If I am, so to speak, an employee in the core business who gets 20% of his time to think about the future, [...] if I do that and do it in the housing industry, then*

*we will fill 20% with free time, coffee klatch and maybe catch up on things that we haven't done for a long time”*

The expert is of the opinion that motivation for exploration is not strongly present in operational units and therefore a structural approach is more suitable.

In summary, the motivation to pursue exploration tasks next to exploitation is different within operational units. If the right employees are selected and the work is designed accordingly, a contextual approach can be used, or a hybrid model can be beneficial. The motivation for exploration of employees in operational units is irrelevant in a structural approach, as they are not working on such projects.

Some experts also mentioned the *openness to new* (mainly) in operational units. This goes along, considering the low perceived need for (radical) innovation, with the importance of fun of leaders on such projects:

*“Where top management has a certain affinity for innovation, there is often a dedicated strategy department or, in some cases, several strategy teams”*

*“That's why I think this role of [CEO] is so crucial, because [...] I think [he/she] quickly gets bored in this company because it's such a boring administration. And that's why [he/she] looks for areas to play in”*

Connecting this factor with the previous one, in these instances, there seems to be a strong intrinsic motivation of leaders to pursue exploration activity. In operational units, openness to new is also important. Similarly to motivation, there seems to be a distinction between the employees:

*“If someone is open to innovative topics in addition to the fact that they also are strong in processes, then this combination is ideal. Or we know people in our specialist departments who we recognize as being open to such topics and we then forward this to them with a request for an assessment” [...] “In other words, we look for people who have mastered their subject, so to speak, but who are open to the new subject or bring it in or are passionate about it, whatever the case may be, and then we move it forward together with them”*

Again, this expert is combining employees in operational units that are open to new, and there is also the mention of certain competences that are needed, which calls for a

structurally separate unit as a complement to get the best outcome for organizational ambidexterity. On the other hand, if openness to new is not given in operational units, the structurally separate unit must take the lead according to one expert:

*“But there is, I always affectionately call it 'forced gratification', which also means that we say this is an interesting topic, especially if perhaps a department is not otherwise known for always being open to newer topics, then we set this topic, then the exchange is made and then we see whether we can integrate it”*

In conclusion, it seems to be possible to integrate operational units into exploration activity, if they possess the openness to new. If the openness to new is not present, similar to motivation, the structural unit can take over. One could argue a culture of openness, that would need to be fostered, could also enable a contextual approach (Havermans et al. 2015).

**Accountability** is another factor influencing organizational ambidexterity according to one expert. It calls for a structural approach, in the expert’s opinion:

*“That we are only measured by this one thing. What new products have come out that I can use? Are they available on the market and are they generating revenue? By clearly measuring these goals and reviewing them through our Management Board [...] on the one hand and through this dedication to being focused on them, I think you get a lot of drive into it”*

This could also be done in a contextual approach. Nevertheless, the expert stresses “we are only measured by this one thing”, which increases accountability.

A very interesting comment was made by one of the experts on **self-conception** of operational workers when it comes to bigger changes in their work:

*“I think that would also mean that I would be questioning far too much what is actually my day-to-day self-image, my task. You have to have a very strong personality to completely question what you actually understand about yourself and your work, to do things differently”*

With this, the expert made a point about (bigger) change needs to come from outside of the operational units and therefore supporting a structural approach. This might also be the reason for some of the resistance of operational employees described above.

A factor influencing ambidexterity and favoring a contextual approach is **job variety**. One expert stressed this is several instances for the expert and the team:

*“It was always a nice challenge for me to have projects in addition to the day-to-day business, to dedicate myself to new topics and, of course, to develop myself further, learn new things and introduce new things”*

*“I also found the variety exciting. When you're in the core business. Sure, you're always affected by legal regulations, [...] but basically day-to-day business is day-to-day business and the challenge is actually to do another project. And that has a different level of complexity and is very exciting”*

*“I have made the experience that they [employees in operational units] are also happy when they have a break from their day-to-day business and can simply take on other topics”*

Therefore, including variety in operational jobs can help to satisfy employees in operational units and it probably has a positive effect on their daily tasks as well. Job variety promotes the employees' creativity, proactivity, and learning and development and supports organizational ambidexterity (Parker 2014, 681). Additionally, it can help employees to be open to new experiences (Parker 2014, 673).

All in all, competences/skills are an important factor in developing the business in processes and new business models. The competences/skills needed for such jobs differ from operational workers and therefore call for a structural approach. For such projects, a lot of times the knowledge/expertise of operational units is invaluable, which calls for a contextual approach. Motivation, openness to new, self-conception and job variety are influencing factors, especially for operational units and their part in exploration activity. If the setting, culture, leadership, etc. are well designed, it can be achieved to include these units in exploration activity. However, some exploitation-driven employees might hinder exploration activity, which would make a selection of employees for such tasks necessary. A distinct unit makes accountability for exploration easier – could nevertheless be established in a contextual approach as well. Concluding, a separate unit for exploration is easier to establish. To achieve the best results, motivated employees from exploitation units that are open for new should however be included in the process.

### 4.2.3 Process and project factors

Processes and project factors play an important role in the influence of organizational structure to achieve organizational ambidexterity in service firms. The factors identified in this category are incremental vs. radical innovation, distance to the business, capacity/time, project duration, speed, daily routine, and complexity.

First, the nature of innovation, i.e., incremental or radical, has an influence on organizational ambidexterity. One expert explains:

*“I am of the opinion that there is no clear-cut answer, but that there simply needs to be a mixture of more innovative and faster areas that can drive topics forward, which perhaps also involve the specialist departments, but which also look at how the project is progressing. And the departments that optimize themselves, that naturally adapt topics in their own interest, that perhaps also have the necessary expertise from their department to take up and implement the topics in the first place. And so, I believe that there really isn't just one answer, there is always a mixture”*

Even though the expert stated that there is a mixture, it becomes clear by the explanation that a separate unit is best for radical innovations and incremental innovations to be done inside of the operational teams.

Another expert shares similar experiences, that everything that concerns the daily business should stay in the operational team. But the expert also drove forward a larger change, perhaps to be classified toward radical innovation, where other knowledge and skills were needed, which is why it was done in a separate setting. In this case, it even involved the founding of a new business altogether. Interestingly, however, the expert, who is the leader of several operational teams, stayed in this operational role while also leading the other project and now also the new business, making it a mixed form between structural and contextual ambidexterity. Generally, the findings are in line with literature, that radical innovations rather call for structural ambidexterity while incremental innovation favors a contextual approach (O'Reilly & Tushman 2004, 76; Ossenbrink et al.'s 2019, 1339; Adler et al. 1999).

Radical innovations that are connected with the main business are also possible to implement with a contextual approach according to two other experts, giving examples where it worked before.

Some other experts explained their companies to have two separate units for each type of innovation:

*“One department is looking more at how we can expand our product portfolio, what are long-term innovations [...]. And the other department is basically concerned with what can be improved operationally, how can processes be tackled or how can structural changes be made in the company. In other words, [...] this is the department that takes care of how we can improve structurally and operationally and everything that concerns new forms of business, new sales methods, so to speak, is in another department”*

This separation of also the incremental innovation from the operational units is according to the expert mainly because of different skills that are needed to do such. This is supported by another expert's experience:

*“When talking about central units, I would also see this much more in organizational development, which does process management, that they accompany such things. So, such incremental process innovations are much better and more targeted in the core business”*

This expert's company also introduced two separate entities, each responsible for either radical innovations or incremental innovations respectively. It becomes clear, that for the incremental unit, it is essential to be close to the operational units. This approach tries to bring together the factors of competences/skills and knowledge/expertise for incremental innovations. Particularly important is in this regard, that for more incremental innovation, knowledge of the current business and processes are far more relevant than for more radical innovations, as they can be further away from the current business model (cf. Lavie et al. 2010, 114).

