



Purposeful sampling and saturation in qualitative research methodologies: recommendations and review

Ricarda B. Bouncken¹ · Wojciech Czakon² · Florian Schmitt¹

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Abstract

Qualitative research has been flourishing in business and management research over the past decades. The insights gathered from rich qualitative data fundamentally depend on the analyzed subjects and case(s). Hence, highly substantial to qualitative research is how to achieve purposeful case selection and saturation of cases and informants. Our study reviews previous research on purposeful case selection and saturation. We specify that considering the level of analysis is particularly challenging in business and management research as cases are not typically individuals but rather aggregated individuals or collective entities, such as units, organizations, or types of organizations. Furthermore, informants and cases can provide coherent or differing information ('harmony' and 'discord') on different levels and across informants or cases so influencing purposeful selection and especially saturation. Our study zooms in on three qualitative approaches in business and management research: the so-called Gioia, the Eisenhardt, and the flexible pattern matching approach. We review how empirical studies following those approaches have explained the purposeful case selection and the saturation as well as what number of informants and cases they used. From these reviews, we deduct critical reflections, considerations, and guidelines about harmony and discord when including different informants and cases in the qualitative research process.

Keywords Qualitative research · Research methods · Saturation · Purposeful sampling

✉ Ricarda B. Bouncken
bouncken@uni-bayreuth.de

Florian Schmitt
Florian.Schmitt@uni-bayreuth.de

¹ Faculty of Law and Economics, Chair of Strategic Management and Organization, University of Bayreuth, Prieserstraße 2, 95444 Bayreuth, Germany

² Strategic Management Department, Jagiellonian University in Krakow, Ul. Łojasiewicza 4, 30-348 Kraków, Poland

1 Introduction

Qualitative research concerns diverse approaches, each shaped by distinct purposes and methodologies about how to generate rich insights and develop theoretical contributions from empirical data. The strength of qualitative research lies in its flexibility and the researcher's reflection, emphasizing the depth of insights through detailed single-case studies and specific manifestations of phenomena (Gioia 2021; Gioia et al. 2013; Yin, 2014; Bonnardel and Marmèche 2004), insights through multi-case comparisons (Eisenhardt 1989; Eisenhardt and Graebner 2007), or process understanding through longitudinal analyses. Core to the qualitative inquiry are relatively small samples, sometimes even single cases ($n = 1$), which are chosen purposefully to provide rich, detailed insights (Patton 2015). Typically, qualitative research is applied when the phenomena under scrutiny are new and theorizing is nascent (Graebner et al. 2012).

Two central, but only rudimentarily addressed matters, especially in business and management research, revolve around the purposeful sampling of cases, the appropriate number of cases, and the number of informants to get insights and aggregate for each case. Purposeful sampling describes the selection of cases that provide rich information for the study of interest. Depending on the research purpose, several sampling criteria have been proposed, yet often by outside business and management research (Palinkas et al. 2015). Generic guidance is provided by Glaser and Strauss (2009) with the saturation criterion, which is reached when no new insights emerge from the data that contributes to the development or refinement of a category's properties.

Business and management research faces specific challenges, especially related to different levels of analysis that it can cover. Different levels include the individual, team, organization, and inter-organizational matters or categories. For all studies interested in more than the individual, the question is not only studying how many cases, but also how many informants ought to be considered in one case or compared with others in other cases and on the same or different level.

For example, for a micro-event such as a single decision as starting a venture by individuals aged 50 years when unemployed (Soto-Simeone and Kautonen 2021), one informant per case is sufficient. Yet, studying the behavior of organizations or industries may require involving multiple informants or multiple cases. For example, understanding the variation in technology adoption across organizational units involved 59 informants representing eight units of a hospital (van Offenbeek et al. 2024). Hence, the evaluation of purposeful sampling and saturation concerns rather complex and interrelated considerations. Yet, there is a very limited understanding in qualitative research about purposeful sampling and saturation, especially on the background of different levels and cases.

Therefore, the purpose of our study is to support researchers in selecting and explaining the appropriate number of cases and informants for business and management case studies, especially by considering that they may cover different levels of

analysis and cases. Yet, while there are some more general answers to this question, answers also depend on the choice of the data analysis method.

Among the myriads of available methods, we considered three approaches: the Gioia, the Eisenhardt, and the Flexible Pattern Matching, which might be referred to as the Bouncken approach. We selected these approaches as they were strongly used, accepted, or emerging in qualitative research, offering ample examples and differentiating criteria. Each of the approaches follows different assumptions regarding the role of discord and harmony in the process. Discord can be defined by contradictions, data left without interpretation and irreconcilable with the theoretical framework (that does not fit theory). By harmony, we define research findings that are parsimonious, clear, and coherent incorporations of empirical insights into constructs, processes, or theoretical frameworks.

