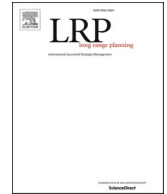




ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Long Range Planning

journal homepage: www.elsevier.com/locate/lrp

Deliberate simple rule creation and use: Activities and challenges

 Renate Kratochvil ^{a,*}, Johanna Gruenauer ^{b,c}, Martin Friesl ^{d,e}, Wolfgang H. Güttel ^f
^a BI Norwegian Business School, Norway^b WU Vienna University of Economics and Business, Austria^c Johannes Kepler University Linz, Austria^d University of Bamberg, Germany^e NHH Norwegian School of Economics, Norway^f TU Wien (Vienna University of Technology), Austria

ARTICLE INFO

Keywords:

Simple rules
Experience
Simplicity
Bottom-up
Strategy implementation
Established firm

ABSTRACT

Using 'simple rules' may enable managers to take organizational decisions more rapidly. While prior research presents advantages of simple rule use during strategy formation, we lack insights into how firms can deliberately create simple rules and mitigate the challenges during strategy implementation. This is particularly interesting for established firms struggling to leverage their wealth of experience. We explore how managers of a multinational corporation deliberately create and use simple rules to implement the firm's growth strategy. Drawing on interviews and secondary data, we reveal the activities through which managers ensure the relevance and legitimacy of codified simple rules, yet also establish causality between simple rules and outcomes. Simple rule creation is accomplished via bottom-up identification and lateral validation, its use via consistent top-down guiding and timely adaptation. Our findings contribute to the growing body of research on the evolution of simple rules and aspects of strategy implementation more generally.

"It's not the big companies that devour the small ones, rather it is the fast ones devouring the slow ones. [...] Twist finds that aspect difficult, because we're large." (Interviewee 21)

Introduction

Enabling individuals to make decisions on the spot allows companies to capture fleeting opportunities (Eisenhardt, 1989) and maintain a competitive edge in fast-moving environments (Furr et al., 2020; Eisenhardt and Bingham, 2017). Yet, quick decision-making is impeded when different approaches and perspectives compete for attention (Sull and Eisenhardt, 2012; Seidl and Werle, 2017). Condensing experience from prior decision-making episodes into 'simple rules' can help companies simplify and enable fast decision-making (Bingham and Eisenhardt, 2011; Bingham et al., 2007; Sull and Eisenhardt, 2015; Sull and Eisenhardt, 2012). Simple rules represent firm-specific, overtly-articulated but often informal rules of thumb, or heuristics, which enable a flexible, yet coherent and coordinated response to unexpected opportunities (Brown and Eisenhardt, 1997; Davis et al., 2009; Eisenhardt and Sull,

* Corresponding author.

E-mail addresses: renate.kratochvil@bi.no (R. Kratochvil), johanna.gruenauer@jku.at (J. Gruenauer), martin.friesl@uni-bamberg.de (M. Friesl), wolfgang.guettel@tu-wien.ac.at (W.H. Güttel).

<https://doi.org/10.1016/j.lrp.2022.102264>

Received 23 April 2021; Received in revised form 13 July 2022; Accepted 23 September 2022

Available online 29 September 2022

0024-6301/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

2001). Prior research shows how simple rules gradually, and often tacitly, emerge through the accumulation of experiences in collective, real-time learning processes (Bingham and Eisenhardt, 2011; Bingham and Halebian, 2012) in situations where appropriate decision-making guidelines do not yet exist (Atanasiu et al., 2022).

We argue that the creation and use of simple rules can be part of a deliberate strategic intent. Indeed, rather than being a consequence of gradual learning over time (Bingham et al., 2007; Bingham et al., 2019), simple rules may be deliberately created based on the past experience of organization members (Zollo and Winter, 2002; Sull and Eisenhardt, 2012; Regnér, 2003). Moreover, simple rules may not just be useful during strategy formation (Bingham and Eisenhardt, 2011) but also implementation. Yet, the challenges and activities through which simple rules are deliberately created for subsequent and continued use are not well understood. Therefore, we address the following research question: How do managers in established firms deliberately create and use simple rules and how do they mitigate the challenges involved?

We address this question by drawing on a qualitative, single-case design (Yin, 2014) of a well-established company, Twist-A (name changed), part of the international Twist Group. Due to limited guidance from the parent company and increasing ambiguity regarding the implementation of Twist's growth strategy, Twist-A's managers had to make on-the-spot decisions. Over time, this individualistic approach resulted in substantial internal complexity, and managers were required to consider many complex guidelines and checklists. Thus, implementing Twist's growth strategy became bogged down in a slow-moving decision-making process building on individual, rather than organizational, experience. When the Managing Director (MD) of Twist-A learned about the concept of simple rules, he proposed to deliberately create a set of such simple rules to facilitate the implementation of the firm's growth strategy. We grasped this rare opportunity of deliberate simple rule creation and collected interviews and secondary data from this process.

Our data reveal that the deliberate creation and use of simple rules faces three central challenges: (1) conferring and ensuring relevance, (2) capturing and maintaining causality between simple rules and intended outcomes when codifying rules, and (3) establishing and nurturing legitimacy during creation and use of codified simple rules. We show that these challenges are addressed through the bottom-up identification and lateral validation of a set of simple rules in the creation phase. Yet, these challenges need to be addressed when using simple rules. Our findings suggest that this is accomplished through top-down guidance and adaptation of simple rules: The ongoing effort of the Managing Director (MD) to communicate the simple rules encouraged their use and continuous updating. Cultural context is a crucial aspect of our model: The deliberate endeavor to create and use simple rules was underpinned by a highly formalized organizational context and Twist-A's need to be limited in its capturing of opportunities.

Our findings make three contributions to extant research. First, existing research investigates the evolution of simple rules in settings that are characterized by a lack of strategic decision-making guidelines, such as entrepreneurial ventures (e.g. Bingham et al., 2011, 2019). Our study adds an alternative approach of simple rule creation: We describe the activities involved in deliberately creating simple rules in a 'mature' business context characterized by a plethora of operational decision-making guidelines. Second, we add to prior research by delineating the challenges involved in deliberate simple rule creation (Bingham and Eisenhardt, 2011; Sull and Eisenhardt, 2012). Thereby we address the difficulty in strategy work to capture essence and create means-ends relationships from different experiences (Regnér, 2003) to support growth (King and Zeithaml, 2001; King, 2007). Finally, our paper adds to extant research on simple rules by showing how the creation and use of simple rules may facilitate strategy implementation (Friesl et al., 2020; Weiser et al., 2020).

Theoretical background

The development of simple rules: current state of research

We have witnessed an increasing interest in the underlying mechanisms of heuristics-based decision making in recent years (Eisenhardt and Bingham, 2017; Luan et al., 2019; Looock and Hinnen, 2015; Eisenhardt et al., 2019; Atanasiu et al., 2022). Contrary to research emphasizing the negative effects of bounded rationality (Cyert and March, 1963), contemporary research reveals how managers may use heuristics deliberately, instead of avoiding them (Gigerenzer et al., 2022). Mousavi and Gigerenzer (2014) note that "[i]n many business situations, effective heuristic decision-making deliberately ignores information and hence uses fewer resources" (p. 1671). Also, Bettis (2017) states that heuristics facilitate problem solving before a situation changes and a solution or decision becomes irrelevant.

Companies sometimes draw on heuristics in the form of simple rules to save time and effort when making decisions in uncertain, complex, or highly dynamic situations (Eisenhardt and Sull, 2001). Simple rules are straightforward statements that are easy to communicate and create boundaries for decision-making (Eisenhardt and Bingham, 2017; Bingham and Eisenhardt, 2014), yet also leave room for real-time improvisation (Bingham and Eisenhardt, 2014) and flexibility (Sull and Eisenhardt, 2012). Examples of simple rules from a Singapore-based software firm are: "Restrict internationalization to Asia", "Sell to government agencies and banks", and "Hire an experienced local country manager" (Bingham and Eisenhardt, 2011, p. 1447). Such statements narrow the space of available formulations of problems and solutions (Ocasio, 1997) and thereby focus attention (Bingham and Eisenhardt, 2011). Using simple rules as guidelines for decision-making is an efficient but idiosyncratic strategy to capture opportunities (Bingham et al., 2007), and their use may improve firm performance (Bingham and Eisenhardt, 2011; Bingham et al., 2019).

