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## Article

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Article

# Achieving Ambidexterity in Internationalization: Analysis of How SMEs Cope with Tensions between Organizational Agility–Efficiency

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**Abstract:** This study aims to examine how small and medium enterprises manage the tensions between organizational agility and efficiency. Organizational agility is a multidimensional concept where each of its components can interact differently with efficiency. The tensions between other capabilities have been explored in many previous studies, yet there is a lack of research exploring the roots of the tensions between organizational agility and efficiency, how the actors interpret these tensions and what dimensions of organizational agility are causing the tensions. A multiple case study research design with an inductive approach was used to explore how two SMEs manage the tensions between organizational agility and efficiency to serve customers from abroad. Despite the relationship between the agility and efficiency seeming contradictory, our analysis demonstrated that the interaction between the two concepts is complex, depending on the object of the tensions, the actors involved and the context. In fact, two actors at the same level of the organizational hierarchy can have identical perceptions about a tension, but they can arise from different logical reasoning. Moreover, due to the multidimensionality of organizational agility, a meta-capability of organizational agility is more likely to dominate the interaction with efficiency. This study contributes to the limited empirical evidence on how actors in SMEs perceive and manage the various tensions emerging from organizational agility and efficiency.

**Keywords:** organizational agility; dynamic capabilities; ambidexterity; resource orchestration; knowledge management; product and process innovation; open innovation

## 1. Introduction

In a fast changing environment, organizational agility is imperative for firms in order to remain competitive and adaptive [1]. Existing works define strategic agility as the capability of organizations to reorganize their resources in order to be better fit the changing environment by adjusting strategic direction [2,3]. Organizational agility enables firms to create novel solutions to combine various unrelated concepts, even conflicting ones [4]. Also, organizational agility is one of the prerequisites for an organization to pursue successful organizational transformation [2]. Organizational transformation is critical for firms' survival in a risky and unpredictable environment. The emergence of Industry 4.0 [5], the COVID-19 pandemic [6] and artificial intelligence are examples of how external factors have dramatically changed the business environment and threat to survival of firms.

Although organizational agility supports firms to survive in changing business environment, it is not well suited for firms prioritizing efficiency capability. The capability emphasis on stability

and rigidity, which leads to less adaptivity to environmental changes. In the long term, this can cause core rigidity [7] and resource stickiness [8], which can endanger firms' business sustainability. Thus, this capability is more suitable for a stable and predictable business environment. Therefore, it is timely to conduct this research on the topic of organizational agility and efficiency with the purpose of developing knowledge regarding how to develop the adaptability of firms to a changing environment while maintaining efficiency. Firms that can combine organizational agility and efficiency can be categorized as ambidextrous organizations.

Ambidexterity is often explained metaphorically as the ability to “use both hands with the same capabilities”. Exploration and exploitation have been perceived as contradictory in nature [9,10] but more recent studies demonstrated that the interactions between the two capabilities are more complex than predicted [11] as the boundaries between the two capabilities that seem in contradiction are not clear. In fact, the boundaries can be negotiated [12].

The nature of ambidexterity, which is path [11] and context dependent [13], requires a detailed observation by analyzing the key of capabilities involved in the tensions [12]. With this approach, the situational uniqueness of the tensions can be analyzed in a detailed way so that the findings of the study can be more relevant to practices [14]. Accordingly, research that observes ambidexterity must analyze in detail the constituent elements and cannot just observe general concepts involved in the tensions. The failure to specify the elements of capabilities will lead to difficulties in interpreting the tensions between two capabilities.

Many scholars have analyzed the ambidexterity between exploration and exploitation [15–18], with several further sub-tensions, including flexibility versus efficiency [19], radical versus incremental innovation [20] and alignment versus adaptability [9], amongst many others. Exploration requires an organization's ability to be flexible, and, to some extent, this capability is identical with organizational agility. However, it seems that the tensions between organizational agility and efficiency have been missing from the attention of scholars and it is the purpose of this paper to address this gap. This knowledge gap escalates when we take a closer look at organizational agility because it is a multidimensional concept consisting of three meta capabilities: strategic sensitivity, leadership unity and resource fluidity [2]. Thus, this research attempts examine the details how each of these meta capabilities interplay with efficiency so that the multidimensionality of organizational agility can be covered [2] and the path dependency nature of ambidexterity can be accommodated [11].

Adding to this complexity is the way each of the meta capabilities of organizational agility interplays with efficiency. Strategic agility has been perceived as “thoughtful and purposive interplay” of the top management [2]. From this statement, the concept of organizational agility puts more emphasis on top management and overlooks the role of lower level employees. As a matter of fact, employees can be considered part of strategic agility because employees can be considered resources for firms and they have been documented as major determinants of ambidexterity [9,21]. Based on the discussion above, we aim to examine how each meta-capabilities of organizational agility—i.e., organizational sensitivity, resource fluidity and leadership unity—interplays with efficiency, and how individuals within SMEs perceived the tensions between them. Thus, the research question proposed in this study is: *How do SMEs manage the tensions between organizational agility and efficiency to achieve ambidexterity?*

The remainder of this paper is organized into five sections. The next section discusses existing literature related to this study, and from there, we identified research gap as the basis for proposing the research question. Section 3 discusses the methodological approach to undertake the study and the justification for selecting the method. Section 4 presents the findings from empirical works, which is followed with discussions with literature in Section 5. Last, we summarize the findings of this study and offer future research directions in Section 6.

## 2. Literature Review

### 2.1. Managing Tensions between Capabilities

The managers of SMEs, which are typically also the owners, play a dominant role in decision-making and in the management of the firm's resources. Arguably, the entire strategic orientation of an SME is in the hands of its manager(s). Based on this logic, it can be said that the managers of SMEs determine how various tensions are interpreted [11], including those between agility and tension efficiency, which in turn will determine how the actors react. How managers build their perceptions regarding tensions is based on the situation of the specific organization and the strategic orientation of SMEs in general [22].

Like other organizations with an organic structure, the workplace in SMEs is generally dynamic, requiring employees to be prepared for environmental changes. This characteristic supports ambidexterity [21], but employees often feel that they lack job security, clearly defined career paths, and sufficient opportunities for future career development. Therefore, they must equip themselves with diverse skills that can be adjusted to the firm's strategic orientation. They also typically have weak bargaining power and influence in regard to management decisions.

Existing studies documented that ambidexterity must be analyzed using multidimensional and multidomain approaches [23,24] and to manage it, scholars have categorized three strategies: structural separation, behavioral integration and sequential alteration [22,23]. All three can co-exist within organizations, particularly large-sized companies with multi-layered organizational levels. Although these strategies can be adopted simultaneously, they do not necessarily all need to be adopted simultaneously. Instead, companies should seek to master one of the strategies, and also be familiar with the others [22]. Using such an approach, companies will be able to become more adaptive to external changes, which is one of the critical success factors in achieving ambidexterity [1].

In general, there are three broad interpretations of tensions: complementary, conflicting and interrelated. Unlike in large companies, in which there are different interpretations at each level, in SMEs all three interpretations occur at both levels: top management and employees.

**Complementary:** actors view the two capabilities as complementary. Multi-tasking, multi-skilling, job-sharing and facility-sharing are some examples that can be categorized as efforts to achieve efficiency and organizational agility simultaneously [21]. Innovative production processes are carried out by employees of SMEs to reduce production cost, which is also part of efficiency [11].

**Contradicting:** actors view the two contradictory capabilities as contradictory, and emphasize that one capability must come at the expense of the other [25]. From this perspective, there are strategies that aim to achieve efficiency but do not address agility, and vice versa.