Some experts also gave reasons, why radical innovations need to be separated from daily business. Mostly, the reasoning is because of the difference in competences needed (see above) and external input needed, which will be discussed later.

Another factor, that calls for structural separation, is *distance to the business*. Several experts stated this:

*“There will then be new topics, new business areas, for example, where we say that we would perhaps like to look after the topic of submetering ourselves, i.e. open up new business areas and new sales potential in the future. There won't actually be a specialist area that takes on this topic”*

*“Thematically, it [new business areas] doesn't really fit into the departments”*

*“That was a topic that we had to develop from scratch. For example, this is now a topic where I say that we would have had to find another department for it. [...] For example, it would have been good to have a project development team or a team that does project development and drives these things forward”*

The statements indicate that the further a new topic is away from one's core business, the more it makes sense to include it in a separate unit and let it be developed there. To some extent, this goes along with the argumentation above for structural separation in radical innovations, as they are naturally further away from the core business. “Compared to returns from exploitation, returns from exploration are systematically less certain, more remote in time, and organizationally more distant from the locus of action and adaption” (March 1991, 73).

**Capacity and time** seem to have a large influence on ambidexterity as well. Contextually ambidextrous companies, which by definition include the switching of tasks by single employees between exploitation and exploration (Gibson & Birkinshaw 2004, 211), seem to have a disadvantage compared to structural ambidexterity according to some experts (Table 9):



Table 9. Project- and process factor: Capacity and time

Quote Nr.	Quote
1	“We simply noticed that we didn't really make any progress with the projects, so there was one project [...] I wasn't satisfied with it at all because we simply lacked the capacity. Exactly the topic, we were so busy in our daily topics [...] that we simply didn't get to the real topics. So, we made no progress in the project [...] nobody could really contribute to it and we simply realized that the only thing you can do is involve the department, I think, in a project meeting, ask questions, but in the meantime they don't have time to prepare things or familiarize themselves with new topics. And for that, you actually need a strategic department or a department that is free-floating and really takes care of such a topic full-time” [...] “I think it's because the topics are so extensive and you actually want to get results so quickly that you need the whole day to do it”
2	“I somehow need the time for that to actually think about how the housing industry is developing, what is coming up for us in terms of sustainability, detached from the day-to-day business, it is now so extensive that I can't actually do it alongside the day-to-day business”
3	“In general, I would say that it is relatively difficult for companies to think about and work on these long-term innovations on a day-to-day basis. We are now realizing more and more that we need extra positions for this, extra capacities, because the strategic view is simply lost far too often in day-to-day business, because there are simply so many issues coming in and short-term changes that you simply can no longer keep up with really thinking strategically about the future”
4	“My observation is only where you don't have a dedicated team,[...] not as much new development happens as here [in a separate unit]. And I think there are several factors behind this. [...] I think the most important thing is simply the question of resources. Because when I work in the core business, even if I'm told you're getting two extra employees or your team is getting bigger and you all have one day a week for innovation or something, as an employee, I'm always faced with the question of whether I should take care of the big pile of paper that's lying around, or maybe an email inbox, which can also be digital, but you take care of [your] worklist, [...] and work through it, which I do every day anyway and which I never manage to do. So, there's no one in any of our departments or areas who says I have too much time; everyone always says I don't have enough time for my work. Or do I say in a disciplined way, oh, but now it's Friday, when I want to work on innovation. I do have 2 or 3 urgent tasks on my plate, but I'm doing them today. Hardly anyone has this self-discipline and I think that if you have to organize your own time and then do what you have to do, then many people say, I'd rather do the things that I really have to do urgently now instead of sitting down and thinking about innovations”
5	“There wasn't enough time, sometimes, to work on things in depth, whatever the topic, core business or project, as sometimes should have been required or as I would have liked”

The quotes above describe why it can be very difficult from a time or capacity perspective, to follow a contextual approach. The third quote makes the differentiation that it is particularly difficult for radical innovations to be done in a contextually ambidextrous organization.

Also, for structural approaches, time and capacity are relevant. This then applies to the separate unit, as one expert explained:

*“We realized that nothing was coming from inside of the company anymore, because trust had been lost a little bit, because many things could not be pursued due to the capacity that was present, because we had no one who could take care of it and, as I said, if I then took out my idea, which was good, maybe someone gave it to me on top, but then fell behind because he didn't have time, and so trust was lost”*

Nevertheless, several experts call for structural ambidexterity. There, the shortcomings of too little time in exploitation units are not present:

*“I think that just helps a lot because we simply can't look for any other activity”*

*“Out of 10 ideas, there must be one left”*

All in all, especially contextual ambidexterity seems to struggle to find time for exploration activity. This is due to too much daily work on the operational units which will usually win over long-term project work (cf. Schoemaker et al. 2018, 19), which March (1991, 73) calls the “vulnerability of exploration”. Therefore, it seems questionable to leave the balance within organizational ambidexterity in the hands of a single employee. The experts favor structural ambidexterity when considering the factor time and capacity. For structurally ambidextrous organizations the experts seem to assume enough resources provided for the exploitation unit.

Another factor in projects and processes that influence organizational ambidexterity and the corresponding structures, is **project duration**. One expert mentioned in several instances, that a separate unit always makes sense if it is a “continuous task”. Thus, as exploration and exploitation are continuous tasks that a company should perform, which is the definition of organizational ambidexterity, it calls for a structural ambidextrous approach. Another expert supports this, by stating in a short project duration, it can be done with some extra work within the operational units. If it however a large project, which radically innovation projects usually are, it makes more sense in the expert’s opinion to structurally separate.

Two experts also mentioned the factor of **speed** that is needed to keep up with competition and change and that is better possible in a separate unit, which seems to be a benefit of a structural approach also in literature (Ossenbrink et al. 2019, 1328).

Getting out of *daily routine* is another factor according to one expert. This is relevant for contextual approaches:

*“If you want it [contextual ambidexterity] to work, you really have to be out of the day-to-day business, somehow in another office or another place, or perhaps together with others, somehow moderated by someone. So you have to somehow manage to be torn away from this daily pulse of operations”*

The expert stresses that for exploration activity, it is important to get away from the daily routine, to break out of it to get into the culture of exploration. This is easier done in structurally separate units compared to contextual ambidexterity.

In exploration, high *complexity* and uncertainty are involved (cf. March 1991, 73). One expert mentioned having several separate units for exploration. This is because according to the expert, to do all exploration tasks in one team is already too complex to deal with otherwise:

*“If I have a Head of Corporate Development today, [he/she] doesn't have to be familiar with the strategic orientation of one business area, but of [several] business areas. If I then say to [him/her], please do the whole topic of climate protection, i.e. climate protection strategy and sustainability management. Then that's a pretty big board that you're asking them to drill at this point and that's why we decided [...] to separate that at this point and it's been going really well ever since”*

The expert does not mention operational units. However, it becomes clear that by the decision to separate even the exploration tasks into different units due to high complexity, a contextual approach seems not feasible. Similarly, another expert said:

*“You have to understand intellectually [...] that I often have such a typical hockey-stick business case curve, I simply have to invest in software, for example, with which I can later make a profit. And that's different when I buy a residential building”*

By this statement, the expert on the one hand explains the different knowledge needed for the different tasks of exploitation and exploration, but also indicates that exploration is more complex than exploitation, and therefore the expert called for structural separation.