Prior research predominantly argues that companies develop simple rules through collective learning, as they repeat strategic processes and select successful decision-making modes in a defined area of strategic relevance (Sull and Eisenhardt, 2012). Thereafter, they actively translate and condense their experience and learnings into simple rules with unique content (Bingham and Eisenhardt, 2011). Optimally, throughout this process, which involves the elaboration and abstraction of experience across hierarchical levels, the participants' perceptions tend to converge. This decouples organization-level heuristics from individual perceptions of a specific

problem, leading to greater success in the learning and use of the simple rules.

Yet, as simple rules ultimately rest on experience, their use in specific situations carries risks (Kahneman et al., 2021; Vuori and Vuori, 2014; Ott et al., 2017). This happens when experiences are misinterpreted, misused, or become outdated, and thus, simple rules are not aligned with the organization's success patterns (cf. Lippman and Rumelt, 1982). Moreover, potential copying of simple rules from other contexts may not fit the idiosyncratic context (Bingham and Eisenhardt, 2011). Finally, as simple rules are based on past successes and failures, their usefulness in new and unusual situations (e.g. pandemics and other crises) is unknown; thereby the framing of problems might be skewed through existing heuristics (Stingl and Geraldi, 2021). Building on knowledge from the past might lead to missing out on new, attractive opportunities.

Developing simple rules in established companies

Previous research has largely investigated the emergence of simple rules on the individual level (Atanasiu et al., 2022; Wenzel and Stjerne, 2021) and from the perspective of repeated but limited experiences of young ventures which are still forming their strategies (Bingham et al., 2007; Bingham et al., 2019; Bingham and Eisenhardt, 2014). However, this imparts an incomplete picture of the differing ways in which simple rules originate. They may be created or evolve in other organizational forms (Loock and Hinnen, 2015; Ott et al., 2017), such as established companies (Pieper et al., 2015; Sull and Eisenhardt, 2012). These firms have pre-existing and sometimes complicated cultural and strategic setups. Indeed, they may have accumulated different experiences over long periods of time (Regnér, 2003; Kogut and Zander, 1992) and may thus struggle to identify appropriate experience and performance relationships (Lippman and Rumelt, 1982; King, 2007; King and Zeithaml, 2001). In contrast to young organizations, established companies have a rich cultural network of implicit and explicit rules, standards, guidelines, systems, stories, rites, rituals and ceremonies which, taken together, constitute an oversupply of 'correct' or 'good' solutions to those problems and opportunities (Sackmann, 1992; Tippmann et al., 2014; Parker et al., 2019). This often results in information-intensive decision making, and managers are engrossed in evaluating the relevance of information rather than acting upon opportunities (Ketchen et al., 2007). Thereby, long-established organizations which are pursuing an existing strategy and have to cope with high internal complexity deriving from a wealth of background experience, may also be able to leverage the simplicity of simple rules and benefit from this flexible form of decision making (Sull and Eisenhardt, 2012; Heimeriks et al., 2015; Atanasiu et al., 2022).

We argue that the purposeful creation and use of simple rules can be framed as a process of deliberate learning: the continuous accumulation, articulation, and codification of knowledge (Zollo and Winter, 2002). The encoded knowledge is stored in organizational routines to mitigate challenges related to transmitting and implementing codified knowledge. While the notion of deliberate learning emphasizes the development of routines, in this paper, we are interested in how companies deliberately create and use codified simple rules. Routines and simple rules share some similarities with regard to deliberate learning. First, both benefit from the codification of tacit knowledge embedded in social interactions. Second, both may lead to a reduction of causal ambiguity by clarifying means-ends relationships and thus, improve the effectiveness of decision-making (Bingham and Eisenhardt, 2011; Zollo and Singh, 2004; Konlechner and Ambrosini, 2019). Yet, simple rules are distinct from routines (Bingham and Eisenhardt, 2014). While routines provide a "quasi-automatic response to problems", simple rules "provide a common structure for a range of similar problems" (Bingham and Eisenhardt, 2011, p. 1439). In other words, managers are flexible in their managerial action when taking decisions as simple rules provide guidance based on content, but do not determine the content of a decision (e.g. yes, no).

However, we have a limited understanding of how established firms deliberately create and use simple rules. Hence, we ask: How do managers in established firms deliberately create and use simple rules and how do they mitigate the challenges involved?

Methods

We use a qualitative single-case study design to explore the processes by which the deliberate creation and use of simple rules unfolds over time. A single context enables us to benefit from deep insights into simple rule evolution while avoiding variation among idiosyncratic aspects of the context (Yin, 2014).

Research context

We collected data from Twist-A, part of the multinational Twist Group. Twist is a leader in producing and selling assembly and fastening materials (in total, more than 125,000 different products) to the automotive and construction industry. In 2021 the group had more than 80,000 employees in over 80 countries and generated annual sales of more than €15 billion. The Twist Group has a global reputation for effectiveness, innovation and its strong focus on highly-specified processes and operational rules. For many decades, Twist's growth was built on a traditional field sales approach, but around 2005, the company switched to a multi-channel growth strategy. The company started to establish a network of retail stores in a few selected growth markets (Austria, Germany, Norway, and the United Kingdom). This expansion strategy has been a reaction to industry dynamics, new technological developments (e.g. 3D printing), and customers' changing needs.

Our specific research context is Twist-A, Twist's subsidiary in Austria, which acts autonomously within the Twist Group. It was founded about 60 years ago, and by 2021, it employed over 950 people and generated annual sales of approximately €280 million. In 2016, at the start of data collection, Twist-A had 42 stores contributing 20% to annual turnover, which, however, failed to meet Twist's own targets. Revenue was about one third lower than in comparable German stores, reflecting a weaker performance in Twist-A's store management. Despite this, stores have become Twist-A's most attractive sales channel, and their operation and expansion were a

Table 1
Overview of data sources

Data type	Source	Use for data analysis
Interviews	54 interviews with 21 informants (2016-2021) Informants: 17* Interviews with TMT members 30* with middle- and lower-level managers 10 with employees *Two people participated during three interviews	Narrative and timeline of events Reflective accounts of simple rule creation and use, and involved challenges
Video recordings	15 Video recordings of the MD asking various managers about their experience	Timeline of events Insight into simple rule creation and involved challenges as actors interact with each other
Documents	Corporate presentations and working documents, official organizational reports, press releases, the employee newspaper	Account of codified simple rules and modification of simple rules; and use of simple rules Background information on Twist and their cultural context Accounts of successes in store expansion and management
Company visits	Fieldnotes and pictures (e.g. art exhibition, offices, warehouse)	Background information on Twist-A and their cultural context

strategic priority. While the opening of stores has continued, the underlying organizational processes have been characterized by high levels of internal complexity associated with delays and high costs. To counteract this challenge, in 2016, Twist-A decided to introduce the concept of, and jointly synthesize, a set of simple rules from their past experience to reduce internal complexity while at the same time continuing to pursue their growth strategy. Since 2016 Twist-A has been using simple rules, and by 2021 the branch network had been expanded to 65 stores. This case provides us with an invaluable chance to acquire a real-time insight into a company's activities when intentionally putting the concept of simple rules into practice (Siggelkow, 2007).

Data collection

We used interviews and secondary data to collect retrospective and real-time data and triangulated it across a range of actors and sources (Table 1). Data collection commenced in December 2016 and ended in August 2021.