**Interrelated:** some capabilities are interrelated even though they are separate concepts. Here, when one capability increases, others will also increase, or vice versa. To some extent, a capability might intersect with others [12]. To manage capabilities with this type of relationship, managers must adopt different strategies, which leads to path-dependence in managing ambidexterity [11].

### 2.2. Organizational Agility and Ambidexterity

The concept of organizational agility consists of three meta-capabilities: sensitivity, resource fluidity and leadership unity [2,26]. Being an agile organization means maintaining an organization that is adaptive, flexible and easily adjustable to the external environment [1]. Agile organizations will be open to new opportunities, reassess already selected options, and be eager to make new orientation changes for the purpose of future development. In agile companies, management continually re-adjusts the strategic direction as a response to environmental changes [2]. All these require sensitivity from the managers [26], who should be kept alert on opportunities coming from environmental changes [27]. With the support of this agility, the company will be able to avoid stagnation, and can adapt easily to environmental changes without the need to undertake a difficult and complex process [3].

Organizations with low leadership unity will not be able to respond quickly to environmental changes [3]. Organizations with solid management will be able to put knowledge to better use, as conflicting opinions occurring within a solid team can lead to more creative ideas. Leadership unity between the members of the top management team affects how conflicting knowledge is assessed, which is the basis of exploration and exploitation, so that better integration between the two can be achieved [28].

Scholars suggest investigating ambidexterity at the individual level and at different organizational levels [29,30] as the actors that experience the tensions between capabilities determine how the tensions are perceived and interpreted. Previous study demonstrated that the role of individuals at different levels of organization have different interpretations of ambidexterity. In addition, different perceptions of the tension results in a nested relationship between capabilities, where they are not simply contradictory but also interrelated and, to some extent, supportive of one another [11].

This study focuses on SMEs as the unit of investigation because they experience similar issues—contradiction between exploitation and exploration [3,31] but with some distinguishing characteristics: more limited resources and simpler managerial levels, which can encourage or inhibit the management of contradictory knowledge and, consequently, affects the ability of firms to manage ambidexterity [32]. Moreover, SMEs typically have organic organizational structures that can support ambidexterity [21]. The structure leads to increased self-efficacy of the employees and increased functional flexibility [33]. Due to these characteristics, practices successfully employed in large companies might not necessarily be suitable in SMEs. For example, large companies can manage exploitation and exploration in different business unit structures, with some focusing on exploitation and the others on exploration [22]. This strategy is unlikely to be adopted in SMEs, as a result of resource constraints.

Due to their simple organizational structure, SMEs often rely on the capabilities of top management to manage ambidexterity [28]. In such organizations, top managers are more likely to be responsible for both strategic and operational issues, and, therefore, will experience first-hand the incompatibility between the existing and required resources for managing ambidexterity [34]. Despite the dominant role of the top manager, employee engagement cannot be ignored in managing ambidexterity, as organizational ambidexterity stems from the individual accumulation of ambidexterity [9]. In short, based on the above argument, the extent to which SMEs are able to manage ambidexterity is determined by the members of the top management team, the individual ambidexterity of the employees and the interactions between top managers and ambidextrous employees.

Acknowledging the importance of this topic, a number of empirical studies have been carried out on ambidexterity at the individual level and its interaction with organizational ambidexterity [35], on the role of top managers in SMEs as individuals [28] and on individual ambidexterity at different levels [11]. The majority of studies investigating this topic at the individual level have used top management as their subjects and have been undertaken in large-sized companies and various industries such as in military and defense [36], telecommunication [11], consulting [17] and semi-conductor [25], among many others. A previous study related to the present study has been conducted with the focus on examining the tensions between innovation and efficiency [11]. Although the concept of innovation and organizational agility might overlap, it seems that no research has yet examined organizational agility as a multidimensional concept where each dimension might interact differently with efficiency; this is the knowledge gap that has not been investigated and thus will be the focus of the analysis in the present research.

This research offers contribution to knowledge by providing an understanding of how the boundaries between capabilities that seem in conflict are blurred due to the differences of meta-capabilities of organizational agility involved in tensions with efficiency; different meta capabilities result in different tensions with efficiency and thus require different approaches for managing it.

### 3. Research Method

#### 3.1. Case Companies Selection

The research question in this paper is ‘how’ related questions and case studies using a qualitative approach are deemed as the most appropriate for this type of question [37,38]. In our study, we were seeking detailed and complex evidence pertaining to the elements of organizational agility that interplay with efficiency. The concept being examined in this study could be extremely difficult to quantify. Therefore, the case study method was deemed the most suitable for providing rich insight on how firms manage the complex interplays between elements of organizational agility with efficiency in SME contexts by providing rich real-life stories [39]. A brief overview of the case companies is presented in Table 1.

**Table 1.** Company Profile of Case Companies.

Characteristics	Batik Alpha	Omega Handicraft
Firm size	75 people	44 people
Product	Various fashion products made of batik—e.g., Batik fashion, classic batik, hand-painting batik and hand/screen-printing)	Boxes of tissues, handphone holders, pencil cases, VCD cases, magazine baskets, etc.
Market	Local (10%) and export (90%)	Local (30%) and export (70%)
Distribution channel	Retail, B2C and B2B	Retail and B2B
Informants	Owner, marketing staffs, marketing supervisor, shop floor staffs.	Owner, production staffs, marketing staffs.
Number of informants	14	12
Duration	Ranging from 30 min to 2 h	Ranging from 30 min to 2 h
Total interviews	23	18
Field visits	7	6

Using the theoretical sampling technique, we selected two firms manufacturing batik and handicraft products with the purpose of improving sample variation, control and generalization. The presence of industry differences is expected to improve the generalizability of the findings [38,40]. Due to the complexity of the phenomenon of interest, using two cases is considered sufficient; and adding too many cases would lead to difficulties for researchers to manage the observation effectively [37].

The cases were not selected based on criteria such as those for hypothesis testing but for the theoretical insights that they offer [40], because a case study attempts to develop analytical generalization, not statistical generalization [41]. Combining batik and handicraft firms was considered appropriate when looking at the characteristic variations between the two case firms, and thus replication logic can be undertaken appropriately.

#### 3.2. Data Collection and Analysis

Data collection was undertaken over a period of six months, using the following methods: interviews, observations and analysis of archival data. Archival data covers not only the documentation available in the firms but also documentation available to the public, such as interviews from the official YouTube channel of the case company, social media and web achieves. Interviews were conducted in several waves to mitigate retrospective bias and gather new data types as theoretical insights emerged. The main goal of the interview method is to obtain rich and varied information from the most relevant individuals, who in this study were managers, supervisors and shop floor employees. Interviews lasted from between half an hour to two hours, depending on the interview flow.

The use of data collected from various sources, such as was the case in this study, allows researchers to undertake triangulation so that research validity can be assured [41]. Combined with interviews, observation enabled the researchers to be immersed in the operations of the firms on a real-time



basis, providing first-hand experience of less obvious phenomena [37]. To analyze the collected data, the researchers utilized grounded theory [42,43]; the data analysis stages using grounded theory are explained below:

Phase 1: the researchers first carried out open coding on the collected data. The focus of this coding was on identifying how different actors interpret tensions from their personal views, which is the focus of this investigation [44]. Open coding is loose, and, as far as possible, attempts to cover all the messages conveyed by informants so that there is no reduction in the richness of the data [45].

Phase 2: this is the most pivotal stage in the data analysis. At this stage, the categorization was still relatively loose and flexible; when necessary, phrases or sentences that had been classified into one category were moved to other categories with overlapping concepts. This stage was undertaken iteratively until the researcher felt that the saturation point was reached [46].