#### 4.2.4 External factors

External factors are the fourth category that influences organizational ambidexterity and the choice for an organizational structure to achieve it. The factors are external input and external network.

**External input** is important to deal with changes, develop new ideas, and work on innovation. The input are mainly ideas and opportunities. As one expert said:

*“A central strategy department or an innovation department then recognizes [new business areas or revenue opportunities] in the market in the first place. This is often the reason where it fails - to see these trends and potentials at all”*

The expert mentions the importance of seeing trends and potentials in the markets in the first place. In this opinion, a structurally separate unit serves this goal better. Several experts mentioned that it seems important to get new talent in the company. As one expert explained:

*“I think that if my team and I [separate exploration unit] were to do this job for 10 years without any personnel changes, we would probably be very much housing industry and no longer innovative. You have to make sure that you keep rejuvenating yourself and keep bringing in new people”*

Therefore, even in a separate unit, it might be difficult to keep the separate culture or new ideas needed for exploration. The solution, according to the expert, is to get new input through new employees. Hiring people from extern can help the exploration unit (Tushman & Euchner 2015, 20). Another expert also stresses the importance of a separate exploration unit, as an outside view is necessary:

*“We are also dependent on someone having a little bit of an outward view and also looking beyond the boundaries of our own industry. It's not enough to think purely in terms of the industry, because many things that come from other industries are slowly spilling over to us”*

A third expert, arguing for the need for a separate unit as well said:

*“[it is necessary] to be in close contact with the market, with market companions and potential service providers”*

Trends screening seems also closely related to a market view and therefore input from extern:

*“We work with a fixed set of megatrends and sub-trends that we consistently work through, which means that we take a look at everything that is available in the form of studies. And see whether it has any relevance for us”*

Additionally, several experts mentioned working together with start-ups as a way to get in new ideas into the company. They were in favor of a structural approach:

*“We screen the [start-up] market very closely and are very open to pilot projects so that they can learn, and we can learn what they do differently”*

One expert described the difficulties of external input and market knowledge in contextual ambidexterity:

*“If you look at it in the context of digitalization, i.e. perhaps digitalizing the process somewhere, optimizing it, our idea at the time was that every department should actually recognize where there is potential for optimization, but perhaps only when it knows the possibilities, i.e. when it knows what is technically possible, what solutions are available on the market [...] I think it needs input from IT or from a digitalization department somewhere so that you can recognize this for yourself as a department”*

With this quote, it becomes clear that knowing possibilities as input from the outside can help in introducing change within the company.

Concluding, external input seems to be vital for change, whether it be for incremental or radical innovation. A structural approach seems recommendable, as this unit can systematically screen the market and available research for new trends and look for new ideas in one's own industry and beyond. To avoid losing sight of the market and new approaches and ideas, it also seems recommendable to hire new people for the exploration unit to get new views into this unit itself as well.

Several experts also stressed building an **external network**, perhaps to establish a constant external input. For exploration, having an external network with different stakeholders can enhance innovative outcomes (Karami & Read 2021, 13-14). External networks have been identified as a strong moderator between exploration and firm performance (Günsel

et al. 2018, 200). Some experts also favor a structural approach to establish an external network:

*“I think something like that [new business field] might develop more in a somewhat free-floating department that is perhaps also more widely networked in the housing industry”*

*“I need time to deal with partners with networks outside the company. I don't think I can manage that alongside my day-to-day business. That's also my experience. I've tried to do that, I've also tried to maintain external contacts, but I don't have the time and I think that's why I need people who have the time and who really maintain these contacts and relationships”*

The above quotes highlight the importance of an external network. It is accordingly easier to build networks in a structurally separate unit, as there is more time available for interacting networks and building relationships outside the company.

In contrast, one expert favors nurturing external networks within the operational units:

*“There is also the question of how high the affinity is with external consultants, associations, etc. at this point. [...] if the partnerships exist accordingly, perhaps also with friendly companies, then it is perhaps more of a vertical exchange, i.e. you exchange ideas with colleagues from other companies, colleagues from other companies that are active in the same field, there is a certain cluster formation, a swarm intelligence and a much deeper involvement with individual topics and there are also certain working groups within the housing industry, which in my view all speaks in favor of doing this from a specialist area, because you also have a deeper understanding and go into the exchange. So that certainly speaks in favor of mapping it there”*

The reason for building networks on an operational level seems to be one of knowledge. Generally, the expert mentions multiple stakeholders a network can be comprised of consultants, associations, other companies, and work groups in the industry.

In conclusion, external input is necessary and relevant to maintain an exchange of ideas and screening the market and beyond. It seems easier to do so in a structural approach,

however it can also be beneficial for the operative units to network beyond one's own company.

Concluding this section of influencing factors for organizational structure to achieve organizational ambidexterity: The findings neither indicate structural nor contextual ambidexterity to be more suitable than the other for service firms. Organizational, individual, process and project, as well as external factors, have an influence and are highly interdependent. The experts mentioned several ways to combine the benefits of the approaches by mitigating the downsides at the same time in mixed models. Therefore, on the basis of the data collected in this thesis, a hybrid model seems recommended to achieve organizational ambidexterity in service firms.

### **4.3 Organizational ambidexterity to achieve competitive advantage**

The experts that were interviewed had different views on how organizational ambidexterity leads to competitive advantage. Especially the low market dynamics and the material-bound and long-lasting service of housing lead most experts to stay mostly with a rather short-term focus with classic KPIs. A focus on exploitation is seen as a focus on the short term whereas a focus on exploration is seen as a focus on the long term. In the words of one of the experts:

*“So far, and I believe it will continue to be the case, the most relevant parameters in the real estate industry are really the rental success or the increase in rent, which is then somehow directly reflected in the annual result and also in the valuation. In other words, that is the absolute focus and even if you look at the past few years or the past decade, the really biggest success criteria for the private housing industry in particular was financial optimization. [...] This means that it has by far the greatest relevance to earnings and therefore also the greatest focus for many private-sector or privately managed municipal companies or companies managed according to private-sector principles [...]. This means that I always have to measure the issue of further innovations that do not contribute directly to the key business against this”*

Next to traditional metrics, which therefore also represent traditional business, i.e., exploitation, it is difficult to get much importance for innovative, new business fields. One expert said it more drastically:

*“The focus is always on the short term” [...] “[the most important is] the survival of the company”*

In these cases, there was a very strong focus on exploitation, which was also seen in the competitive advantages and the short-term orientation. The short-term performance might be increased through this focus, but might not necessarily be sustainable (see, for example, Kassotaki 2022, 1).