Interviews. We conducted 54 semi-structured interviews, comprising 21 different informants at various levels of the hierarchy. We undertook interviews one to three times a year to closely follow Twist-A's activities (Van de Ven, 1992). Due to the key role of the MD, he was interviewed eight times. The interviews revealed retrospective information about the process of creating and introducing the simple rules (2016–2017), plus real-time data about the process of using and updating them (2016–2021); they lasted between 40 and 135 minutes.

Secondary data. We collected substantial secondary data, including video recordings, corporate presentations and working documents, official organizational reports, press releases, the employee newspaper, and pictures of stores and the offices. The videos consist of 15 discussions conducted between the MD (hereafter: V) and several middle and lower-level managers, who shared their experiences about the opening and managing of stores. The MD had written his Master's thesis on the topic, during which he had produced video recordings of the bottom-up sharing of experience.

Data analysis

Our data analysis evolved in four highly iterative steps. First, we organized our data set and developed a case history consisting of a narrative and timeline of events that we used in the subsequent steps of analysis (Langley, 1999). This timeline of events starts with the MD learning about simple rules, continues with the deliberate creation of a first set of codified simple rules, and concludes with the subsequent use, which comprises the implementation and later updating of simple rules based on additional experience.

Second, we built on the timeline for open coding. For both simple rule creation and use we analyzed the activities that actors at Twist-A engaged in. For each activity we assigned a descriptive code using the respondents' language as much as possible (e.g. keeping them simple, focusing attention, interpret them for staff members, create a common language). Moreover, we analyzed the data by being sensitive to the challenges that arose in the creation and use process. Again, we assigned descriptive themes drawing on the language of respondents.

Third, we started to compare these descriptive themes across respondents to identify key commonalities and differences across descriptive themes. While the coding process was primarily conducted by the first author of this paper, the process of constant comparison across descriptive themes was done jointly. Throughout the analysis, we made extensive use of the interviews and secondary data to find patterns across the empirical material in relation to our research interest. In this step of data analysis we sketched drawings, figures, and graphs to understand the simple rule evolution and allocate the coded activities to creation and use (Miles et al., 2018). During several iterations, descriptive themes were aggregated into second-order or theoretical concepts. This resulted in the identification of activities involved in simple rule creation (bottom-up identification and lateral validation) and use (top-down guidance and adaptation) and three challenges involved in the creation of simple rules (relevance, causality, and legitimacy).

Fourth, we then engaged in axial coding to investigate the relationship between activities and challenges of simple rule creation and use (Saldaña, 2021; Locke et al., 2015). We went back into our data and we coded all incidents related to activities for mitigating challenges. We then analyzed interviewees describing the impact of activities for dealing with any challenges that arose in the processes. Similar to the third step of data analysis we developed descriptive themes that captured the relationship between activities and challenges (Table 3 & 4) and developed a theoretical model (Fig. 1).

To corroborate our interview data we made extensive use of secondary data (e.g. reports, documents, press releases, Table 1) (Lincoln and Guba, 1985). In this instance we uncovered that the highly formalized context of Twist in combination with its entrepreneurial spirit are important facilitating aspects to the continued creation and use of simple rules. Going back into the data, we also uncovered how staff members mention in several interviews that they were used to Twist's formalized processes and that they appreciated a rule-based approach for simplifying decision-making.

Deliberately creating and using simple rules at Twist-A

While conducting his Executive MBA, Arthur, MD of Twist-A, became enthusiastic about the concept of simple rules and its potential for increasing decision-making speed. Thus, in early 2016, he introduced the 'simple rules approach' to Twist-A's top management team (TMT). In his presentation, he drew on Sull and Eisenhardt (2015, p. 5) to explain that simple rules are "shortcut strategies that save time and effort by focusing our attention and simplifying the way we process information" and "are constrained to a minimal amount of information that can be kept in mind easily" (Internal Document). He suggested that creating and using simple rules might help Twist-A simplify or remove some of the "deadlock situations" (I1) that they came across when searching for, opening, and running new stores. Arthur was aware that the deliberate formulation of simple rules could be fraught with difficulty (Sull and

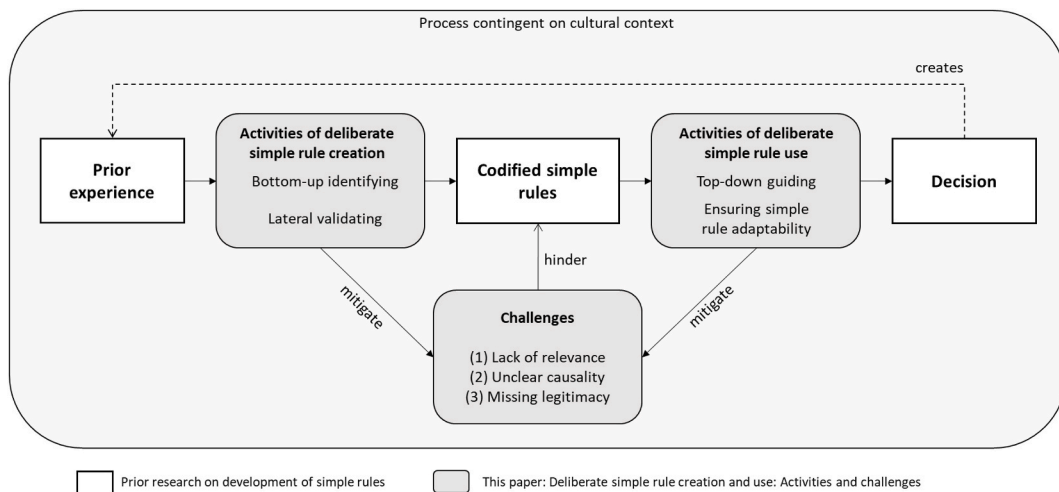


Figure 1. Deliberate creation and use of simple rules in an established firm.

Eisenhardt, 2012). He proposed to draw on the wealth of different experiences held by various actors within the company when creating simple rules.

In the following sections, we describe the activities that lead to deliberate simple rule creation and use, the challenges that hinder deliberate creation and use, and how these activities mitigate these challenges. These findings are shown in Fig. 1, which also depicts the core process of simple rule creation and use (Bingham et al., 2019; Atanasiu et al., 2022) and connection between decision-making and experience accumulation (Zollo and Winter, 2002).

Activities do not follow a linear process; instead, they occur concurrently and in varying sequences and are embedded in a cultural context that influences the extent to which a firm is receptive to such approaches in management. Thus, activities of simple rules creation and use concurrently mitigate the challenges—lack of relevance, unclear causality, missing legitimacy—that hinder the deliberate creation and use of codified simple rules.

Activities of deliberate simple rule creation

To start out with simple rule creation, Arthur wanted everyone to share how decisions regarding store expansion and management are made. Hence, Twist's approach to creating simple rules commenced with a series of meetings with multiple staff members across the organization. Two activities were central: identifying success-related experiences through bottom-up sharing and validating experiences via lateral sharing to codify simple rules with transparency in mind.

These activities not only helped to extract actors' ill-specified, fuzzy background knowledge, but also deal with challenges: "There he [the MD] goes again with another new idea" (I1), was a common reaction when staff at Twist-A first heard about the simple rule initiative. Correspondingly, the MD pointed out that people were skeptical, and at "the beginning, only about half the people showed much enthusiasm." In his eyes, people were afraid that these simple rules would end up as "yet another checklist" (I20) that they would have to work through, and that decision making would become even more time-consuming and complicated. As the MD concluded, it "is important for simple rules [...] to tackle the things that the managers find most challenging", as otherwise they "will just become a box-ticking exercise" (I1).

Identifying success-related experiences through bottom-up identifying. To tap into the relevant decision-making experiences of employees, individual staff members were initially asked to "explain what makes them successful" (I16) in their role. The MD, therefore, asked everybody who should have a say on the subject: "Have a look [...] What do you think?" (I3). This triggered further individual conversations and team meetings within managers departments and regions. Within these meetings they shared this with each other and collectively conceptualized what they believed made them successful in their respective domains. As one informant pointed out: "it's really important to me that the people who have to live by the simple rules are also the people who create them." One manager explained, "the MD collected it ... But the input came from us because it's us who live by those requirements on a daily basis." (I4)

The outcome of this process of bottom-up identifying was a long list, generated by the MD and TMT, of everything that staff members felt were success factors in store expansion and management. During the initial phases of simple rule creation, the MD set up meetings to collect information. In later stages, bottom-up identifying happened in formally and ad-hoc informal meetings about simple rules.