Phase 3: based on the results of the previous phase, the researcher performed axial coding. In this phase, the researcher attempted to conduct deeper analysis of the emerging dimensions, concepts and categories. By analyzing the concepts in more depth and considering the contexts in which they emerged, it was possible to explore the causal relationship between them, which is the basis for theory-building [47]. The in-depth analysis at this stage was intended to ensure richness of the resulting constructs, so that the developed theory would be more robust [48].

Phase 4: in this final stage, it was possible to identify dominant patterns of tensions experienced by top managers and shop floor employees. The researcher analyzed how the patterns interacted with existing concepts, validated the interrelationships between these concepts and conducted further analysis to determine whether there were categories that required further refinement [45]. These processes were performed iteratively until saturation was reached [37,48].

The process of analyzing the data is iterative, where the researchers move back and forth between data, existing theoretical arguments and findings from previous studies [47]. This process is expected to improve the internal validity of emergent theoretical relationships as well as enable researchers to develop more accurate, robust and parsimonious theory [37]. For confidentiality reasons, companies and individual names were anonymized. Due to the language barrier, the draft manuscript was given to the study participants for approval before it was translated into English. Any changes to the manuscript after the translation were communicated to participants before it was submitted.

The data from interviews was transcribed verbatim and the researchers wrote up interview reports including how the researchers interpreted the data; these were subsequently validated by the interviewees. In the case of disagreement between the researchers and interviewees, the researchers discussed the issues via telephone or face-to-face and amended the report as necessary. To ensure that the developed construct met the criteria for validity and reliability, this study utilized a negotiated agreement approach [49]. Two independent reviewers assessed the coding undertaken by the researcher and the results showed that 82% of the coding results were acceptable to them. At this stage, the reviewers and the researcher provided clarifications regarding the language used to describe the concepts before conducting further analysis. The differences occurred because each informant used diverse vocabularies when expressing a concept [50].

### 3.3. Case Studies

The managers of the two case companies shared the view that organizational agility is a way to maintain firms' survival. Even so, each manager interprets organizational agility differently. Alpha Batik understands agility as the capability to find new markets, while Omega Handicraft interprets it as the ability to undertake product innovation. Batik products have more limited opportunities for product innovation due to the type of raw materials used and the firm is supported with more resources, meaning it has more opportunities to search for new markets. On the contrary, Omega Handicraft has more opportunities for product innovation due to diversity of raw materials used and much higher product variations demanded by the market.

Omega Handicraft undertakes product innovation to serve existing markets, encompassing elements of both exploration and exploitation. Here, exploration refers to trial and error to find the best way for making new products so that it can be inferred as micro innovation. From the description above, the two case study SMEs demonstrate two distinct perceptions regarding organizational agility:

- the capability to search for new markets, which is found in Batik Alpha; and
- the capability to innovate products, which is demonstrated in Omega Handicraft.

Capability to find new markets, demonstrated by Batik Alpha, is closely related to market exploration, which requires the capability to develop networks, understand the needs of new markets, and the capability to design suitable products. Meanwhile, capability to innovate products requires micro-exploration, which relies on fluidity of resources within the firm. On the contrary, Omega Handicraft attempts to carry out product innovations supported with sensitivity to the market.

It can be inferred from the above evidence that the categorization of an activity as exploration or exploitation depends on which perspective one takes. A new product introduction can be categorized as exploitation of the existing market, which is more efficient than exploring new markets. The exploitation requires resource fluidity, one of the meta-capabilities of organizational agility; whereas agility is often associated with exploration to adjust with external environment changes.

Both case companies agreed that agility has created various tensions due to the different perceptions and the level of tension itself can vary. Agility incurs costs due to organizational resource changes and, thus, the contradiction between agility and efficiency becomes apparent. The tension of agility with finding new markets is more impactful but it happens less frequently in comparison to the tension between agility and efficiency.

#### 4. Analysis and Findings

##### 4.1. Tensions at Management Level: Long or Short-Term Orientation

The main focus of the managers is how to maintain the sustainability of firms in the long term as well as ensure the profitability of current operations. The need to balance between the short- and long-term increases because most of most of their products are manufactured based on order from customers, and the also firms adopt as a way to reduce idle capacity.

*“The market keeps on moving, competitors are maneuvering, consumer tastes also change. Sometimes it is not clear who is the most dominant force driving us to change, but, inevitably, we must follow it, as [we need to] understand who wants our products and what products are needed”.*

(Manager, Batik Alpha)

With the use of meta-capability sensitivity, managers do not only conduct external strategic analysis but also internal, regarding what resources the firm has to exploit for future opportunities. This involves open internal dialogue, internal participation in process strategy and assessing to what extent the current state of resource fluidity is able to meet future market demands.

*“Not all of our [market] opportunities are taken; we need to be sure that we have enough time to prepare for and serve them”.*

(Manager, Alpha Batik)

A similar opinion was expressed by the manager of Omega Handicraft:

*“But [we must be] careful; understanding what products the customer wants is not enough. We must also have the resources needed to produce it. We might be able to produce them now, but in the future, it is possible that the skills we have at the moment will no longer be relevant [for making products]”.*

(Manager, Omega Handicraft)



In such circumstances, managers experience tensions between identifying future markets—which can be performed using sensitivity—and exploiting existing markets. Exploiting existing markets, which is supported with meta-capability resource fluidity, is closely related to efficiency. Although agility and efficiency seem contradictory, from the above evidence one can infer that firms use resource fluidity—which is one of the agile organizational meta-capabilities—to achieve efficiency. Besides, the two meta-capabilities—i.e., sensitivity and resource fluidity—have a different degree of importance when analyzed from a time perspective: sensitivity is more long-term oriented, while resource fluidity has a higher importance in the short term. Accordingly, the managers of the SME case companies must consider simultaneously both the fluidity of resources and the sensitivity when conducting future business analyses. The interpretation regarding organizational agility and efficiency can be different. In addition, different meta capabilities can be interpreted with different meanings. More examples on how the case companies view long and short-term orientation tensions are described in Table 2.

**Table 2.** Long and short-term orientation tensions.

Operational Definition of the Tensions	Meta-Capabilities and Interpretations	Illustrative Quotes
Organizational agility: how to earn profit optimally from existing market.	Sensitivity: allocate sufficient resource for undertaking preparation before exploitation	"We have to make a guess what to do not only next year, but also a few years after that. If we don't plan, we must change plans suddenly, and it's going to be costly." (Batik Alpha)
	Resource fluidity: devote existing resource to exploit low-hanging fruit markets	"There are many opportunities, but not all of them are profitable. Why you should look for complicated customers if it is not necessarily profitable? We are looking for something that is easy, rather than risky." (Omega Handicraft)
Efficiency: how to maintain business sustainability	Ability to find new markets in the future	"We are better off losing some money in the beginning to explore the market than experiencing problems later on." (Batik Alpha)
	Ability to foresee what type of resource is needed to meet the market demands	"We are small but that does not mean we are without planning . . . If we don't plan our resource, we have to change it suddenly, and maybe we cannot manage it." (Omega Handicraft)

#### 4.1.1. Tension Interpretation: Interrelated

Exploration for finding a new market abroad to increase production scale results in different influences on the interaction between agility and efficiency. The firms' agility in terms of reaching new markets abroad can increase production capacity and reduce fixed costs with economies of scale of production; these increase the efficiency of the company, due to lower fixed costs. In this context, agility and efficiency are not contradictory. However, it should be noted here that only a certain degree of agility can help companies achieve efficiency.