Discord between data, data interpretation, and theory can emerge during the research process (Gioia approach), be anticipated by purposeful sampling (Eisenhardt approach), or designed-in (Bouncken approach). Hence, we provide a literature analysis of typical case numbers, informants, and insights of these three approaches.

The so-called Gioia approach is based on the assumption that qualitative research provides a convincing and well-supported explanation of observed phenomena (Gioia 2021). A key delivery is deriving a structure of constructs and topics from the data. Second, we portray the widely applied so-called Eisenhardt approach (Eisenhardt and Graebner 2007; Eisenhardt et al. 2016), which is about the comparison of cases and the learnings from comparison. Third, we selected the recently emerging Bouncken approach or the Flexible Pattern Matching (Bouncken et al. 2021a, b). It demands that the researcher elaborates guiding theoretical propositions first to then compare how the empirical insights cohere or depart from the proposed theoretical pattern (Bouncken et al. 2021a, b; Sinkovics 2018).

In a nutshell, our insights contribute to previous qualitative research that has started to debate about purposeful sampling and saturation. We explicitly consider this under the umbrella of harmony and discord, permitting further theoretical development from the qualitative data. We develop recommendations based on saturation assessment and selection of cases for qualitative research in management. For example, for researchers who encounter harmony or strong coherence in their findings from the cases, we recommend revisiting the field to obtain contrasting or refining insights. This process can enhance the robustness and refinement of their insights by incorporating diverse perspectives that challenge and enrich the initial results. Alternatively, when encountering discord and variance across levels and cases, we propose the development of multiple alternative models to account for the observed differences in concepts or relationships. This approach involves crafting alternatives and corresponding rationales to explain the variance, such as uncovering hidden concepts or considering alternative or aggregated theoretical models.

2 Theoretical concepts

2.1 Purposeful sampling for case studies

The sampling of cases and informants has to follow the purpose of a study (Campbell et al. 2020b). In qualitative research, the depth of understanding guides the purposeful selection of a typically small number of cases. While it does not allow for statistical generalizability, it aims at opening ways for analytic generalizations and case-to-case transfer (Onwuegbuzie and Leech 2007), useful for theory building and refinement on the basis of case-to-case transfers across contexts (Campbell et al. 2020b; Corley et al. 2020).

What might be considered a “bias” or a limitation in statistical sampling becomes a deliberate focus when researchers delve into cases that offer valuable and relevant data for their research goals (Patton 2015). Thus, purposeful sampling is designed to identify and select cases rich in information to make the most effective use of limited resources (Patton 2002). Beyond the case selection, purposeful sampling involves choosing individuals or groups with significant knowledge or experience related to the phenomenon under investigation (Creswell and Clark 2017). Campbell et al. (2020a) classify four core sampling avenues for multiple cases: stratified, cell, quota, and theoretical sampling.

Stratified sampling involves selecting specific types or groups of participants that must be included in the final sample. The sample is then divided, or stratified, according to the participant characteristics, with a predetermined number assigned to each category. For example, participants could be grouped by factors such as age, family size, or IQ. The allocation of participants to each group is crucial, especially if the numbers differ across groups. Importantly, there should be a clear rationale tied to the study’s aims and objectives that justifies why these groups are distinct, ensuring that each group contributes meaningfully to the research (Campbell et al. 2020a: 654).

Cell sampling, while similar to stratified sampling, differs in that its categories can overlap, much like the sections of a Venn diagram (Miles and Huberman 1994b). For instance, in a study involving children with chronic illnesses, one group might consist of obese children and another of children with diabetes, with the overlap representing children who are both obese and diabetic (Campbell et al. 2020a: 654). Cell sampling offers the heterogeneity of the sample depending on the discrete category or type of cases that the researcher aims to include in the sample.