Validating simple rule creation through lateral validation. Bottom-up identification was carried out without input from the TMT, and managers were given free rein to engage with their teams across both geographic regions and functional departments. Through lateral communication and "lengthy discussions" (I14), they then tried to capture many of the interactions, nuances and potential pitfalls involved in decisions: "everyone makes decisions in this way; I would call it gut feeling ... So you just need to get onto

paper and explain to everyone what you have always thought" (I7). This resulted in an extensive, and at times "tense discuss[ion] at one of the workshops" (I5) regarding the actual value of this approach when it came to enabling faster growth and greater flexibility, as the CFO explained: "... You have to have a second or a third round, but then the end result is that it gets done in a way that everyone can agree to." (I3).

Through this complex network of interactions, "both laterally between team members and hierarchically between team leaders and their staff" (I6), staff members realized that individual decision making needed to become "organizational": i.e. they realized that the complex setup of organizational decision guidelines (strategy, manuals, etc.) lead—through different individual interpretation—to a wide variety of individual decisions of managers, which again resulted in great variety of store performance. For instance, actors recognized that the ill-specified definition of ideal store premises led to widely-varying square meterage. Some of the consequences of this were: difficulty in fitting Twist's product portfolio into a particular store's format and building design, high costs resulting from necessarily store-specific maintenance, and disparities in the number and skill level of the retail staff. Ill-defined square meterage requirements affected the screening of suitable new store locations. Real estate agents would submit multiple potential premises for consideration, but often no decision was taken, or the preferred premises were already off the market once a decision was reached. It became clear to staff members that the great variety of different decisions taken regarding store size is a key driver behind internal complexity.

Supporting the creation of codified simple rules: Mitigating challenges through bottom-up identification and lateral validation

Bottom-up identification and lateral validation lead TMT to the synthesis and codification of findings into strategically relevant organizational simple rules (Table 2). Rather than making top-down decisions, Twist-A's TMT decided to work with the detailed descriptions and distill them down to their essence, while considering whether the emerging simple rules were in line with how the company operated, including Twist Group standards: "... asking oneself whether the simple rules are still suited to our culture and to the market conditions." (I6). This resulted in simple rules for making expansion decisions, such as: "New locations must not exceed 600m². Do not compromise on this." (Internal Document). Finally, the MD presented the drafts of three sets of simple rules, each set dealing with bottleneck topics in the area of store expansion and management, to the TMT for final revisions:

"... and then we revised them yet again and said maybe we should adjust the wording here or change this or that a bit. And after that the parameters were pretty well-defined, and we said to our expansion team, that's it, we'll run with this, and there should be no exceptions allowed to these simple rules." (I7).

The TMT released the sets of simple rules over more than one channel (written, verbal) in several formats (e.g. manuals, trainings) as "it is important to keep communicating the simple rules. They will not implement themselves." (I1). One manager stressed how, beyond allowing for better prioritizing, this broad accessibility created transparency in how decisions were arrived at:

"In the past, opinions often varied. Someone might say, 'That's an A Location', and someone else might say, 'No, it's a B location'. But these days, everyone knows what an A Location is." (I5).

Thus, as these activities supported the codification of simple rules, they also helped to mitigate three important challenges that

Table 2
Examples of simple rules

Simple rule	Theme	Problem	Purpose
New locations must not exceed 600m ² . Do not compromise on this.	Selection of new stores	Difficulties in choosing premises Large variation in size of premises	Reduce amount of time given to searching for premises Aim for similar store designs and product range positioning Increase profitability of stores and avoid retention of unprofitable ones
New store must be located on a busy street and have sufficient parking.	Selection of new stores	Difficulties in choosing premises Large variation in location types of premises	Reduce amount of time given to searching for premises Aim for similar location types Attract customers through presence of location
Offer system solutions to customers, who explore individual products only.	Sales and distribution	Low numbers of product sales Customers buying single products (as opposed to system solutions) takes up too much of sales staff's time	Increase sales (products and revenue) Tie customer to company Improve ratio of sales staff time to actual returns
Always inquire with customers about future needs.	Interaction/Sales and distribution	Number of returning customers could be higher (in some stores) Lack of information as to customer needs and preferences in different areas of the country	Get entrepreneurial ideas/stimuli for the company in a systematic way Simple rules are useful for generating business impulses systematically
Discuss with your team members only those things which you yourself can control.	Leadership in stores	Dissatisfaction among workforce with instructions from both store managers and Austrian headquarters Store managers lack self-determination	Strengthen role of store manager Make managers' tasks explicit Simplify store manager decision making

Sources: Internal document, videos, interviews

Table 3
Mechanisms of deliberate rule creation: Supportive evidence

Bottom-up identification	Challenges of simple rule creation	Lateral validation
<p>Connecting simple rules with actual practice The people working in the branch stores were involved and did provide us with feedback. ... and maybe even added things to one or two of the rules. (I3) In [CITY], as I keep saying, the parking situation is a really significant factor. (V24)</p>	<p>Relevance Ultimately, it's about complexity and resources. If I have vast amounts of resources, I probably don't need to have rules. [...] And if you want to prioritize, you have to start with strategically relevant heuristics. What do I concentrate on? What is also important, but could probably be done later? (I7)</p>	<p>Ensuring simple rule represents common experience With people from different levels of the hierarchy being involved in the process. They all sit at one table when these things are being discussed. For me this is really important. It doesn't work if you try and do it any other way. (I7)</p>
<p>Identifying simple rules that capture cause-effect relationships Our staff are the ones who know what is going on locally. (I14) It's our [TMT's] role to relate this back to what constitutes success in terms of the company as a whole. (I3)</p>	<p>Causality We don't want to have to re-invent ourselves every single time. And we need faster decision-making processes [...], which is only possible if we don't have to re-evaluate every issue. That way we can improve efficiency [...] especially when it comes to making decisions about locations. (I1)</p>	<p>Refining of simple rules by drawing on multiple experiences But if we look at the whole rather than just going ahead and building a branch store regardless of whether it's likely to work or not, [...] the simple rules make sense. Because they make subsequent operations a lot easier. (I4)</p>
<p>Participation enhances simple rule legitimacy Having simple rules brings substantial advantages at the process level. [...] The terminology isn't the important bit; I just think that putting the logic of simple rules in place brings added value because it means that people have to think about it. [...] I think the major benefit comes from the fact that people who generate the rules are also the people who have to implement the. (I7)</p>	<p>Legitimacy A [simple] rule that gets handed down from above will generally get met with resistance. And so it's really important to me that the people who have to live by the rules are also the people who create the rules. (I10)</p>	<p>Participative approach to rule review enhances simple rule legitimacy Whether there are guidelines or not is irrelevant and it's only really afterwards, when they get presented in a management meeting, that it becomes clear whether people actually agree with a set of rules, whether we as the managers are actually in agreement. For me that's one of the most important things. More than anything else, when it comes to communication on these issues, it's better to spend twice as much time discussing something so that in the end you can actually live with the new process or rule. Rather than ending up questioning its validity. (I10)</p>

might hinder the development of codified simple rules. By developing simple rules the TMT needed to confer relevance, capture causality (i.e. means-ends relationships) and establish the legitimacy of simple rules (see Table 3).