Maintaining current market position is strongly related to exploitation; by contrast, being future-oriented aims to ensure firms have sufficient market share to support business feasibility. Firms utilize sensitivity to envisage the future and, based on the results, undertake exploitation in the present. Thus, there must be a balance between the short and long term, as expressed by one of the staffs below:

*"What we are currently harvesting now is the result of our work in the past. And now, we are working for the future. If we are not working hard depicting what the future looks like, I am sure that the future will not exist [for us]. But don't forget, we need money too; that's why we are harvesting now".*

(Batik Alpha, Procurement Staff)

On the contrary, Omega Handicraft underscores resource fluidity more than sensitivity to overcome the tensions between short and long term. Omega Handicraft only needs to ensure that its resources are fluid enough to respond to short term market changes that want innovative products. Below is how a production staff describes this circumstance:

*"When thinking of the future, we tend to be hesitant... However, sometimes we do speculate, just in case. For example, procuring raw materials in large volumes is definitely cheaper, although we are not 100%*

*convinced that the remaining raw materials will still be needed in the future, but that's what we do ... We must be prepared for any conditions".*

(Production staff, Omega Handicraft)

The above evidence suggests that time frame determines the tension and interactions between agility and efficiency. Focusing too much on the future—which is analogous with exploration requiring financial support—could cause firms to miss opportunities to harvest profit. By contrast, prioritizing the short term could endanger the firms' future business sustainability and ability to achieve business growth. Furthermore, Omega Handicraft relies on its agility to create product innovation using its resource fluidity. Meanwhile, Batik Alpha utilizes its sensitivity capabilities to identify partners through which they can deliver value. Agility, particularly sensitivity, from the perspective of Alpha Batik's manager, is perceived as the ability to predict the future, switch distributors, supply chain networks, suppliers and other partners. Two companies experiencing an identical tension have overcome it using different meta-capabilities, depending on the context of the firms.

#### 4.1.2. Tension Management: Temporal Separation or Behavioral Adaptation

The managers of the SME case companies have two options: reconfiguring resources and organizational models to anticipate future business needs or focus on maintaining current conditions by serving the current market. Maintaining focus means that firms must sharpen a particular expertise and thus reduce the fluidity of their resources. Indeed, excellent skills in a particular expertise could improve productivity, but in the long run the company could potentially suffer from 'resource stickiness' [51].

The two SME case studies in this study adopted slightly different approaches to responding to tensions between long- and short-term horizons. Batik Alpha, which has a larger amount of resources but more limited opportunities to undertake product innovation, applies temporal separation as expressed by the manager:

*"We prefer to communicate intensively with prospective customers within a certain period of time, and, when we feel that we have enough [customers], we will serve them wholeheartedly".*

(Manager, Batik Alpha)

By contrast, Omega Handicrafts adopts behavioral integration to cope with tensions. The manager strives to embed both exploration and exploitation across all of the firm's resources. One of the reasons behind this strategy is that the firm has a limited amount of resources and there is a higher possibility of innovation in handicraft products compared to batik. Behavioral integration allows Omega Handicraft to respond quicker to market changes and avoid time lags between market analysis and new product introduction.

#### 4.2. Tension at the Management Level: To Be the First in the Market or Waiting for Market Readiness

Batik Alpha adopts the 'first to market' strategy and combines it with manufacturing products with a long-life cycle. Being the first in the market promises big profits but is a risky strategy, so it requires a risk-taking attitude from management. Meanwhile, efficiency is viewed as a risk-averse attitude and involves being patient and waiting until the market is ready to accept innovative products. Both attitudes require leadership unity. A description of these attitudes is given in the quotations presented in Table 3.

**Table 3.** First in the market or waiting for market readiness.

Operational Definition of the Tensions	Meta-Capabilities and Interpretations	Illustrative Quotes
Agility: how to be the first in market	Leadership unity: how to introduce new products fast before others do	"I am a former professional athlete...we were the first to make batik products with a World Cup theme as well as the Olympics, Manchester United, and others. This is truly anti-mainstream design, and surprisingly it was successful." (Manager, Batik Alpha)
Efficiency: waiting for market readiness	Being patient, waiting for the left moment to enter the market	"Handicraft products are not limited [in terms of product variations] and we need to assess the level of innovation accepted by the market. It is not easy to understand to what kind of newness really needed by markets ... it is too risky if we make move before understand what customers wants." (Manager, Omega Handicraft)

#### 4.2.1. Tensions Interpretation: Interrelated

Batik Alpha decided to be the first to launch innovative products. However, the firm also manufactures 'generic products' that are always needed by customers. The generic products are products that never date as they incorporate traditional and historical designs. Therefore, the decision to be the first to market is supported by the presence of products that will always be accepted in the market. This is not the case for Omega Handicraft, which manufactures purely innovative products.

#### 4.2.2. Tension Management: Structural Approach

The tension requires management to decide whether to be the first in the market or wait until the market has been established. The case companies use a structural approach and put this decision on the shoulders of the managers, as they have the most comprehensive understanding of the market.

#### 4.3. Tensions at Management Level: Searching for New Markets or Serving Existing Markets

The managers of both SMEs agreed that searching for new markets is associated with exploration, while serving new markets and reaping profits are categorized as exploitation. In the context of this tension, agility plays a role in supporting both the identification of new markets by using sensitivity to explore new markets, and in serving existing markets via resource fluidity. Thus, the case companies use different meta-capabilities to explore and exploit.

Empirical data demonstrates that both case companies rely on the capability of managers, particularly their sensitivity capability, to explore new markets. For Batik Alpha, the experience of the manager, who previously worked in a multinational company located in Switzerland, has helped him to develop personal networks for finding new markets. Below is his description:

*"I was fortunate to have worked at a company in Europe. From that experience I became familiar with international culture and met a lot of acquaintances. I understand their backgrounds, and know them personally. This is what makes relationships easier".*

(Manager, Batik Alpha)

Meanwhile, the manager of Omega Handicraft, who has no international professional experience, finds it difficult to get new customers from abroad. For them, it is much more beneficial to focus on serving their existing customers as best they can, although this means they have to perform more frequent product innovations. However, undertaking more frequent product innovation is still more efficient than finding new markets, which to some extent involves speculation. It seems that building international networks to acquire new markets has created a bottleneck for the firm. He describes this circumstance as follow:

*"Finding new customers is synonymous with complexity. We want to make products and for customers to buy them directly, but it does not work that way... We do our best to serve our customers. No matter how expensive serving existing customers is, it is still much cheaper than finding new customers... Looking for new customers is difficult for small businesses like us".*

(Manager, Omega Handicraft)

More detailed definitions of the tension, interpretation of meta-capabilities involved in the tensions and the quotes from the informants are presented in Table 4.

**Table 4.** Tension between exploring new markets or exploiting existing markets.

Operational Definition of the Tensions	Meta-Capabilities and Interpretations	Illustrative Quotes
Agility: how to find new market, either from the same or different countries	Sensitivity: market sensitivity for finding new opportunities	"The relationships that I have built while working abroad are truly an asset for me. They act as a kind of information agent for me." (Manager, Batik Alpha)
Efficiency: how to exploit existing markets	Capability to adjust resources with supply chain partners for serving existing markets	"Making resource adjustments based on the needs of our partners is not easy. It is hard for me to entrust jobs to new people; staff that are knowledgeable of the domestic market most likely do not have sufficient knowledge to handle foreign customers." (Manager, Batik Alpha)

#### 4.3.1. Tension Interpretation: Complementary

The two case companies in this study have different characteristics—company size, managers' ability to build international networks, level of product innovation, and availability of resources—which give rise to differences in their interpretation of tensions. The manager of Omega Handicraft stated that it is more efficient if the firm takes advantage of the fluidity of resources to exploit the market, compared to finding new partners. When Omega Handicraft utilizes its resource fluidity to undertake product innovation, the manager views agility as useful for exploiting the market in a cost-efficient way and, thus, agility and efficiency are perceived as complementary.