Concerning exploration activity, one expert has other KPIs and a larger time horizon, however, the mid-term financial performance is important:

*“[We] are much more focused on an idea that will bring in money soon than on an idea that is perhaps very big but could only bring in money in 10 years' time. And that's the way it is, but I think it's also intentional”*

The implication from this is for the companies to look for new revenue streams closer to their core business rather than being far away from it. In one expert's words:

*“We have simply seen in recent years that we can offer many, many more services around this residential business and can also simply optimize our revenue stream. Because we can offer things that our tenants need anyway. And why not earn money from it and perhaps even make the tenant a better offer, whether it's a cell phone contract or insurance, these are things that the tenant needs anyway, and we simply see that we have been leaving money lying around for a long time, but we also see that certain topics, such as this whole digitalization issue, tenant app, communication with the tenant has simply become much, much more important in recent years or has become much, much more decisive and we can position ourselves accordingly and wanted to look to the future again”*

Here, as well as in the next quote, the focus on optimizing the current business and looking for new business fields becomes visible. Therefore, it seems to create a sustained competitive advantage from an organizational ambidextrous setup. The expert puts the essential idea of organizational ambidexterity into practical terms:

*“Finding the balance is very, very difficult, but we are simply of the opinion that if we don't look ahead and see what will happen in the next few years, then we will lose our day-to-day business because others will do things better or do more or*



*offer more, no matter how effectively we work, if we then lose orders or customers to others who have done other things that we have missed out on”*

Here, a short- and long-term perspective is applied. Interestingly, the focus lays, different from most other experts, rather on the exploration of new business than on optimizing the current.

Some experts said, for explorative topics further away from the main business, they would opt for start-up investments rather than taking on the venture themselves:

*“You tend to try it [radical innovations] by perhaps investing in a startup. They have exactly these hockey-stick business cases and some of them really do have millions that simply flow into them in the first 4 or 5 years. And they have a corresponding burn rate until they reach profitability. As an organization, we don't have the confidence to do that ourselves, but I think that's also simply because our Executive Board always has to stand up for the P&L on the Supervisory Board. And a startup investment is simply an asset on the balance sheet and not an expense, and a loss in the sense of a hockey-stick business case development is a loss, is an expense. This is much more difficult for him to justify to the shareholder. It will be interesting if a startup goes bust at some point. Then I'll have a big write-off”*

According to this expert, expectations of shareholders are also essential on the balance of ambidexterity, because it always has to do something with risk appetite.

All in all, the experts believe that it is important to engage in exploitation and exploration to be successful in the short- and long-term. In the studied industry of housing companies, it seems that exploitation and a short-term focus are far more important than exploration and a long-term view. This is mainly due to low market dynamics and a long-lasting product that is bound to the service.

#### **4.4 Synthesis and suggested model for structure**

After the detailed view of the characteristics of service firms and factors within them to shape structure and organizational ambidexterity, a model is presented for an overview of the findings (Figure 10).

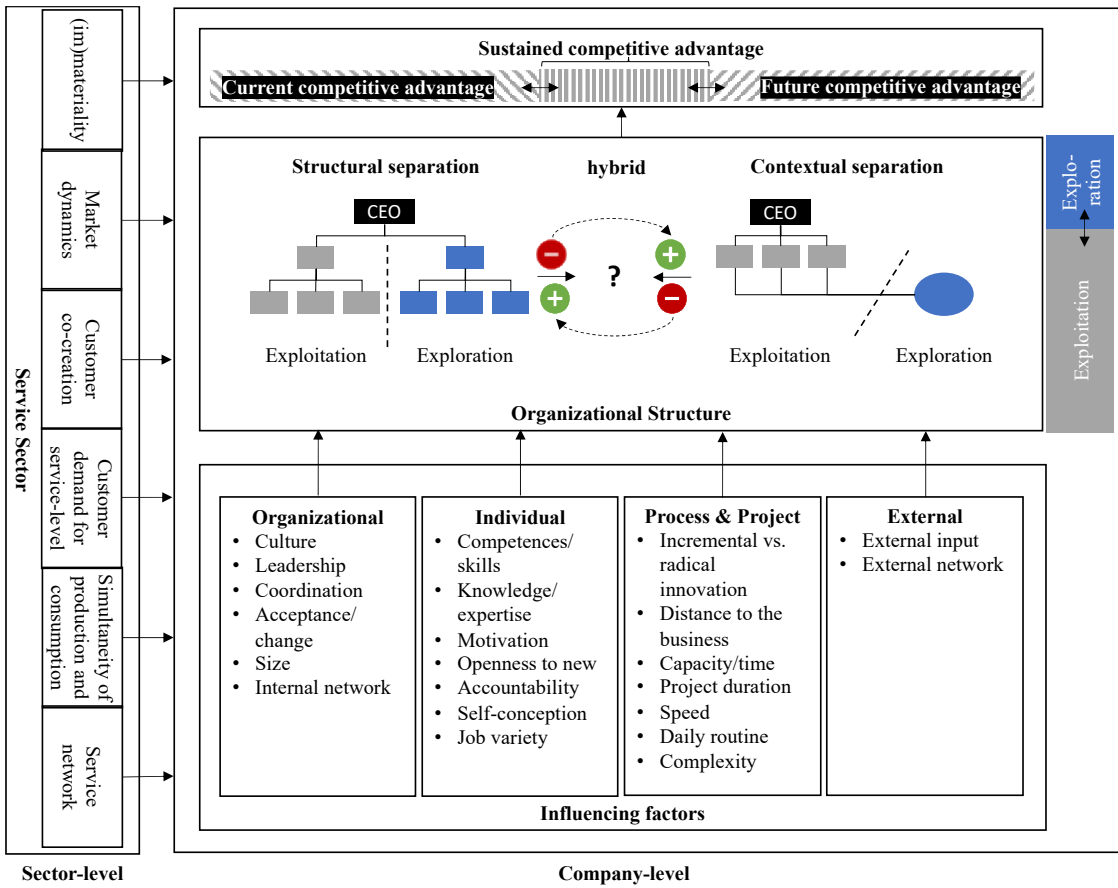


Figure 10. Factors influencing organizational structure to achieve sustained competitive advantage in service firms (two org. structures from Olivan 2019, 40)

As explained in the findings above, the service sector characteristics are identified as having an impact on organizational ambidexterity. Additionally, there are 22 factors in four categories that influence organizational structure that can lead to a sustained competitive advantage. The factors support either structural or contextual ambidexterity, sometimes depending on their direction on a continuum. In several instances, a hybrid form, i.e., the combination of characteristics of a structural and a contextual approach, was mentioned as a resolution to enhance the positive effects while mitigating the negative effects. On the right-hand side of the organizational structure is a bar, which indicates that exploitation takes on more resources than exploration. If the configuration of exploitation and exploration is set beneficial in the company structure, it can lead to competitive advantage. This competitive advantage can be short or long-term oriented and therefore focuses on exploiting the current competitive advantage and exploring for future competitive advantage. The two-sided arrows show the dynamism that is involved in this process. It means one type of competitive advantage can be emphasized more at times and at other times the other. This is achieved through a dynamic shift in the bar on

the right-hand side of emphasizing more exploitation or more exploration. It is important, however, to not let one side dominate (see renewal and competence trap). It must be included in the structure of the company to make organizational ambidexterity a dynamic capability. Then, structure can achieve organizational ambidexterity as a dynamic capability in service organizations to achieve a sustained competitive advantage.

A hybrid form of organizational ambidexterity, taking into consideration all mentioned influencing factors, is developed (Figure 11).