Conferring relevance: Involving the actors regardless of their level in the hierarchy counteracted potential resistance because simple rules reflect their common experience. One interviewee explained that “it doesn't make any sense if you put rules in place without involving the people who have to live by them. [...] You can do it, but then you have to expect that they won't be followed.” (I7). Counterintuitively, managers welcomed the limiting of their ability to choose between opportunities. Twist is known for being a large corporation with a high “entrepreneurial spirit” (Company Website). This culture causes managers to recognize too many, rather than too few, opportunities, leading to high complexity. As one manager said: “We can see a lot of problems and opportunities that we might need to deal with. But how do we know which ones are actually important enough to tackle?” (I13). In this respect, simple rules lead to a commonly established strategic framework that connects to actual practice, focusing managers' attention on the aspects most relevant to implementing Twist's growth strategy.

Capturing causality: One challenge when wanting others to use simple rules is to unpack the mechanisms that “solves the particular problem at hand” (I12). Relating the simple rules back to Twist's bottlenecks, particularly through the lateral validation of experiences, allowed actors to identify means-end relationships that underpinned simple rules. Otherwise, actors might only see one piece of the puzzle and would not be able to connect the use of simple rules to an intended outcome. TMT then needed to ensure that the organizational ‘levers’ captured in simple rules “relate [...] to what constitutes success in terms of the company as a whole” (I3). As a result, staff would know when to use a simple rule and what the intended outcome should be.

Establishing legitimacy: Based on their tenure inside the firm, members of the TMT understood Twist's business inside-out. This in-depth understanding of the company allowed them to work with staff in a participative manner and relate their experience towards the articulation of simple rules that were considered valid and, hence, legitimate by staff. The transparency of the simple rules made it evident that simple rules were for everyone, including the TMT, and that everyone would be evaluated according to how well they kept to them. The simple rules received further validation because they were a good fit with the organizational culture. As the head of marketing put it: “I think a simple rule is ultimately only effective right across the board if it's based on an internally-consistent value construct.” (I20).

Activities of deliberate use of simple rules

For Arthur, Twist's simple rules were not just another initiative. He strongly believed in their potential for aiding the firm in its growth strategy. He knew that, ultimately, to reap any positive strategic effects, the simple rules needed to be used consistently and be updated, if necessary. Consequently, the TMT drew repeated attention to the simple rules and gave staff *guidance* for using them. The

TMT continuously highlighted that the simple rules were adaptable. Below we discuss the simple rule use and mitigation of inherent challenges.

Top-down guiding of simple rule use. Despite the broad acceptance of simple rules among Twist-A members, the MD reinforced the simple rules by monitoring use and visiting sales outlets. For Arthur, this was important. The purpose of introducing the simple rules was to simplify decision making. Thus, Arthur did not want to encourage rule proliferation, which would merely lead to increased complexity, the opposite of what he had in mind. To achieve this, the TMT put regular checks in place. These checks had two complementary rationales: The simple rules needed to be used by the entire organization to function as they should. The effective updating of the simple rules was only possible if they were known and used by everyone. Initially, the “star sales managers” did not adapt well to the use of simple rules because they had their own individual success patterns. “Forcing” them to adopt them was not an option, given that Twist did not want them to leave the organization. However, it was important for all sales managers to use the new rules since they would not be “fully effective” (I1) if there were too many exceptions. The TMT decided to motivate simple rule use “slowly” (I3) through the setting of individual KPIs.

There were three sets, each containing seven simple rules. As Arthur said, “Seven is the magic number.” (I1). He considered it important for each set to contain a small number of “cognitively-manageable” and “strategically” (I1) relevant simple rules. All employees “should have access” to the simple rules and be able to “learn them by heart” (I1). The TMT restricted the applicability of the simple rules to the bottleneck area represented by store expansion and management.

Yet, a few exceptions to simple rules were granted. One came in what the staff termed “the 8th rule”, which came into force when the majority shareholder of the Twist group pushed an idea that fell outside the framework provided by the simple rules. For example, he wanted to open a small store in a city’s pedestrian zone (the simple rules would have guided the choice towards a big store on a big street with plenty of parking). The MD decided, “If the owner of Twist wants particular premises, then we take it. If the owner wants a particular item to stay in the product range, then we keep it in. [...] even if it means it costs an extra 50%, it’s not up for discussion.” (I1). Exceptions like this, however, provided a comparison case, thereby highlighting the positive outcomes of simple rule application.

Ensuring simple rule adaptability. There was a general understanding among staff that the simple rules would not be cast in stone but remain malleable and the creation process stays open-ended because “... it’s important to keep re-investigating” (I5) and “if a new simple rule is required, then an existing one should be removed. If a simple rule is no longer useful, then it should be deleted.” (I13). As a result, it was proposed that simple rules should be evaluated regularly against new experiences and that they should be revised when “they stop[ped] leading to successful outcomes” (I12).

After about four years of using the square meterage rule, the company realized that it needed to change. As the density of the network of stores in Austria was constantly growing, different actors in the company began to realize that the customers were not making full use of the product range in every store. In an internal presentation, one member of Twist’s TMT pointed out that, due to market saturation resulting from increasing store network density, the available retail potential of each store was lower per square meter than forecasted (Internal document). Yet, it was not immediately clear that this would have had implications for the size of new stores and thereby for the square meterage captured in the initial rule. It took several iterations of sharing information and experience, both from the bottom up and laterally, to realize that the maximum square meterage should be decreased to 450m². The MD emphasized that “This change did not originate at the managerial level, as expected, but from the TMT.” Managers had internalized the simple rule so deeply that “... They had not even thought about making a case for changing it.” (I1). This again highlights the importance of the MD’s role in steering not just the creation but also that of using and updating the rules.

Using codified simple rules: Mitigating challenges through top-down guidance and adaptation

The TMT made simple rules easily accessible and invited staff to share new experiences that challenged one or other of the simple rules: the fact that the rules were adaptable allowed the actors to keep questioning their usefulness. Our data show that the simple rules continued to be discussed at different hierarchy levels long after their initial launch. Due to simple rules being transparent and adaptable, staff was able to examine them at any time and refer to them when making decisions. In what follows, we describe how top-down guidance and adaptation mitigate the challenges and supported the continued use and codification of simple rules by ensuring relevance, maintaining causality, and nurturing legitimacy (Table 4).

Ensuring relevance: TMT held simple rule use as a priority. If they are to be used, simple rules need to stay relevant to the strategic direction of the company. Their relevance became manifest once the TMT was able to start drawing connections between simple rule use and the growing profitability of the Twist-A stores (e.g. higher profits after store relocation). Continuous use of simple rules helped to embed them within the day-to-day practices of the staff members and allow for new experience to be collected and shared, eventually leading to updating. In this way, the opening of new stores and management of them gradually improved. As the MD explained this small-step way of decision-making improvement for store expansion, “One thing is certain: this isn’t a way to make big changes. We’re growing slowly, but we are growing continually.” (I1).

Maintaining causality: If simple rules are to remain effective, they need to be able to capture obscure and ambiguous means-ends relationships while adapting to changes in the internal and external context (e.g. changes in strategy in the former case, or changes in customer preference in the latter) while maintaining their core intent. The TMT invited staff to continuously share new experiences contradicting existing rules. Still, the more the simple rules became embedded in everyday practices, the harder this deliberate reflection became. To combat this challenge, the TMT initiated formal and informal meetings in which staff was invited to re-engage with the simple rules to explore whether the means-ends relationships captured in the simple rules were still valid. Most of the time, the simple rules were merely discussed and re-approved, but updates (re-creations) did only take place on a few occasions.