Meanwhile, Batik Alpha's exploration to find new markets, new partners, new networks and market trends, as well as its orchestration with partner resources, are examples of meta-sensitivity capabilities. The higher the level of the meta-capability sensitivity, the more accurate the results; this leads to more effective decision-making. In other words, sensitivity enables Batik Alpha to carry out exploration more accurately, and, therefore, exploration can be undertaken more efficiently. Thus, agility and efficiency are complementary.

The managers of both case companies interpret the tensions between agility and efficiency in the same way—i.e., as complementary. However, the managers reached these identical interpretations through different logical reasoning. Omega Handicraft uses resource fluidity to exploit its current market while Batik Alpha relies on sensitivity to look for new opportunities. Thus, Omega Handicraft uses agility to exploit markets while Batik Alpha uses it for exploration.

#### 4.3.2. Tension Management: Temporal Separation or Behavioral Integration

Omega Handicraft focuses on serving current markets by relying on its resource fluidity. As a small-sized firm with an organic structure, there is no apparent knowledge gap between top management and shop floor employees. Almost all individuals within the firm have roughly the same level of knowledge. Against this background, Omega Handicraft conducts behavioral integration; all of its people take part in the process of exploration and exploitation, and both activities are embedded in daily activities.

By contrast, Batik Alpha prioritizes searching for new markets, relying on its manager. The sensitivity for building international networks that the manager possesses distinguishes him from the shop floor workers. He is also capable of synchronizing internal resources with those of the firm's partners. The firm copes with the tensions between finding new markets and serving current markets using temporal separation between exploitation and exploration, with the former more dominant than the latter.

#### 4.4. Tensions for Shop Floor Workers: Developing New Knowledge or Converting Knowledge into Routines

Knowledge enables shop floor staff to be more agile, but the acquisition of knowledge and converting it to practice requires adaptation processes. Omega Handicraft needs to develop new knowledge because most of its products are manufactured on a made-to-order basis. Organizational agility, which is developed from resource fluidity, is interpreted as how staff can acquire new knowledge quickly to enable them to manufacture new products. New knowledge development allows employees to produce innovative products, but this incurs costs due to the need for trial and error. By contrast, efficiency is perceived as allocating skillful staff possessing suitable skills to carry out routine jobs. The operational definitions of the tensions, interpretations and illustrative quotes are presented in Table 5.

**Table 5.** Develop new knowledge or convert knowledge into routines.

Operational Definition of the Tensions	Meta-Capabilities and Interpretations	Illustrative Quotes
Agility: acquiring new knowledge	Resource fluidity: where staff can learn new knowledge quickly to manufacture new products	"Sometimes new product orders come unexpectedly, and we have to get them ready in a short time. If we are unable to do that, we will miss that opportunity." (Shop floor employee, Omega Handicraft)
Efficiency: converting knowledge into routines	Efficiency: allocating skillful staff with suitable skills to undertake routine jobs.	"I could have done other parts of the job, but of course it will be not as good as those who routinely do it... They also work faster and learn faster if we get new tools." (Shop floor employee, Omega Handicraft)

##### 4.4.1. Tension Interpretation: Complementary

The staff of the case companies perceived that the tension between the two capabilities is complementary. As the staff acquire more new knowledge, they will become more flexible to do a variety of different jobs and can be allocated in different resource configurations, resulting in a more efficient production process.

##### 4.4.2. Tension Management: Behavioral Integration

Due to the limited number of employees, almost all staff in both case companies must carry out knowledge acquisition and transform knowledge into routines. Thus, both case companies have adopted behavioral integration. Most staff are assigned to acquire new knowledge and subsequently convert that into routines.

#### 4.5. Tensions for Shop Floor Workers: Product Introduction and Process Innovation

Shop floor employees of Omega Handicraft perceive that one of the dimensions of organizational agility is the ability to create new products with existing resources. One shop floor employee described this as follows:

*"Working in SMEs means you have to be ready to move flexibly; you shouldn't just to work in one position and not in other parts. Our business is small, we have to learn many things and help each other. Quite often we have to learn completely new things to make new products. But that's why we are able to survive, because only small businesses like us are willing to do that".*

(Production staff, Omega Handicraft)

When viewed from the perspective of organizational agility [3], the definition proposed by the shop floor employees covers resource fluidity. In this context, shop floor employees perceive agility and efficiency as complementary; the employees should be flexible in moving between different positions within the business for the purpose of saving money.

Meanwhile, with more limited opportunities for pursuing product innovation, Batik Alpha does not require resource fluidity to the same extent as Omega Handicraft needs. Thus, the firm adopts a different approach. An employee described the situation as follows:

*“I could do other jobs as well, but only I and a few other people who have worked in this section were trusted by the owner. I have been here for 26 years, and others more or less the same. Because I have been here for so long, I found new methods that managers could not find. I can do it all from experience”.*

(Staff, design drafting, Batik Alpha)

Knowledge accumulation, finding new production techniques and developing skill specialization are some of the strategies implemented to support process innovation with the purpose of improving efficiency.

#### 4.5.1. Tension Interpretation: Complementary

Empirical data demonstrates that both case studies have an identical perception regarding the tension between new product introduction and process innovation. Both firms perceive the tension to be complementary, but as a result of different logical reasoning. In Omega Handicraft, agility is converted into a number of practices such as multiskilled workers and flexible scheduling, which has enabled the firm to operate more efficiently. These approaches are adopted by Omega Handicraft to support product innovation, given the company’s broad opportunities to introduce new products. Based on this analysis, it can be said that the employees of Omega Handicraft perceive new product introduction and efficiency to be complementary. Meanwhile, Batik Alpha, which has a more standardized production process, accumulates knowledge from past experience to carry out product innovation in an efficient way.

#### 4.5.2. Tension Management: Integration

The concept of agility spreading amongst the shop floor employees of Omega Handicraft is goal-oriented and practical, driven by the desire to simultaneously reduce production costs and create agility. From this perspective, agility is viewed as a tool for creating innovative products efficiently. This complementary relationship is achieved by combining process innovation and continuous improvement. Thus, the shop floor employees adopt integration to manage tension.

On the other hand, in Batik Alpha, knowledge accumulation has been perceived as a technique to find ideas for developing new products in more efficient way, where knowledge accumulation allows employees to work more efficiently. In this context, knowledge accumulation supports efficiency, and vice versa. A more detailed description regarding how to manage the tensions between product and process innovation is presented in Table 6.