Quota sampling offers more flexibility. Quota sampling is often seen as more flexible than cell sampling, as it allows to adjust participant recruitment more easily compared to the stricter requirements of stratified or cell sampling (Robinson 2014). Its flexibility increases its usefulness when recruiting diverse or hard-to-reach populations (Campbell et al. 2020a: 654). Rather than setting fixed numbers of participants for each category, quota sampling predefines categories and only requires a minimum number of participants for each (Mason 2002). Interestingly, the minimum numbers of cases are set ex-ante rather than being established during the sampling process or once the saturation assessment has started. This method allows for more adaptability while still ensuring that key categories are represented in the sample. As the study progresses, the numbers in each category are carefully tracked to ensure

that the predefined quotas are met. For instance, in a study involving children with chronic illnesses, there might be quota sets for both types of illness and types of family structure. The research team would establish a minimum number of participants for each quota. For example, researchers might inquire about at least five children with diabetes, leukemia, or arthritis, and for family type, they might seek 10 participants from nuclear families and 15 from reconstituted families (Campbell et al. 2020a: 654). This use of minimum quotas ensures that key participants are included in the final sample.

Theoretical sampling concerns how researchers use previous categories, concepts, and constructs established to design their data collection (Urquhart et al. 2010). It is based on the iterative nature of Grounded Theory and follows considerations of adding data through further waves of data collection (Mason 2002; Magnani and Gioia 2023), new cases, or reconfiguring the sampling strategy (van Eechoud and Ganzaroli 2023). This entails either selecting cases from new groups to provide meaningful comparisons or contrasts with other groups, or alternatively reshaping the sample based on new criteria emerging from the analysis. Reshaping means replacing the original sampling strategy chosen as a-priori sampling strategy.

Palinkas et al. (2015) provide a list of 16 purposeful sampling avenues: 7 emphasizing similarity of cases that lean towards homogeneity, 7 emphasizing variation which corresponds to heterogeneity, and 2 non-specific. Research has introduced different forms of homogeneity/heterogeneity designs: criterion-I, criterion-e, typical cases, homogeneity, snowball, and extreme or deviant cases. In addition, criteria concern issues such as intensity, maximum variation, critical cases, confirming and disconfirming cases, stratified purposeful, and purposeful random.

For example, selecting extreme or deviant (outlier) cases shapes the basis for learning from unusual manifestations of phenomena. Choosing cases with maximum variation permits capturing a wide range of adaptations to different conditions, allowing researchers to document diverse responses and simultaneously identify important common patterns that transcend these variations. The more the sampling is directed towards homogeneity, the fewer will be the number of participants/cases needed to reach saturation. Vice versa, larger samples are required for broad questions and heterogeneous samples that include discord of findings. These numbers can serve as guidelines for setting a priori the minimum required sample size, which may need to be expanded as data collection and analysis are conducted.

3 Saturation and case numbers

3.1 Saturation concept in qualitative research

Qualitative research does not pursue the objective of offering statistically generalizable results. The key criterion in qualitative research for assessing the adequacy of sample size is saturation. In other words, failure to reach saturation foremost hampers content validity (Fusch and Ness 2015), which can be fatal in qualitative studies. Glaser and Strauss (2009) describe that saturation occurs when no new information emerges from data that adds to the development of a category's properties. As

researchers repeatedly encounter similar instances of conceptualization, they gain empirical confidence that the category has been fully explored, and then saturation is met. Still, even if the category seems fully explored, researchers may actively seek to push the boundaries of the data's variability to ensure that saturation is based on the broadest possible range of information. Saturation, accordingly, demands that additional data do not add insights (Saunders et al. 2018a).

Reaching out for more remote data guarantees that the category is well-defined and deeply understood from every angle. Charmaz (2014) specifies the richness and conceptual depth of the categories of saturation. Saturation is achieved when categories have been thoroughly explored, and no new properties for the conceptual development emerge from additional data collection. Saturation may also focus more strongly on findings of broader applicability, hence the generalization allowing to generate theories that can be used in other contexts (Boddy 2016). Saturation implies that results are sufficiently comprehensive to offer insights stretching beyond the specific study. The more generalization-orientated perspectives depart slightly from the typical focus of qualitative research on depth rather than breadth.

Therefore, saturation is evaluated by researchers after the data analysis process is in operation rather than being predefined at the empirical research design stage. Interestingly, saturation can be identified, substantiated, and reported only after the saturation point has been reached. Only when additional data do not add additional insights do researchers realize their study is saturated.

Samples can be too small to achieve saturation but also too large to effectively extract thick, rich data (Onwuegbuzie and Leech 2007). Depending on the richness and purposefulness of the data, studies may comprise a deeply analyzed single case but also multiple cases, even analyzing (comparison, contrasting, etc.) by different data analytical techniques (Boddy 2016). Some researchers claim that qualitative research needs a pre-specification of the sample size that transfers into the stopping criterion (Francis et al. 2010).