Nurturing legitimacy: The TMT’s constant reinforcement of simple rules in communications, the attention they placed on them,

Table 4
Mechanisms of deliberate rule implementation: Supportive evidence

Top-down guidance	Challenges of simple rule use	Adaptation
<p>Simple rule implementation is top management priority I am the guardian of the simple rules. (I1) Everyone has to agree, but if they don't, the company hierarchy exists to ensure that simple rules like this are actually implemented. (I7)</p>	<p>Relevance The relevance of the simple rules is ensured by the fact that the rules have to be self-validating ... (I3)</p> <p>The challenge was to keep the simple rules relevant over time and "if necessary, adapt them to new situations". (I1)</p>	<p>Simple rules are continuously updated Stick to it at all costs ... and if a new simple rule is required, then an existing one should be removed. And if a simple rule is no longer useful, then it should be deleted. (I13)</p>
<p>Continuous monitoring of simple rule efficacy And of course I myself am often on the road with salespeople and we need to be able to monitor these things, regardless which hierarchical level you're talking about, and see if they're being implemented over the course of the sales process. And that's the only way we can check whether it actually works. Because if I'm with a salesperson all day long and we've laid down certain rules that we require them to follow and they aren't doing it, then I know that the rules haven't been taken on board. (I7)</p>	<p>Causality We need to fill them with life, put them into action, otherwise they become checklists. (I1) I think it provides a good way for team members to orientate themselves because imagine having to discuss every item of real estate at executive board meetings ... if you have to do that then you're taking up the organization's most expensive labor resources on things that should be easy to decide. (I3)</p>	<p>Simple rules are tailored to context while maintaining core It doesn't really matter if people diverge from the rules in small ways, so long as the general tack is right. (I1) ... it's important to keep re-investigating and asking "Is this rule still correct? Is it still accurate or do I need to make changes?" (I5)</p>
<p>Top management involvement reinforces legitimacy Rules are always, you have to explain them to people, and of course rules can be misunderstood. Yes. And of course, people have to be prepared to accept the rules and implement them. (V9) During consultations we ask: "Can we do this? Are we playing by the rules? Or not? If we aren't, we need to inform top management ..." (I5)</p>	<p>Legitimacy Rules are always, you have to explain them to people, and of course rules can be misunderstood. Yes. And of course, people have to be prepared to accept the rules and implement them. (V9)</p>	<p>Simple rule depends on staff expertise Implementing the rules takes know-how as well, because in order to be able to sell, for example, you also want to be good at it; on its own a rule isn't much use. (Internal Document)</p>

their ongoing re-approval and updating based on staff expertise signaled to staff that the TMT considered simple rules a crucial tool for implementing Twist's growth strategy. This lent weight to the rules' legitimacy. As one interviewee pointed out: "What do we want our salesman to know and do? [...] That's a big challenge, to direct everyone's attention to the things that are important to us." (I6). On occasion, the fact that the simple rules had been successfully applied within other companies and that it was possible to read about them in the 'Harvard Business Review' and other well-known outlets helped further increase legitimacy. It was also clear that the simple rules had to be used, and were being used, by every employee—including the TMT—and that their incorrect use would be negatively evaluated.

Twist's cultural fit facilitates simple rule creation and use

Our analysis also suggests that the cultural fit of simple rules was crucial to the deliberate development and the actors' constructive participation. Staff members understood that the firm's intention was to provide easy-to-use guidelines for organizational decision making that, while being straightforward, left room for improvisation. Simple rules would allow them to act more swiftly without having to "sit down and think about it [...] every single time" (I4). Thus, simple rules could help them to avoid "wasting valuable time" (I4). Twist employees are generally used to working with operational rules and guidelines. Hence, building their decision making on a new framework was familiar and easily implemented. New was that the unique content of simple rules derived bottom-up from Twist-A staff members' experience (in contrast to the usual top-down, centralized design and introduction of guidelines), and that simple rules would, if necessary, be updated based on employees' experience. Hence, staff was motivated to take part in the creation of simple rules and the cultural fit supported them in using the codified simple rules willingly and reliably. But this cultural fit of simple rules to Twist's organizational context also had its downside. Twist-A members did not question every simple rule on an ongoing basis, and as a result, it took them several iterations to realize that one of the details needed to change.

Implications of simple rule creation and use for decision making at Twist-A

The introduction of simple rules at Twist-A was well received by managers and the firm was on the intended growth trajectory. They "had been delivering excellent sales figures up to that point. But afterwards they were even better" (I12), as one interviewee summarized the situation. Indeed, the firm had made several tough decisions guided by the simple rules. For instance, a decision had been taken to relocate one of the stores in a major city. Although the store had been profitable, it did not comply with the required store

characteristics as captured in the new rules. The regional manager decided to move the store to a nearby location on a busy street, one which complied with the ‘store-size rule’. Three years later, the regional manager told us that the store was now very successful. When the MD reflected on how decisions regarding store opening had been made before the introduction of the simple rules, he admitted: “In many cases, it would have helped to have simple rules. We would have made different decisions.” (I1).

The outbreak of the Covid-19 pandemic is another case in point for showing how simple rules facilitated Twist-S’s store expansion. In 2020 and 2021, most of the stores had to remain closed for some time due to government-mandated lockdowns and social-distancing rules. During this period, Twist-A increased its speed of expansion. They opened two more stores than in previous years (on average five shops a year) (Internal Document) and introduced self-service checkouts. The MD said: “[Building on simple rules] we immediately knew what to do and as a result, the managers could just go on with their work.” (I1).

Discussion

Simple rules facilitate quick decision making by building on condensed experience (Bingham et al., 2007; Bingham and Eisenhardt, 2011). However, despite several studies revealing how simple rules emerge from real-time learning in companies during the formative phase of strategic development, little is known about how large, established firms deliberately create simple rules for successful use (Atanasiu et al., 2022). Our analysis of Twist-A uncovers how simple rules are created and used in a mature and highly formalized organization. We particularly focus on the challenges (lack of relevance, unclear causality, missing legitimacy) that might hinder this process as well as the activities for mitigating these challenges for deliberate simple rule creation and use. The organization’s cultural context of formalization supported deliberate simple rule formulation. We thereby make the following theoretical contributions.

First, we add to extant research on simple rules by delineating the micro-level activities and supporting conditions of simple rule creation and use. Prior literature provides deep insights into the gradual, often tacit, emergence of simple rules from specific experience (Bingham and Eisenhardt, 2011; Bingham et al., 2019) and the required unlearning of existing cognitive schemes (Atanasiu et al., 2022). Existing research thus predominantly investigates the emergence of simple rules in entrepreneurial settings (e.g. Bingham et al., 2007, 2011, 2019) where appropriate decision-making rules do not yet exist (Atanasiu et al., 2022). Our paper sheds light on another approach to simple rule creation: The deliberate choice to develop simple rules in a mature setting. Indeed, also established organizations may benefit from the use of simple rules. However, they might need a deliberate social process of experience synthesis and simple rule formulation (e.g. King, 2007; Zollo and Winter, 2002) due to their often pre-existing and sometimes complicated strategic setups. Also, rather than focusing on specific empirical instances, they might draw on messy, unstructured, and culturally rooted background knowledge (Sackmann, 1992) about how decisions have been made (Regnér, 2003; Kogut and Zander, 1992) and may thus struggle to articulate clear means-ends relationships that would guide future decision-making (Lippman and Rumelt, 1982; King, 2007; King and Zeithaml, 2001). By tracing simple rule creation at Twist-A, we spell out how firms may deliberately create and subsequently use such rules. We describe the activities involved in simple rule creation (bottom-up identification and lateral validation) and use (top-down guidance and ensuring simple rule adaptability). While this process confirms recent research by Atanasiu et al. (2022) regarding the creation of heuristics for strategic decision-making, our findings provide further nuance on the use of simple rules by highlighting the need for top-down legitimation of codified rules to avoid resistance or misuse. Thereby we address the call for more in-depth understanding of simple rule evolution (Vuori and Vuori, 2014; Loock and Hinnen, 2015; Ott et al., 2017; Eisenhardt and Bingham, 2017) and an underlying process of deliberate synthesis of experience that has so far been solely conceptual (Zollo and Winter, 2002; Zollo and Singh, 2004).

In our investigation, we also show that this synthesis of experience is guided by one manager, a strategist, with a deep contextual knowledge of the organization and the industry in which it is situated (Whittington et al., 2011). This aspect is particularly important: witness, for example, the skill exhibited in the present case by the MD and other TMT members when mobilizing the firm’s existing highly formalized cultural context and need to restrict itself to strategically-chosen opportunities. This puts attention on the important role and impact of single individuals on simple rule creation and use (Aguinis et al., 2022).