**Table 6.** Introducing new products or improving processes.

Operational Definition of the Tensions	Meta-Capabilities and Interpretations	Illustrative Quotes
Agility: how to serve customers in new ways	Resource fluidity: how to improve manufacturing process using existing tools and equipment	“Sometimes we try things using very different techniques; as an example, we use hair dryers to make glue dry faster so that we don’t need to wait a long time.” (Shop floor staff, Omega Handicraft)
Efficiency: process innovation to find the most efficient way of manufacturing products	How to make our tools and equipment suitable for conducting various tasks	“We use this and that tools only, we don’t have sophisticated machines or technology to help us ... we have to be creative to make what is offered to customers while saving costs.” (Shop floor staff, Omega Handicraft)
	Capability to conduct cross-functional collaboration between design and production	“The shape of leather [as a raw material] is irregular; most of it is going to be wasted if you are unable to choose the left shape raw materials for the product design... By contrast, in the past, we have made handicraft products using scrap materials from the manufacturing process of other stuff.” (Shop floor staff, Omega Handicraft)
Agility: how to make more innovative products using available resources 5	Sensitivity: identifying what customers want, for pursuing innovation	“We must understand not only how to make the product but also the customer’s habits in using the product ... as an example, which parts of the product are likely to be easily damaged because they are often held or used as a handle when lifting. We have to make that part extra carefully.” (Shop floor staff, Omega Handicraft)
	Resource fluidity: how to incorporate raw materials from suppliers in our production process	“We can make any product design, but the problem is whether the size is appropriate ... A mismatch between the size of the design and the shape of the raw materials causes more scrap and the product price will increase and, as a result, we do not have a sufficient profit margin.” (Staff, production division, Omega Handicraft)



## 5. Discussion

This study addresses a research gap that suggests the need to conduct analysis on ambidexterity at different organizational levels [21], using efficiency and agility as the focus of observation, as well as describing how the different meta-capabilities of organizational agility interact with efficiency. In observing the tensions between agility and efficiency, multilevel approaches are needed to analyze ambidexterity [52] because individuals at different organizational levels can perceive ambidexterity differently [53].

### 5.1. Source of Organizational Agility and Tension

Meta-capabilities of organizational agility form a complex system in which elements of the capability interplay with one another; these interactions occur at different levels within organizations. Firms need different meta-capabilities to cope with different latent tensions, occurring at different levels. In addition, it has been shown that the source of each meta-capability spreads across the different levels within an organization. There is a tendency for managers to have better sensitivity capability, while employees tend to be more knowledgeable of resource fluidity but the pattern is not consistent.

A number of previous studies have described ambidexterity as an approach to overcome capabilities perceived to be contradictory [1,4]. This study has demonstrated that the two capabilities are not necessarily contradictory but have a complex relationship. In some cases, agility and efficiency intersect with one another—i.e., in efficiency there is agility, and vice versa—and therefore, firms must attempt to achieve a balance between them.

Managers of SMEs can encourage employees to change their perception of the tensions between agility and efficiency. This can be achieved by challenging existing business practices and introducing novel methods of performing jobs. These help firms to avoid becoming trapped in current or existing trends and routines [4]. The manager of Omega Handicraft gives employees room to undertake experiments with the aim of finding new ways of completing their tasks.

Individuals occupying managerial positions of the same level had identical interpretation of tensions but arising from different logical reasoning. This is due to the context in which these tensions can occur, such as company culture, company size, product innovation level, and so on [22]. If other scholars define ambidexterity as an ability to manage two contradictory capabilities—efficiency and flexibility [19], and adaptability and alignment [9]—the present study operationalizes ambidexterity as the interrelationship between agility and efficiency.

### 5.2. Path-Dependent Practices for Managing Tensions

The two case studies adopt different strategies to manage tensions, but with identical components: sequential alternation and behavioral integration. The case companies do not adopt solely one or the other of these methods, but rather combine the two with one strategy being more dominant than the other. Supported with limited but highly fluid resources, the strategy of Omega Handicraft is more dominated by behavioral integration and sequential alternation is rarely applied. Meanwhile, the manager of Batik Alpha prefers to adopt sequential alternation, and only occasionally implements behavioral integration.

The SMEs both appear to have implemented a blended strategy, where the boundaries between one adaptation and another cannot be clearly identified. Arguably, the blended strategy is applicable to behavioral integration and sequential alternation strategies, while structural separation seems inappropriate. One of the explanations for this could be that SMEs experience difficulties in allocating limited resources across separate structures. Another possibility is that structural separation could potentially lead to resource rigidity, which inhibits agility [1].

For shop floor employees, agility is perceived as the capability to move between different tasks and jobs quickly. From their perspective, agility refers to resource flexibility in carrying out the production process, also known as resource fluidity [2]. Flexibility of resources supports cost reduction

as the firm does not need to acquire new resources to perform different jobs and tasks. Accordingly, shop floor employers perceive agility as an overlapping concept with efficiency: in efficiency there are elements of agility, and vice versa. This pattern is also evident in the tensions between innovations and efficiency [11].

### 5.3. Complex Interactions among the Meta-Capabilities of Agility

The two case companies use resource fluidity to manage tensions between organizational agility and efficiency. Each of the meta-capabilities has a different level of importance for different organizations. In regard to the two case companies, they appeared to focus on one meta-capability and pay less attention to others, depending on the tensions they were experiencing. With the support of resource fluidity, the case companies conduct process innovation to reduce costs; similarly, with the support of resource fluidity, they coordinate internally to adjust their existing resources to new market's needs. SMEs use sensitivity to search for new supply chain partners, distributors and other networks used to deliver products.

Sensitivity, as one of the meta-capabilities [2] to some extent is similar to sensing, as a dynamic capability [51]. The finding of new partners, new networks, market trends and alignment with partner resources, are examples of meta-sensitivity capabilities. On the other hand, firms use exploitation to gain benefit from identified opportunities [22] using resource fluidity [2], which consists of the allocation of resources, business processes and structural approaches to exploit the market. Firms supported with resource fluidity but lacking in sensitivity would be able to manufacture products but be unable to market them. Conversely, sensitivity without the support of resource fluidity would result in inability to manufacture products.

This study has demonstrated that capabilities can be categorized into different orders. Similar to the findings of a previous study [22] stating that sensing and seizing are lower-order capabilities while transforming is a higher-order capability, this study has found that resource fluidity and sensitivity are lower-order capabilities. However, firms need higher-order capability to synchronize the lower-order, as they are interrelated. Thus, one of the important findings of this study is that a higher order capability to synchronize lower order capabilities is needed for organizational agility to be realized and the firms' strategies to be executed successfully.

### 5.4. The Interplays between Organizational Agility and Open Innovation

The interplays between organizational agility and open innovation have not been discussed widely in literature and this research identified some common features between the concepts. Organizational entrepreneurship—one of capabilities for supporting open innovation [54]—requires firms to possess strategic sensitivity to identify opportunities and potential future changes [2]. In this regard, organizational entrepreneurship can be viewed as the trigger for developing social interactions of people within the organization that supports open innovation [54]. Meanwhile, social interaction to some extent requires resource fluidity [2] and relying on individual skills of employees [21].

Another organizational element for supporting open innovation is intrapreneurship [54]. This concept encompasses various capabilities such as creativity, novel ideas and flexibility, and for this reason, it supports ambidexterity. Our empirical evidences have demonstrated that creativity and capability of developing creative ideas support process innovation with the purpose of improving the efficiency of manufacturing processes. Intrapreneurship relies on the engagement of individuals within firms in the business process of the firms [21] and it is also one of drivers for open innovation implementation [55].

Organizational agility of the firm, which is reflected in resource fluidity, supports implementation of open innovation by blurring the boundaries between organizational functions so that collaboration and open communication can be done more easily [56]. This capability is not only needed when interacting with parties within the organization but also externally. The behavior of external parties outside the organizations also determines how agile an organization is and how successful it is in

implementing open innovation. These parties are not only customers but all actors involved in the business ecosystem, such as government, competitors, large sized firms, startups and investors. A business ecosystem which is dominated by large sized firms can reduce the benefit of organizational agility of SMEs, and vice versa [57]. Market dominances of large sized firms will reduce the market share of SMEs, so that SMEs only serve a limited number customers, and accordingly, implementation of organizational agility to be less cost efficient due to lack of economies of scale. To avoid this circumstance, a dynamic balance between the parties involved in the business ecosystem is needed so that the interplays between the participants are supportive for open innovation.