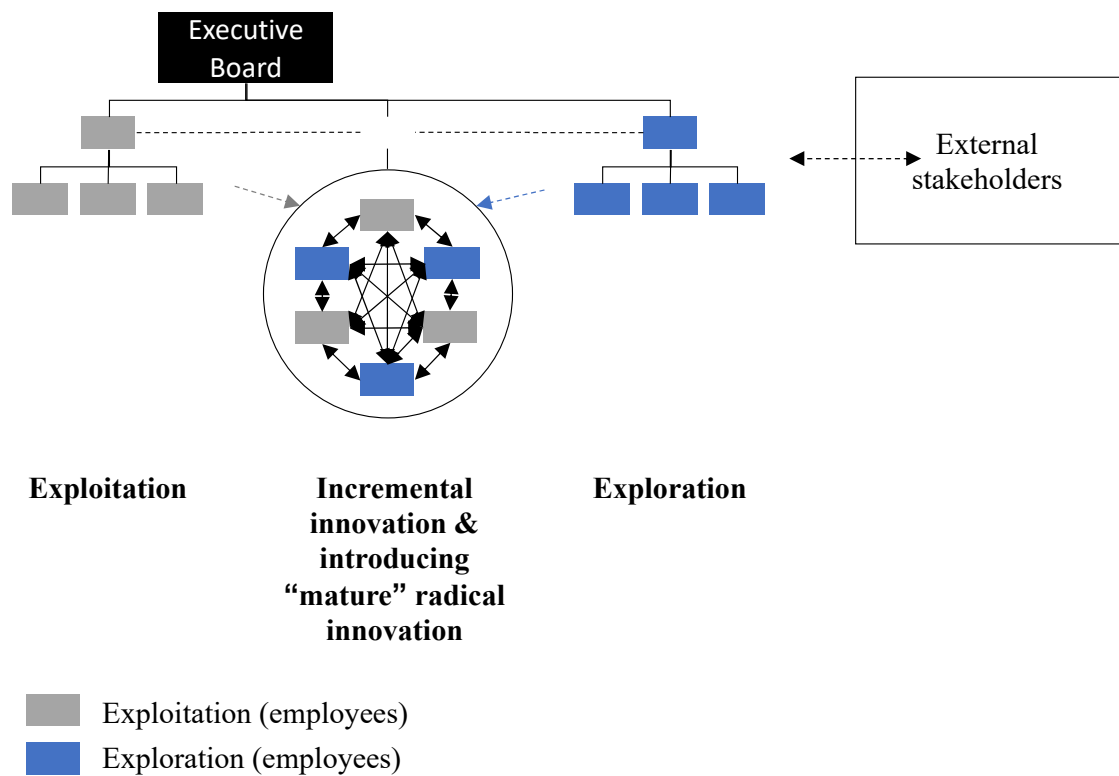


Figure 11. Hybrid Ambidexterity for a sustained competitive advantage in service firms

The developed hybrid model is justified along all factors described as having an influence on organizational structure by the experts. First, the model is explained. There is an executive board, "classic" exploitation units, a separate exploration unit for radical innovation, and another unit for incremental innovation and the introduction of radical innovations into the organization. The latter unit will be called hybrid unit in the following.

Generally, the executive board, a single or several managers that lead the company, are on top of the organization. They are responsible for the organizational ambidexterity. Their choices influence the balance in organizational ambidexterity directly. On the outer

sides, structurally separate units for exploitation and exploration are situated. They have distinct employees and separate unit leads. The exploration unit is closely connected with external stakeholders. The link between the exploitation and exploration unit is depicted in the middle. It is a unit comprised of employees from the exploitation units and the exploration unit(s), that are working on their respective exploitation or exploration tasks and at the same time on the incremental innovation topics. The form of organization is a network structure. By adopting such a hybrid model, a flexible switching of emphasis on exploitation and exploration is ensured, which emphasizes (again) on organizational ambidexterity as a dynamic capability. For the exploitation and exploration unit, the model shows a functional structure. This however was not studied in this thesis and is to be studied in the future separately.

The suggested structure allows for distinct cultures in exploitation and exploration units, which can be helpful because of the different tasks the units work on. Nevertheless, both units can work together and learn from each other's culture and adapt suitable cultural artifacts for one's unit in the hybrid unit. Leadership plays an important role and coordinates activities to the business needs. More focus on exploitation or exploration can be given by focusing more on the exploration unit or using those employees more for the hybrid unit to advance the current business. As exploitation units are included in the process of incremental innovation and working together with exploration units, it is to be expected for them to accept change better. The internal network is also strengthened through the hybrid unit and different employees get together for different projects. Importantly, in the hybrid unit, the competences and skills of the exploration employees are used in combination with the knowledge and expertise of the employees from the exploitation unit. Not all employees from the exploitation units seem suitable for tasks beyond the operations. Therefore, in the suggested model the most motivated and open to new employees from exploitation units can be selected and used in the hybrid unit. In such projects and a dedicated unit for incremental innovation, accountability is also higher than solely doing such in exploitation units. It would at the same time mean to improve, however, not to question the entire work of oneself of the exploitation. Additionally, it gives the employee from the exploitation unit a variety on the job to help in turn again for an interesting workplace and might increase motivation.

The suggested model also allows for incremental innovation as well as radical innovation. Incremental innovation is done in the hybrid unit, drawing on human resources from

exploitation and exploration units that seem to be the most beneficial combination for such type of innovation. Radical innovation can on the other hand be developed at a distance from the current business in the exploration unit. The set-up in the model allows for a clear distinction between operative tasks and innovative tasks and for those employees who are working in both units, capacity can be accounted for and planned. As all three units, exploitation, hybrid, and exploration are dealing with tasks that are continuously done, it makes sense to have a distinct unit for them. Additionally, this can help that such tasks as incremental innovation or exploration are not falling behind the daily business and projects can be done in a timely manner. The change of team and perhaps also setting can lead to the “breaking” of daily routine which might be required to lead to desired results. Concerning complexity, the division of the units is also beneficial. The exploration unit can get external input and keep an external network, use it for the exploration work, and through the hybrid unit bring the insights to the entire organization.

The proposed model also entails some challenges. One challenge is that the large operational units are still not involved in radical innovation. If the need for radical change arises or market dynamics increase, it might still be challenging to introduce it to this large part of the organization, which is not directly involved in its development. Another challenge might be the clash of the two different cultures in the hybrid unit. Leadership will have an important role in managing this merger of employees who work in very different cultures in their respective units. As most literature focuses on either structural or contextual ambidexterity, it might also be a challenge to find the right set-up and managerial moves to make this hybrid model a success.

## 5 Conclusions

### 5.1 Theoretical contribution

This thesis contributes to the academic discussion around organizational ambidexterity and provides practitioners guidance on how to implement the concept of ambidexterity in service organizations. Following, four reasons are provided why this thesis makes a substantial contribution to the existing literature. First, it addresses the research gaps introduced in 1.2. Despite the widely accepted importance of organizational ambidexterity in modern organizations, there remains a noticeable lack of research, particularly in the context of service firms (Fourné et al. 2019, 564; Ossenbrink et al. 2019, 1322; Blindenbach-Driessen & van den Ende 2014, 1089). This scarcity of empirical studies creates a significant knowledge gap that is bridged by this thesis. While prior studies that investigate service firms do this mainly through comparison between manufacturing and service firms, this thesis investigates service firms in particular. The existing literature finds that there is a difference in organizational ambidexterity for service firms compared to manufacturing firms, however, only theorizes which characteristics of service firms influence organizational ambidexterity and does not study those specifically (see, for example, Fourné et al. 2019, 572; Kortmann 2012, 135; Blindenbach-Driessen & van den Ende 2014, 1103). This significant gap in research is filled in this thesis. The findings suggest (im)materiality, market dynamics, customer co-creation, simultaneity of production and consumption, customer demand for service-level, and service network to influence organizational ambidexterity in service firms. While service firms make up the largest part of Western economies (World Bank 2023) and organizational ambidexterity can lead to a competitive advantage (see, for example, Birkinshaw & Gibson 2004; O'Reilly & Tushman 2013; He & Wong 2004; Raisch & Birkinshaw 2008), the findings in this thesis can contribute to the success of service firms and the overall success of service dominated economies.