Second, we establish a more nuanced picture of the issues involved in the formulation of simple rules. Indeed, the deliberate creation of simple rules is faced with a three-fold challenge: the creation and ensuring of relevance (with regards to strategic objectives), the capturing and maintaining of causality (with regards to means-ends relationships described by simple rules) and the establishing and preserving of the legitimacy of the codified rules as decision-making devices. In prior literature, authors address the positive (e.g. Bingham et al. 2007, 2019, Eisenhardt and Bingham, 2017) and negative effects of simple rule use (e.g. Bingham et al. 2011, Vuori and Vuori, 2014). For instance, Sull and Eisenhardt (2012) hint towards organizational challenges to simple rule development, especially as simple rules are unique within their context (e.g. Bingham et al., 2011) and are meant for future decisions by building on past experiences. However, this body of work is largely silent about the concrete organizational challenges arising in the formative phase of simple rule development. We further disentangle these challenges and explain how they affect the creation and use phase of simple rules. These findings highlight a key difficulty in strategy work: capturing what is important and understanding the innerworkings of decisions and organizational processes (Regnér, 2003; Bingham et al., 2019). While such incomprehensible means-ends relationships prevent imitation by competitors, our findings tie back to extant research that they may stifle growth (King and Zeithaml, 2001; King, 2007) if they prevent strategy implementation.

Third, we present simple rule creation and use as a means for implementing strategy. Prior research focuses on simple rules in strategy formulation phases of young, entrepreneurial companies (e.g. Bingham and Eisenhardt, 2011). Such firms use simple rules to improvise in decision-making, due to lack of experience. Improvising with simple rules helps these young companies to collect more experience for further capability development and strategy formulation (e.g. Bingham et al., 2019). Yet, prior literature has overlooked the use of simple rules in other strategy contexts such as an approach to guide strategy implementation (Friesl et al., 2020) as opposed

to strategy development (Bingham and Eisenhardt, 2011; Bingham et al., 2019). Indeed, in the case of Twist-A, simple rules were deliberately introduced to support the firm's existing growth strategy. A simple rule approach to strategy implementation was considered beneficial as the firm's existing complex set of decision-making guidelines started to weigh on managers' ability to make fast decisions when expanding the firm's retail network. Yet, because the firm already had a strong 'rule based' culture, developing simple rules for strategy implementation required the involvement of a broad range of actors (Weiser et al., 2020). A pure top-down approach would have jeopardized the legitimacy of those simple rules because of the richness of experience and the abundance of existing decision-making guidelines within the firm.

Finally, our findings are subject to several boundary conditions that have implications for future research. While these findings stem from a representative case, more research is needed to explore their generalizability, especially the cultural context and the role of managers (Aguinis et al., 2022). In our paper the impetus for simple rule creation came from the top. Future research might consider which other actors can facilitate simple rule creation and how companies that do not already have a culture of using rules can find ways of creating and using simple rules; and consider investigating the dark side of individuals' influence on creating simple rules for organizational use. While this study underscores the collective process to condense past experience into simple rules in established organizations, more research is needed into other means of achieving simplicity for rapid decision-making. One avenue might be to investigate organizations which have existing fine-grained data on decision making and which use data mining and analysis, machine learning or artificial intelligence for detecting patterns of successful decision making; and how the use of new technologies requires new guidelines for decision-making (Rauch and Ansari, 2022).

Conclusion

We investigate how a large, established firm deliberately creates and uses simple rules. The Twist case reveals that simple rules are a deliberate attempt to underpin the implementation of the firm's growth strategy, a strategy that requires speedy and coherent decision making. The firm's TMT decided to introduce and use simple rules and develop them by involving staff members from across the hierarchy. We show that the deliberate creation and use faces three central challenges (lack of relevance, unclear causality, missing legitimacy), and we reveal how actors mitigated those challenges for the successful and continuous use of simple rules. Other established companies with effective but stagnant and complex strategic setups might find it helpful to use this method to condense experience into strategic decision-making guidelines. The complexity of strategy seems to require simplicity for its accomplishment.

Declaration of competing interest

None.

Acknowledgements

This paper benefited from funding received from the Research Council of Norway (282198).

References

- Aguinis, H., Audretsch, D.B., Flammer, C., Meyer, K.E., Peng, M.W., Teece, D.J., 2022. Bringing the Manager Back Into Management Scholarship. *Journal of Management* 48 (7), 1849–1857.
- Atanasiu, R., Ruotsalainen, R., Khapova, S., 2022. A Simple Rule Is Born: How CEOs Distill Heuristics. *Journal of Management Studies*.
- Bettis, R.A., 2017. Organizationally Intractable Decision Problems and the Intellectual Virtues of Heuristics. *Journal of Management* 43 (8), 2620–2637.
- Bingham, C.B., Eisenhardt, K.M., 2011. Rational heuristics: the 'simple rules' that strategists learn from process experience. *Strategic Management Journal* 32 (13), 1437–1464.
- Bingham, C.B., Eisenhardt, K.M., 2014. Heuristics in strategy and organizations: response to Vuori and Vuori. *Strategic Management Journal* 35 (11), 1698–1702.
- Bingham, C.B., Eisenhardt, K.M., Furr, N.R., 2007. What makes a process a capability? Heuristics, strategy, and effective capture of opportunities. *Strategic Entrepreneurship Journal* 1 (1-2), 27–47.
- Bingham, C.B., Halebian, J.J., 2012. How firms learn heuristics: Uncovering missing components of organizational learning. *Strategic Entrepreneurship Journal* 6 (2), 152–177.
- Bingham, C.B., Howell, T., Ott, T.E., 2019. Capability creation: Heuristics as microfoundations. *Strategic Entrepreneurship Journal* 13 (2), 121–153.
- Brown, S.L., Eisenhardt, K.M., 1997. The Art of Continuous Change: Linking Complexity Theory and Time-Paced Evolution in Relentlessly Shifting Organizations. *Administrative Science Quarterly* 42 (1), 1–34.
- Cyert, R.M., March, J.G., 1963. *A Behavioral Theory of the Firm*. Englewood Cliffs, New Jersey.
- Davis, J.P., Eisenhardt, K.M., Bingham, C.B., 2009. Optimal Structure, Market Dynamism, and the Strategy of Simple Rules. *Administrative Science Quarterly* 54 (3), 413–452.
- Eisenhardt, K.M., 1989. Making Fast Strategic Decisions in High-Velocity Environments. *Academy of Management Journal* 32 (3), 543–576.
- Eisenhardt, K.M., Bingham, C.B., 2017. Superior Strategy in Entrepreneurial Settings: Thinking, Doing, and the Logic of Opportunity. *Strategy Science* 2 (4), 246–257.
- Eisenhardt, K.M., Rauch, M., Gigerenzer, G., 2019. Sub-theme 21: Heuristics & Simple Rules: Decision-Making under Uncertainty in Dealing with the Unexpected. *European Group for Organizational Studies*.
- Eisenhardt, K.M., Sull, D.N., 2001. Strategy as simple rules. *Harvard Business Review* 79 (1), 106–119.
- Friesl, M., Stensaker, I., Colman, H.L., 2020. Strategy implementation: Taking stock and moving forward. *Long Range Planning* 54 (4).
- Furr, N.R., Eisenhardt, K.M., Bingham, C.B., 2020. Simple Rules for a World of Change: Reflections on "Turning a Process into a Capability". *Strategic Entrepreneurship Journal* 14, 560–562.
- Gigerenzer, G., Reb, J., Luan, S., 2022. Smart Heuristics for Individuals, Teams, and Organizations. *Annual Review of Organizational Psychology and Organizational Behavior* 9 (1), 171–198.
- Heimeriks, K.H., Bingham, C.B., Laamanen, T., 2015. Unveiling the temporally contingent role of codification in alliance success. *Strategic Management Journal* 36 (3), 462–473.
- Kahneman, D., Sibony, O., Sunstein, C.R., 2021. *Noise: a Flaw in Human Judgment*. Little, Brown Spark, New York.