## 6. Conclusions

This research shows that emerging tensions are not merely strategic concepts that are the responsibility of top management; the tensions are also related to the physical activities involved in daily operations. For example, resource allocation, multi-skilled human resource, multi-purpose production tools and equipment and flexible production schedules are some of the daily activities that are closely related to the strategic concept of resource fluidity. Therefore, this research explores how tensions arising in day-to-day operations interact with those on strategic level. It is a common belief in the management field that there must be alignment between strategic objectives at different managerial levels. In fact, this study demonstrates that achieving an alignment between all different managerial levels is not easy, as a strategy often has different dimensions and each dimension is perceived differently by actors at different managerial levels. Fortunately, this misalignment is not necessarily contradictory in nature; the different dimensions can be supportive of one another or interrelated.

There are interplays between one cause of tension and another, and two different meta capabilities of organizational agility can create either identical or different tensions. It was also shown that the capability of firms to develop knowledge allows them to be more agile so that they can overcome tensions more easily. Emerging tensions are not merely strategic concepts that are the responsibility area of top management; nevertheless, the tensions are also related to daily physical activities that can be applied in daily operations. For example, resource allocation, multi-skilled human resources, multi-purpose production tools and equipment and flexible production schedules are some of the daily activities which are strongly related to strategic concept of resource fluidity. Therefore, this research bridges how tensions arising in day-to-day operations interact with those in strategic concepts.

There has been a common belief in management fields that there must be alignment between strategic objectives at different managerial levels. As a matter of fact, this study demonstrates that achieving alignment between all different managerial levels is not easy because a strategy often has different dimensions and each dimension is perceived differently by actors at different managerial levels. Fortunately, this misalignment of strategies at different levels is not necessarily a contradictory in nature; rather, the misalignment can be can support one another or be interrelated.

Having considered the actors, context and characteristics of the tension, the process of managing it can be summarized as follows: tensions → organizational agility and efficiency → which meta-capabilities of organizational agility → interpretations → type of interpretation → strategy to cope with the tensions. Although this seems a linear process, it is iterative; the actors should go back and forth in exploring the relationship between seemingly contradictory concepts.

This research highlights several avenues for future investigation; particularly the relationship between the different meta-capabilities of organizational agility. Future research might analyze whether the three meta-capabilities of organizational agility are lower-order concepts, or if any of them are higher-order concepts. In this study, in the context of SMEs, resource fluidity and sensitivity emerged to support organizational agility while unity of leadership was not observed. The researcher suspects that leadership unity acts as a higher-order concept that creates synergy between resource fluidity and sensitivity; however, this requires empirical analysis in subsequent studies.

This study used a case study method, which is appropriate for a developing theory but offers 'depth' and 'thin' conclusions. To address this limitation, future research could test the results of

this study, which used an inductive approach to build a theory, using a survey to find more generalizable findings across different contexts so that the cycles of theory building and theory development continue.

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## References

1. Teece, D.; Peteraf, M.; Leih, S. Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *Calif. Manag. Rev.* **2016**, *58*, 13–35. [\[CrossRef\]](#)
2. Doz, Y.L.; Kosonen, M. Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long Range Plann.* **2010**, *43*, 370–382. [\[CrossRef\]](#)
3. Doz, Y.; Kosonen, M. The dynamics of strategic agility: Nokia’s rollercoaster experience. *Calif. Manag. Rev.* **2008**, *50*, 95–118. [\[CrossRef\]](#)
4. Lewis, M.W.; Andriopoulos, C.; Smith, W.K. Paradoxical leadership to enable strategic agility. *Calif. Manag. Rev.* **2014**, *56*, 58–77. [\[CrossRef\]](#)
5. Müller, J.M.; Buliga, O.; Voigt, K. Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0. *Technol. Forecast. Soc. Chang.* **2018**, *132*, 2–17. [\[CrossRef\]](#)
6. Trautrim, A.; Schleper, M.C.; Cakir, M.S.; Gold, S. Survival at the expense of the weakest? Managing modern slavery risks in supply chains. *J. Risk Res.* **2020**, 1–6. [\[CrossRef\]](#)
7. Leonard-Barton, D. Core capabilities and core rigidities: A paradox in managing new product development. *Strateg. Manag. J.* **1992**, *13*, 111–125. [\[CrossRef\]](#)
8. Mishina, Y.; Pollock, T.G.; Porac, J.F. Are more resources always better for growth? Resource stickiness in market and product expansion. *Strateg. Manag. J.* **2004**, *25*, 1179–1197. [\[CrossRef\]](#)
9. Birkinshaw, J.; Gibson, C. Building ambidexterity into an organization. *MIT Sloan Manag. Rev.* **2004**, *45*, 47–55. [\[CrossRef\]](#)
10. Gibson, C.B.; Birkinshaw, J. The antecedents, ambidexterity consequences, and mediating role of organizational. *Acad. Manag. J.* **2004**, *47*, 209–226. [\[CrossRef\]](#)
11. Papachroni, A.; Heracleous, L.; Paroutis, S. In pursuit of ambidexterity: Managerial reactions to innovation–efficiency tensions. *Hum. Relations* **2016**, *69*, 1791–1822. [\[CrossRef\]](#)
12. Papachroni, A.; Heracleous, L. Ambidexterity as practice: Individual ambidexterity through paradoxical practices. *J. Appl. Behav. Sci.* **2020**, *56*, 143–165. [\[CrossRef\]](#)
13. Brion, S.; Mothe, C.; Sabatier, M. The impact of organisational context and competences on innovation ambidexterity. *Int. J. Innov. Manag.* **2010**, *14*, 151–178. [\[CrossRef\]](#)
14. Sandberg, J.; Tsoukas, H. Grasping the logic of practice: Theorizing through practical rationality. *Acad. Manag. Rev.* **2011**, *36*, 338–360.
15. Voss, G.B.; Voss, Z.G. Strategic ambidexterity in small and medium-sized enterprises: Implementing exploration and exploitation in product and market domains. *Organ. Sci.* **2013**, *24*, 1459–1477. [\[CrossRef\]](#)
16. Good, D.; Michel, E.J. Individual ambidexterity: Exploring and exploiting in dynamic contexts. *J. Psychol. Interdiscip. Appl.* **2013**, *147*, 435–453. [\[CrossRef\]](#) [\[PubMed\]](#)
17. Rogan, M.; Mors, M.L. A Network perspective on individual-level ambidexterity in organizations. *Organ. Sci.* **2014**, *25*, 1860–1877. [\[CrossRef\]](#)
18. Papachroni, A.; Heracleous, L.; Paroutis, S. Organizational ambidexterity through the lens of paradox theory: Building a novel research agenda. *J. Appl. Behav. Sci.* **2015**, *51*, 71–93. [\[CrossRef\]](#)
19. Tan, J.; Wang, L. Flexibility–efficiency trade-off and performance implications among Chinese SOEs. *J. Bus. Res.* **2010**, *63*, 356–362. [\[CrossRef\]](#)
20. Bouncken, R.B.; Fredrich, V.; Ritala, P.; Kraus, S. Coopetition in new product development alliances: Advantages and tensions for incremental and radical innovation. *Br. J. Manag.* **2018**, *29*, 391–410. [\[CrossRef\]](#)