Second, the existing research on organizational ambidexterity has produced ambiguous findings concerning the choice of organizational structure best suitable to achieve organizational ambidexterity in service firms (Fourné et al. 2019; Kortmann 2012; Blindenbach-Driessen and van den Ende 2014). Such ambiguity in results not only complicates decision-making for practitioners but also highlights the need for a systematic and in-depth investigation. While the existing studies suggest either structural

or contextual ambidexterity to be more suitable, this thesis combines the approaches in a hybrid approach, adding the advantages of each approach while minimizing the negative outcomes. By examining both structural and contextual ambidexterity approaches, this thesis provides a nuanced view of how these approaches can be effectively implemented and combined within service organizations. This nuanced perspective can guide organizations in choosing the most suitable path to balance exploration and exploitation. This widens the view on approaches to achieve organizational ambidexterity away from only structural or contextual ambidexterity towards more practical and more suitable approaches.

Third, factors that are influencing organizational ambidexterity and its structure are in literature for example leadership, culture, and cooperation (Tushman & O'Reilly 1996, 24; Lang-Koetz et al. 2023, 97). This thesis provides an extensive 22 factors, grouped in four categories, that influence organizational ambidexterity and the choice of the most suitable structure. Thus, this large set of influencing factors allows for a nuanced view of structure for organizational ambidexterity. The provided factors can serve as a basis for hypotheses to further test them in quantitative research.

Fourth, the concepts of organizational ambidexterity, dynamic capabilities, strategy, and innovation are individually connected (see, for example, O'Reilly & Tushman 2008, 190; Raisch & Birkinshaw 2008, 393; Raisch et al. 2009, 689; Ancona et al. 2001, 658; O'Reilly & Tushman 2004, 80; Tushman & O'Reilly 1996, 24; He & Wong 2004; O'Reilly & Tushman 2011, 9; Chaharbaghi & Lynch 1999, 45; De Almeida Guerra & Camargo 2021, 99), however, not yet all combined in a model. This thesis enhances the understanding of the interplay between the concepts and provides a comprehensive model (Figure 6). The model is important because it enhances the understanding of the interplay and connections of the concepts and how this leads to a sustained competitive advantage. As it tackles one of the most important aspects of a company, competitive advantage, it makes an important contribution to academia to further understand the mechanisms allowing to become and stay a successful firm.

## **5.2 Managerial implications**

The approach and research questions of this thesis are next to their theoretical contributions also valuable for practitioners. This section highlights the managerial

implication this study has on managers in service firms in general and for managers in the real estate industry, in which the experts in the semi-structured interview work in.

For managers in service industries, the findings in this thesis have several implications. Generally, the findings approve that organizational ambidexterity can be achieved through organizational structure. A hybrid approach (Figure 11) seems recommendable, but one should always consider the specifics of each firm. Following, a table is provided with all factors that were identified and the managerial implications that are connected to each.

Table 10. Factors influencing organizational structure to achieve organizational ambidexterity and their managerial implications

<b>Group</b>	<b>Factor</b>	<b>Managerial implication</b>
<b>Organizational factors</b>	Culture	In operative units, a culture of efficiency and quality can be established while in exploration units a culture of experimentation can be nurtured. Distinct cultures make sense. However, the cultures can influence each other, and a combination can be achieved.
	Leadership	Leaders should be aware of their important role in the allocation of resources between exploitation and exploration. They should be “ambidextrous leaders” providing both parts enough resources. An overall strategic vision seems also important to keep the company together.
	Coordination	It is important to coordinate between activities for exploitation and exploration and keep both aligned to the strategic intent.
	Acceptance/change	Including employees from exploitation units into change projects can help to get acceptance.
	Size	-
	Internal network	Establishing (formal or informal) links between exploitation and exploration units can be helpful for achieving organizational ambidexterity and innovation within the company.
<b>Individual factors</b>	Competences/skills	The competence and skills of exploration unit employees is important to include in novel business models but also for guiding incremental innovation project with analytically.
	Knowledge/expertise	The knowledge and expertise of employees from operational units should be used in the entire process for innovation (especially incremental innovation).
	Motivation	Motivated employees for innovation from operations should be identified and the motivation nurtured through including them in other projects outside of their day-to-day work.



Table 10. Continued.

<b>Group</b>	<b>Factor</b>	<b>Managerial implication</b>
	Openness to new	Employees who are open for new from operations should be identified and they should be included in other projects outside of their day-to-day work.
	Accountability	In projects outside of day-to-day business, clear measures should be taken to account for the success. Roles and responsibilities of each team member should be clear.
	Self-conception	It seems important to let the employees from operational units work on tasks that may change their own work but not radically.
	Job variety	Through including suitable (see motivation and openness to new) in projects outside of their day-to-day work, it can increase motivation and openness to new and make the overall workplace more desirable.
<b>Process and project factors</b>	Incremental vs. radical innovation	Projects should be classified as incremental or radical and put into the corresponding unit (hybrid or exploration).
	Distance to the business	Like the degree of innovation, the distance to the business should be considered. The closer to the business, the more important to include operational employees in the projects and vice versa.
	Capacity/time	Capacity needed for projects outside of the day-to-day business must be accounted for if ambidexterity is to be achieved. This is particularly true for employees who switch between daily work and project work.
	Project duration	It might make sense to include continuous tasks into a separate unit. This includes particularly continuous tasks like incremental and radical innovation.
	Speed	For projects that need to be achieved in a timely manner, dedicated teams are helpful.
	Daily routine	For employees from the operational units, it is important to get away from their daily routine and into a different environment/setting to unfold the full potential.
	Complexity	One should be aware of the complexity of the project and staff and plan it accordingly with functional expertise and analytical skills.
<b>External factors</b>	External input	To be at the pulse of the market, external input should be sought to gain new ideas. This includes also recruiting new talent occasionally, especially in exploration units.
	External network	An external network should be established and nurtured to gain external input.

The above table shows implications for managers in service firms in general. Particularly, they are relevant for managers, who are usually in responsibility of the balance of

exploitation and exploration, i.e., ambidexterity and for the current and future success of the firm.

Additionally, some specific implications for managers in the real estate industry are provided. The current market dynamics increase the importance of an ambidextrous approach for real estate firms. Exploration should get more attention to not fall into the “competence trap”, even with long product-life cycles and materiality-boundness of the service. The hybrid ambidextrous organizational structure in Figure 11 can be an inspiration. Also, the factors identified for influencing organizational structure can be used to find the most suitable approach for the specific real estate firms.

### **5.3 Limitations and suggestions for further research**

The thesis has significant theoretical contributions and practical implications. Nevertheless, some limitations also apply to this thesis. First, the context of the firms that the experts were chosen from, real estate in Germany, is a rather narrow sample. It could therefore be, that some specifics of the industry influence the findings. Other contextual aspects, such as for example, technology intensity, competitive environment, regulation, company size, differences in international location (and culture), and others could have an influence as well. How these factors influence organizational ambidexterity, and its structure could be studied in the future.

In this thesis, some aspects from the service-dominant logic are used. However, the lens of a service-dominant logic is not applied. Such a lens could bring new insights on the mechanisms for organizational ambidexterity in service firms and could be studied in the future.

The model in Figure 6 could also be studied further. It is based on literature review. Therefore, an investigation looking at the different concepts and their connections could be beneficial in a qualitative or quantitative approach. Is there a connection between them and do they lead to a competitive advantage? Are all directly influencing organizational ambidexterity and are all directly supporting competitive advantage? Can this combination sustain a competitive advantage? Under which circumstances?