- Ketchen, D.J., Ireland, R.D., Snow, C.C., 2007. Strategic entrepreneurship, collaborative innovation, and wealth creation. *Strategic Entrepreneurship Journal* 1 (3-4), 371–385.
- King, A.W., 2007. Disentangling interfirm and intrafirm causal ambiguity: A conceptual model of causal ambiguity and sustainable competitive advantage. *Academy of Management Review* 32 (1), 156–178.
- King, A.W., Zeithaml, C.P., 2001. Competencies and firm performance: examining the causal ambiguity paradox. *Strategic Management Journal* 22 (1), 75–99.
- Kogut, B., Zander, U., 1992. Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology. *Organization Science* 3 (3), 383–397.
- Konlechner, S., Ambrosini, V., 2019. Issues and Trends in Causal Ambiguity Research: A Review and Assessment. *Journal of Management* 45 (6), 2352–2386.
- Langley, A., 1999. Strategies for Theorizing from Process Data. *Academy of Management Review* 24 (4), 691–710.
- Lincoln, Y.S., Guba, E.G., 1985. *Naturalistic Inquiry*. Sage, Beverly Hills, CA.
- Lippman, S.A., Rumelt, R.P., 1982. Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *The bell journal of Economics* 418–438.
- Locke, K., Feldman, M.S., Golden-Biddle, K., 2015. Discovery, validation, and live coding. In: E. K. E, K.R. (Ed.), *Handbook of qualitative organizational research: Innovative pathways and methods*, pp. 135–167.
- Loock, M., Hinnen, G., 2015. Heuristics in organizations: A review and a research agenda. *Journal of Business Research* 68 (9), 2027–2036.
- Luan, S., Reb, J., Gigerenzer, G., 2019. Ecological Rationality: Fast-and-Frugal Heuristics for Managerial Decision Making under Uncertainty. *Academy of Management Journal* 62 (6), 1735–1759.
- Miles, M.B., Huberman, A.M., Saldaña, J., 2018. *Qualitative Data Analysis: A Methods Sourcebook*. Sage Publications.
- Mousavi, S., Gigerenzer, G., 2014. Risk, uncertainty, and heuristics. *Journal of Business Research* 67 (8), 1671–1678.
- Ocasio, W., 1997. Towards an Attention-Based View of the Firm. *Strategic Management Journal* 18, 187–206.
- Ott, T.E., Eisenhardt, K.M., Bingham, C.B., 2017. Strategy Formation in Entrepreneurial Settings: Past Insights and Future Directions. *Strategic Entrepreneurship Journal* 11 (3), 306–325.
- Parker, A., Tippmann, E., Kratochvil, R., 2019. Accessing diverse knowledge for problem solving in the MNC: A network mobilization perspective. *Global Strategy Journal* 9 (3), 423–452.
- Pieper, T.M., Smith, A.D., Kudlats, J., Astrachan, J.H., 2015. The Persistence of Multifamily Firms: Founder Imprinting, Simple Rules, and Monitoring Processes. *Entrepreneurship Theory and Practice* 39 (6), 1313–1337.
- Rauch, M., Ansari, S., 2022. Waging War from Remote Cubicles: How Workers Cope with Technologies That Disrupt the Meaning and Morality of Their Work. *Organization Science* 33 (1), 83–104.
- Regné, P., 2003. Strategy Creation in the Periphery: Inductive Versus Deductive Strategy Making. *Journal of Management Studies* 40 (1), 57–82.
- Sackmann, S.A., 1992. Culture and Subcultures: An Analysis of Organizational Knowledge. *Administrative Science Quarterly* 37 (1), 140–161.
- Saldaña, J., 2021. *The Coding Manual for Qualitative Researchers*. Sage Publications.
- Seidl, D., Werle, F., 2017. Inter-organizational sensemaking in the face of strategic meta-problems: Requisite variety and dynamics of participation. *Strategic Management Journal* 39, 830–858.
- Siggelkow, N., 2007. Persuasion With Case Studies. *Academy of Management Journal* 50 (1), 20–24.
- Stingl, V., Gerald, J., 2021. A research agenda for studying project decision-behaviour through the lenses of simple heuristics. *Technological Forecasting and Social Change* 162, 120367.
- Sull, D., Eisenhardt, K.M., 2012. Simple rules for a complex world. *Harvard Business Review* 1–8.
- Sull, D.N., Eisenhardt, K.M., 2015. *Simple Rules: How to Thrive in a Complex World*. Houghton Mifflin Harcourt, New York.
- Tippmann, E., Sharkey Scott, P., Mangematin, V., 2014. Stimulating Knowledge Search Routines and Architecture Competences: The Role of Organizational Context and Middle Management. *Long Range Planning* 47 (4), 206–223.
- Van de Ven, A.H., 1992. Suggestions for studying strategy process: A research note. *Strategic Management Journal* 13 (S1), 169–188.
- Vuori, N., Vuori, T., 2014. Comment on “Heuristics in the strategy context” by Bingham and Eisenhardt (2011). *Strategic Management Journal* 35 (11), 1689–1697.
- Weiser, A.-K., Jarzabkowski, P., Laamanen, T., 2020. Completing the Adaptive Turn: An Integrative View of Strategy Implementation. *Academy of Management Annals* 14 (2), 969–1031.
- Wenzel, M., Sjerne, I.S., 2021. Heuristics-in-use: Toward a practice theory of organizational heuristics. *Technological Forecasting and Social Change* 164.
- Whittington, R., Cailluet, L., Yakis-Douglas, B., 2011. Opening Strategy: Evolution of a Precarious Profession. *British Journal of Management* 22 (3), 531–544.
- Yin, R., 2014. *Case Study Research: Design and Methods*. SAGE Publications, Los Angeles.
- Zollo, M., Singh, H., 2004. Deliberate learning in corporate acquisitions: post-acquisition strategies and integration capability in U.S. bank mergers. *Strategic Management Journal* 25 (13), 1233–1256.
- Zollo, M., Winter, S.G., 2002. Deliberate Learning and the Evolution of Dynamic Capabilities. *Organization Science* 13 (3), 339–351.



Renate Kratochvil is a postdoctoral research fellow at the Department of Strategy and Entrepreneurship at the BI Norwegian Business School in Oslo. She received her doctorate from the WU Vienna University of Business and Economics. Her research interests include strategy-as-practice, cross-experts collaborations, and qualitative research methods. She has published in *Global Strategy Journal*.



Johanna Grünauer is PhD candidate at WU Vienna University of Business and Economics and Research and Teaching Assistant at the Johannes Kepler University Linz. She received her diploma degree in Psychology from the University of Vienna. Her current research focus is on the subjects of organizational capability development, organizational learning, and heuristics.



Martin Friesl is Professor of Strategy and Organization Studies at Otto-Friedrich-University Bamberg and Adjunct Professor at NHH Norwegian School of Economics. His research focuses on strategic transformation and the development, change and replication of organizational capabilities. His work has been published in journals such as *Journal of Management Studies*, *Organization Studies*, *Strategic Organization*, *Long Range Planning*, *British Journal of Management*, *R&D Management*, *International Journal of Management Reviews*, *European Management Review* and the *Journal of Applied Behavioral Science*.



Wolfgang H. Güttel is Professor for Leadership & Strategy at the Institute of Management Science and Dean of the Academy for Continuing Education at the TU Wien (Vienna University of Technology). Previously he was professor at the Universities of Linz, Kassel, and Hamburg. His main field of research concerns leadership and strategic change in complex and dynamically evolving environments. His work has been published in journals such as *Strategic Organization*, *Human Relations*, *Academy of Management Learning & Education*, *Management Learning*, and the *International Journal of Management Reviews* among others. He is also engaged in executive education and consulting to advise leaders and firms for managing strategic change.