21. Ajayi, O.M.; Odusanya, K.; Morton, S. Stimulating employee ambidexterity and employee engagement in SMEs. *Manag. Decis.* **2017**, *55*, 662–680. [CrossRef]
22. Birkinshaw, J.; Zimmermann, A.; Raisch, S. How do firms adapt to discontinuous change? Bridging the dynamic capabilities and ambidexterity perspectives. *Calif. Manag. Rev.* **2016**, *58*, 36–58. [CrossRef]
23. Raisch, S.; Birkinshaw, J. Organizational ambidexterity: Antecedents, outcomes, and moderators. *J. Manag.* **2008**, *34*, 375–409. [CrossRef]
24. Turner, N.; Lee-Kelley, L. Unpacking the theory on ambidexterity: An illustrative case on the managerial architectures, mechanisms and dynamics. *Manag. Learn.* **2013**, *44*, 179–196. [CrossRef]
25. Wang, P.; Van De Vrande, V.; Jansen, J.J.P. Balancing exploration and exploitation in inventions: Quality of inventions and team composition. *Res. Policy* **2017**, *46*, 1836–1850. [CrossRef]
26. Arbussa, A.; Bikfalvi, A.; Marquès, P. Strategic agility-driven business model renewal: The case of an SME. *Manag. Decis.* **2017**, *55*, 271–293. [CrossRef]
27. Sharma, L. A Systematic review of the concept of entrepreneurial alertness. *J. Entrep. Emerg. Econ.* **2019**, *11*, 217–233. [CrossRef]
28. Lubatkin, M.H.; Simsek, Z.; Ling, Y.; Veiga, J.F. Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *J. Manag.* **2006**, *32*, 646–672. [CrossRef]
29. Cantarello, S.; Martini, A.; Nosella, A. A multi-level model for organizational ambidexterity in the search phase of the innovation process. *Creat. Innov. Manag.* **2012**, *21*, 28–48. [CrossRef]
30. Lin, H.E.; McDonough, E.F. Investigating the role of leadership and organizational culture in fostering innovation ambidexterity. *IEEE Trans. Eng. Manag.* **2011**, *58*, 497–509. [CrossRef]
31. Pertusa-Ortega, E.M.; Molina-Azorín, J.F. A Joint analysis of determinants and performance consequences of ambidexterity. *BRQ Bus. Res. Q.* **2018**, *21*, 84–98. [CrossRef]
32. Verheugen, G. The New SME Definition User Guide and Model Declaration; Office for Official Publications of the European Communities, 2005. Available online: <https://www.eusmecentre.org.cn/sites/default/files/files/news/SME%20Definition.pdf> (accessed on 5 June 2020).
33. Majid, A.; Yasir, M.; Yasir, M. Individual and work dynamics affecting the determinants of functional flexibility in SMEs: Evidence from Pakistan. *J. Entrep. Emerg. Econ.* **2017**, *9*, 144–160. [CrossRef]
34. Bonesso, S.; Gerli, F.; Scapolan, A. The individual side of ambidexterity: Do individuals' perceptions match actual behaviors in reconciling the exploration and exploitation trade-off? *Eur. Manag. J.* **2014**, *32*, 392–405. [CrossRef]
35. Raisch, S.; Birkinshaw, J.; Probst, G.; Tushman, M.L. Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organ. Sci.* **2009**, *20*, 685–695. [CrossRef]
36. Kassotaki, O.; Paroutis, S.; Morrell, K. Ambidexterity penetration across multiple organizational levels in an aerospace and defence organization. *Long Range Plann.* **2019**, *53*, 366–385. [CrossRef]
37. Volmar, E.; Eisenhardt, K.M. Case study research: A state-of-the-art perspective. In *Oxford Research Encyclopedia of Business and Management*; Oxford University Press: Oxford, UK, 2020.
38. Voss, C.; Tsikriktsis, N.; Frohlich, M. Case research in operations management. *Int. J. Oper. Prod. Manag.* **2002**, *22*, 195–219. [CrossRef]
39. Eisenhardt, K.M.; Ott, T.E. Rigor in theory building from multiple cases. In *The Routledge Companion to Qualitative Research in Organization Studies*; Routledge: New York, NY, USA; Abingdon, UK, 2018; pp. 79–91.
40. Eisenhardt, K.M.; Graebner, M.E. Theory building from cases: Opportunities and challenges. *Acad. Manag. J.* **2007**, *50*, 25–32. [CrossRef]
41. Yin, R.K. *Case Study Research: Design and Methods*, 4th ed.; Sage Publications, Inc.: London, UK, 2014.
42. Bamford, D. The use of grounded theory in change management research. *J. Chang. Manag.* **2008**, *8*, 111–121. [CrossRef]
43. Roman, D.J.; Osinski, M.; Erdmann, R.H. El proceso de construcción de la grounded theory en administración. *Contaduría y Adm.* **2017**, *62*, 985–1000. [CrossRef]
44. Suddaby, R. From the editors: What grounded theory is not. *Acad. Manag. J.* **2006**, *49*, 633–642. [CrossRef]
45. Glaser, B.G.; Strauss, A.L. *Discovery of Grounded Theory: Strategies for Qualitative Research*; Aldine de Gruyter: New York, NY, USA, 1967.
46. Edmondson, A.C.; McManus, S.E. Methodological fit in management field research. *Acad. Manag. Rev.* **2007**, *32*, 1155–1179. [CrossRef]
47. Eisenhardt, K.M. Building theories from case study research. *Acad. Manag. Rev.* **1989**, *14*, 532–550. [CrossRef]



48. Eisenhardt, K.M. Better stories and better constructs: The case for rigor and comparative logic. *Acad. Manag. Rev.* **1991**, *16*, 620–627. [\[CrossRef\]](#)
49. Garrison, D.R.; Cleveland-Innes, M.; Koole, M.; Kappelman, J. Revisiting methodological issues in transcript analysis: Negotiated coding and reliability. *Internet High. Educ.* **2006**, *9*, 1–8. [\[CrossRef\]](#)
50. Campbell, J.L.; Quincy, C.; Osserman, J.; Pedersen, O.K. Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability and agreement. *Sociol. Methods Res.* **2013**, *42*, 294–320. [\[CrossRef\]](#)
51. Teece, D.J. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strateg. Manag. J.* **2007**, *28*, 1319–1350. [\[CrossRef\]](#)
52. Andriopoulos, C.; Lewis, M.W. Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organ. Sci.* **2009**, *20*, 696–717. [\[CrossRef\]](#)
53. Birkinshaw, J.; Gupta, K. Clarifying the distinctive contribution of ambidexterity to the field of organization studies. *Acad. Manag. Perspect.* **2013**, *27*, 287–298. [\[CrossRef\]](#)
54. Yun, J.J.; Zhao, X.; Jung, K.; Yigitcanlar, T. The culture for open innovation dynamics. *Sustainability* **2020**, *12*, 5076. [\[CrossRef\]](#)
55. Pellizzoni, E.; Trabucchi, D.; Buganza, T. When agility meets open innovation: Two approaches to manage inbound projects. *Creat. Innov. Manag.* **2019**, *28*, 464–476. [\[CrossRef\]](#)
56. Burchardt, C.; Maisch, B. Digitalization needs a cultural change—Examples of applying agility and open innovation to drive the digital transformation. *Procedia CIRP* **2019**, *84*, 112–117. [\[CrossRef\]](#)
57. Yun, J.J.; Won, D.; Park, K. Entrepreneurial cyclical dynamics of open innovation. *J. Evol. Econ.* **2018**, *28*, 1151–1174. [\[CrossRef\]](#)

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