The other two models, Figure 10 and Figure 11, which are the outcome of the qualitative study, can also be studied further. It would be interesting for example, to study under which circumstances the hybrid approach is favorable. Additionally, the elements of

organizational structure by Robbins et al. (2016, 430) could be applied to the proposed structure. Another area for further research concerning the proposed structure could be which setup is most favorable in which unit. Is a network structure suitable for a hybrid unit? Which is most suitable for the exploration or exploitation unit? Also, the explicit tasks of each unit could be investigated in more depth.

One general critique or limitation is the interpretative character of qualitative research. However, it is just a different basic ontological assumption than that of quantitative research (Morgan & Smircich 1980). Kaiser (2014, 125-146) identifies 5 common problems or mistakes that can occur by conducting expert interviews. Those are:

1. The insufficient justification for conducting expert interviews
2. The lack of reflection on the kind of knowledge to be gained through expert interviews
3. The selection of the "wrong" interview partner and the failure to acquire the "right" interview partner
4. The suboptimal yield from expert interviews
5. The lack of a theory-led analysis and the overestimation of interview data

For this reason, it might be beneficial to study the influencing characteristics of the service sector and the factors influencing organizational structure leading to organizational ambidexterity in a quantitative study. Both, individual factors and the entire model could be studied. One factor, acceptance/change, seemed to be of substantial importance to the experts in this study but this has been studied very little yet. Thus, organizational ambidexterity and organizational structure should be studied in the field of Change Management.

## 6 Summary

Firms must work towards exploiting their current competitive advantage and at the same time explore new opportunities to ensure future competitive advantage. Then, the firm has a sustained competitive advantage. The concept dealing with the balance between exploitation and exploration is organizational ambidexterity. This research stream has a need to understand how organizational ambidexterity works in service firms. Considering this and changing markets, the research question of this thesis is: *How do service firms develop organizational ambidexterity as a dynamic capability to achieve sustained competitive advantage?* To answer this question, semi-structured expert interviews are conducted.

Related concepts of organizational ambidexterity are strategy, dynamic capabilities, innovation, and competitive advantage. Based on a literature review, a research gap is filled by combining all concepts into a model. Hereby, strategy is the frame within the other concepts are embedded. Organizational ambidexterity is viewed as a dynamic capability that deals with the balance of exploitation and exploration. Incremental innovation can enhance exploitation and provide the necessary resources for exploration which can create radical innovation and lead to a competitive advantage in the future competitive environment, thus the model leads to a sustained competitive advantage.

In a qualitative research design, the characteristics of the service sector influencing organizational ambidexterity, factors that influence the organizational structure to achieve organizational ambidexterity, and how this can lead to a sustained competitive advantage are studied. The method applied is semi-structured expert interviews by taking on a critical realist view. Seven interviews were undertaken with management-level experts within the German real estate industry. The data was collected, coded, and analysed by a rigorous operationalization of the research questions and scientific approach ensuring to meet common quality criteria of qualitative research.

The findings from the qualitative research revealed six characteristics, namely (im)materiality, market dynamics, customer co-creation, simultaneity of production and consumption, customer demand for service-level, and service network, to influence organizational ambidexterity. Factors that influence organizational structure are organizational factors: culture, leadership, coordination, acceptance/change, size, and

internal network; individual factors: competences/skills, knowledge/expertise, motivation, openness to new, accountability, self-conception, and job variety; project and process factors: Incremental vs. radical innovation, distance to the business, capacity/time, project duration, speed, daily routine, and complexity; as well as external factors: external input, and external network. On this basis, a model for a hybrid form of organizational ambidexterity for service firms is developed. It contains structural ambidextrous elements of separation between exploitation and exploration units and combines the two approaches in a hybrid unit for incremental innovation and the introduction of new “mature” radical innovations.

This thesis contributes to theory as well as it has practical implications. Theoretical contributions are a view on organizational ambidexterity particularly for service firms, findings for organizational structure to achieve organizational ambidexterity in service firms in a hybrid approach together with a nuanced view on influencing factors, and a combination of the concepts of strategy, dynamic capabilities, innovation, and competitive advantage. Practical implications are given to managers of service firms along the identified factors and allow practical use of the findings. Several elements of the thesis can serve as the basis for future research in different related fields.



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## Appendices

### Appendix 1 Guide for the semi-structured expert interviews

#### 1. Introduction

- Short introduction of the researcher (Name, University, Study program)
- Stating the purpose of the interview: to investigate the effectiveness of structural and contextual organizational designs to achieve ambidexterity in service firms
- Explain the process of interview, confidentiality and informed consent
- Background of the participant: background, role, and experience in service firms
- Stating the main research question: *How do service firms develop organizational ambidexterity as a dynamic capability in order to achieve sustained competitive advantage?*
- Clarify main concepts (at time when question concerning the concept comes up):
  - Ambidexterity: the balance between exploitation (efficiency, daily business, quality, incremental innovation, short-term oriented) and exploration (experimentation for radical innovation, growth, long-term oriented)
  - Dynamic capabilities: the capacity to adapt to or initiate change
  - Sustained competitive advantage: relevant value delivery currently and in the future

#### 2. Themes and related questions

##### *Theme 1: Understanding of ambidexterity*

- Please provide an overview of your perspective on organizational ambidexterity in service firms.
- How do you balance exploitation and exploration?
- What are your experiences and insights on how service firms develop this capability?

- Which strategies and practices have proven successful?

*Theme 2: Factors influencing ambidexterity*

- What are the key factors that influence ambidexterity in your firm? How do they impact the firm's ability to stay competitive?
- "Food for thought": internal factors: leadership, culture, and customer relationships and external factors: market dynamics
- Examples?

*Theme 3: Characteristics of service firms and ambidexterity*

- What affects your firm's ability to achieve a balance between exploitation and exploration? Are there specific characteristics of a service firm? Examples?
- Which challenges are related to these characteristics?
- Which advantages are related to these characteristics?

*Theme 4: Organizational Structures for Ambidexterity*

- Which approaches of ambidexterity have been used by your firm? Structural separation (exploitation and exploration in separate units), contextual ambidexterity (exploitation and exploration in one unit), or a hybrid form?
- How did your firm decide for this approach? Why?
- How has it been implemented? Can you give examples?
- What were the benefits?
- What were the challenges?
- How suitable this strategy is in your industry?
- How suitable this strategy is for your firm?
- Why could the other approach have shortcomings? How could it also be helpful to establish ambidexterity?

*Theme 5: Sustained Competitive Advantage through Organizational Ambidexterity*

- Which metrics do you use to determine success in the short term?
- How is the organizational ambidexterity helping you to achieve a competitive advantage in the short term?
- Which metrics do you use to determine success in the long term?
- How is the organizational ambidexterity helping you to achieve a competitive advantage in the long term?
- Do you see any general barriers to developing ambidexterity in service firms?
- Do you see any general or success factors for developing ambidexterity in service firms?
- Can you provide best practices for developing ambidexterity in service firms?

### **3. Closing**

- Thank for time and insights
- Any further comments, final thoughts, reflections?
- Reiterate confidentiality
- Provide contact information for follow-up questions or clarification

## Appendix 2 Privacy Notice

1. Name of the register	Leveraging Organizational Structure to Achieve Ambidexterity as a Dynamic Capability in Service Organizations
2. Data Controller	Bennet Friedrich, +49 157 87864919, bennet.b.friedrich@utu.fi
3. Contact information of the responsible person	Bennet Friedrich, +49 157 87864919, bennet.b.friedrich@utu.fi
4. Purpose and legal basis for the processing of personal data	<p>The research collects views and experiences of experts of the real estate industry on ambidexterity in service firms with interviews.</p> <p>The legal basis for processing personal data in the Article 6 of the EU General Data Protection Regulation is:</p> <p><input checked="" type="checkbox"/> Processing is necessary for scientific research (public interest, Point 1a of the Article 6)</p> <p><input type="checkbox"/> Data subject has given their consent to processing personal data (consent, Point 1e of the Article 6)</p> <p><input type="checkbox"/> Other, what _____</p>
5. Processed personal data	The following information of the data subjects is stored in the register: Name, Email address, position, company, experiences, and views on ambidexterity.
6. Recipients and recipient groups of personal data	The data will not be transferred or disclosed to parties outside the researcher or his supervisors.
7. Information on transferring data to third countries	Personal data will not be disclosed to parties outside the EU or the European Economic Area.
8. Retention period of personal data or criteria for its determination	The recorded interviews will be transcribed into text files and the recordings will be destroyed. Simultaneously, the research data will be anonymized by erasing identifiable personal and company data. Personal data is stored until 31 December 2023, after which the data is disposed of securely.
9. Rights of the data subject	The data subject has the right to access their personal data retained by the the Data Controller, the right to rectification or erasure of data, and the right to restrict or object the processing of data. The right to erasure is not applied in scientific or historic research purposes in so far as the right to erasure is likely to render impossible or seriously impair the achievement of the objectives of that processing. The realisation of the right to erasure is assessed on a case-by-case basis.

	The data subject has the right to lodge a complaint with the supervisory authority.
10. Information on the source of personal data	In order to send the invitations to the interview, email addresses or the possibility of forwarding a message are used from Ritterwald Unternehmensberatung GbmH, Kurfürstendamm 22, 10719 Berlin, Germany. It will only be done after a primary contact and consent to participate has been given by the subject to the consultants of Ritterwald. The other data is collected directly from those who participate in the interviews for the study.
11. Information on the existence of automatic decision-making, including profiling	The data will not be used for automatic decision-making or profiling.

## Appendix 3 Data management plan

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### Plan Overview

*A Data Management Plan created using DMPTuuli*

**Title:** Qualitative interviews: Leveraging Organizational Structure to Achieve Ambidexterity as a Dynamic Capability in Service Organizations

**Creator:** Bennet Friedrich

**Data Manager:** Bennet Friedrich

**Project Administrator:** Bennet Friedrich

**Affiliation:** University of Turku

**Template:** General data management plan - University of Turku

**Project abstract:**

Semi-structured expert interviews are conducted to understand organizational structure to achieve ambidexterity as a dynamic capability in service organizations

**ID:** 22754

**Start date:** 01-09-2023

**End date:** 31-12-2023

**Last modified:** 09-10-2023

## Qualitative interviews: Leveraging Organizational Structure to Achieve Ambidexterity as a Dynamic Capability in Service Organizations

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### 1. General description of the data

1.1 What kinds of data is your research based on? What data will be collected, produced or reused? What file formats will the data be in? Additionally, give a rough estimate of the size of the data produced and collected.

Expert interviews are conducted and recorded. They will be transcribed in text form and anonymized. The content is the experiences and views of the experts concerning ambidexterity in service firms. The interviews will be approximately 45 minutes to one hour long.

1.2 How will the consistency and quality of data be controlled?

Consistency and quality is ensured by the use of an interview guide.

### 2. Ethical and legal compliance

2.1 What legal issues are related to your data management? (For example, GDPR and other legislation affecting data processing.)

Question not answered.

2.2 How will you manage the rights of the data you use, produce and share?

Data is protected by a separate privacy notice.

### 3. Documentation and metadata

How will you document your data in order to make it findable, accessible, interoperable and re-usable for you and others? What kind of metadata standards, README files or other documentation will you use to help others to understand and use your data?

Data will not be made accessible to third parties.

### 4. Storage and backup during the research project

4.1 Where will your data be stored, and how will the data be backed up?

Data is stored by the researcher on his private laptop. Backups are done with a flash drive. After the research is conducted (latest on Dec. 31, 2024), on both devices the data will be destroyed.

4.2 Who will be responsible for controlling access to your data, and how will secured access be controlled?

The researcher is responsible for access to data. No third parties have access to the devices on which the data is stored.

### 5. Opening, publishing and archiving the data after the research project

5.1 What part of the data can be made openly available or published? Where and when will the data, or its metadata, be made available?

Outside of the findings of the thesis, data will not be made available.

5.2 Where will data with long-term value be preserved, and for how long?

Data will not be stored until after the research is concluded.

### 6. Data management responsibilities and resources

6.1 Who (for example role, position, and institution) will be responsible for data management?



Bennet Friedrich, student, Turku School of Economics

6.2 What resources will be required for your data management procedures to ensure that the data can be opened and preserved according to FAIR principles (Findable, Accessible, Interoperable, Re-usable)?

Data will not be stored until after the research is concluded.

## Appendix 4 Informed consent



### INFORMED CONSENT FORM for Participants / Informierte Einwilligung für Teilnehmer

#### Leveraging Organizational Structure to Achieve Ambidexterity as a Dynamic Capability in Service Organizations /

*Nutzung von Organisationsstruktur zur Erreichung von Ambidextrie als dynamische Fähigkeit in Dienstleistungsunternehmen*

I have read and understood the Information you have given me and I agree to participate in the project. / *Ich habe die Informationen, die Sie mir gegeben haben, gelesen und verstanden und bin damit einverstanden, an dem Projekt teilzunehmen.*

I understand that my participation is entirely voluntary

and that I am free to withdraw at any time without giving

any reason. / *Ich verstehe, dass meine Teilnahme völlig freiwillig ist*

und dass es mir freisteht, meine Teilnahme jederzeit und ohne Angabe von Gründen

zurückzuziehen.

YES / Ja  NO / Nein

I agree to this interview being audio-recorded / *Ich bin damit einverstanden, dass dieses*

*Interview aufgezeichnet wird*

YES / Ja  NO / Nein

I agree to this interview being video-recorded / *Ich bin damit einverstanden, dass dieses*

*Interview auf Video aufgezeichnet wird*

YES / Ja  NO / Nein

I agree to be identified in the following way within research outputs / *Ich bin damit*

*einverstanden, dass ich in den Forschungsergebnissen wie folgt genannt werde*

Pseudonym / *Pseudonym*

YES / Ja  NO / Nein

[i.e. alternative name/code for participant chosen by researcher] / *[d. h. vom Forscher gewählter alternativer Name/Code für den Teilnehmer]*

Impersonal attribution / *Unpersönliche Zuschreibung* YES / Ja  NO / Nein

[e.g. by profession: student, company worker, University Lecturer/Teacher, housewife] / *[z. B. nach Beruf: Student, Angestellter in einem Unternehmen, Universitätsdozent/Lehrer, Hausfrau]*

\_\_\_\_\_  
Name of Participant /

*Name des Teilnehmenden*

\_\_\_\_\_  
Date / *Datum*

\_\_\_\_\_  
Signature / *Unterschrift*

\_\_\_\_\_  
Name of person taking consent /

*Name des Zustimmungnehmens*

\_\_\_\_\_  
Date / *Datum*

\_\_\_\_\_  
Signature / *Unterschrift*