3.2 Saturation forms and criteria

There are different saturation concepts and criteria used for evaluation. Saunders et al. (2018b) classify four distinct models of saturation.

Theoretical saturation is rooted in traditional grounded theory and the development of categories and emerging theories during the analysis process as criteria for additional data collection. Theoretical saturation can be reached by combining sampling, data collection, and data analysis.

Inductive thematic saturation emphasizes the identification of new codes or themes rather than the completeness of existing theoretical categories. Saturation here is determined by the emergence of new codes or themes and is more confined to the level of analysis, with implications for data collection being somewhat implicit. Inductive thematic saturation is reached when researchers accumulate additional evidence for the codes and themes identified, but no further codes/themes can be identified.

A priori thematic saturation involves collecting data to exemplify pre-determined theoretical categories at the level of lower-order codes or themes in contrast to

inductive research. It focuses on validating or exemplifying existing theories rather than developing or refining them, moving away from the inductive logic typical of grounded theory.

Data saturation views saturation as a matter of identifying redundancy in the data without necessarily linking it to specific theoretical frameworks. Here, saturation is defined by the repetition of information and is considered separate from formal data analysis processes. Saturation can relate to the level of codes found within the already retrieved data. When data are not found, researchers proceed with collecting more data. In this vein, Hennink et al. (2017), as well as Hennink and Kaiser (2022), concentrate on the question of codes for data saturation. They distinguish between code saturation and meaning saturation and further elaborate on code frequency and meaning.

Code saturation, as provided by the response to inductive thematic saturation, is typically reached quite rapidly by the 9th interview. Researchers view code saturation as “we have heard it all” (Hennink et al. 2017: 605). Similarly, we find that the frequency of codes refers to examining the number of new codes emerging in coding successive transcripts, and when this number diminishes or goes down to zero, saturation is reached (Hennink and Kaiser 2022: 3).

Meaning saturation, in contrast, is reached when researchers “understand it all” (Hennink et al. 2017: 606), which typically takes between 16 and 24 interviews. Code meaning refers to nuances and dimensions, and the issue at hand is fully understood by researchers. As such, meaning saturation is more demanding than code saturation, both in terms of data interpretation and in terms of data collection. In order to develop a deep understanding, more nuanced, detailed, and less explicit pieces of information need to be included. This typically requires more informants or more cases. Furthermore, saturation will depend on several parameters describing a study: purpose, population, sampling, data quality, type of code, codebook, and the saturation goal. A systematic literature review shows that saturation can be reached with 9–17 interviews or 4–8 focus group interviews, with the lower number referring to code saturation while the higher number to meaning saturation (Hennink and Kaiser 2022). They further specify code frequency and code meaning to assess saturation (Hennink and Kaiser 2022).

Other approaches focus on how deep and informative the concepts gathered through the coding become. For example, Nelson (2017) suggests range, complexity, subtlety, and resonance as specific criteria useful to assess saturation, at the same time suggesting that the saturation criterion might be replaced by a “conceptual depth” assessment (Tight 2024).

The range criterion concerns whether there is enough diversity in codes for a conceptual category to be meaningful. When a category is shaped by opposing perspectives, “the range criterion questions whether all viewpoints are adequately represented (Nelson 2017).

The complexity criterion requires that concepts be clearly shown as part of a rich network of interconnected ideas and themes in the data, with complex relationships between them. Early hand-drawn diagrams or matrices can help with exploring the concepts, aiding in sorting codes, making comparisons, identifying categories, and, most importantly, understanding the connections between them (Nelson 2017).

Subtlety is achieved using the comparative method, wherein researchers analyze multiple occurrences of the same codes in different data sources (interviews/cases) to identify their similarities and differences, which helps establish a nuanced understanding. This process is central to grounded theory and assists in discerning nuances in meanings of different words or concepts and identifying ambiguities. It may be represented as a rich, ambiguous, and multidimensional conceptual description (Nelson 2017).

Resonance describes the relationship with previous literature. If there is resonance with existing literature—such as overlaps, similarities in language, or metaphors, even with some variations and new insights—it can further confirm that sufficient conceptual depth has been achieved (Nelson 2017). Greater resonance develops theory that makes sense to existing theory or other frameworks while offering variations and novelties. Previous research offers suggestions on how to manage the process of assessing and reporting saturation. Francis et al. (2010) suggest four steps for analyzing and reporting saturation: (1) specify a priori the sample size in the first round of data collection or initial analysis sample; (2) specify a priori how many more interviews will be conducted without any new topics or ideas emerging before researchers conclude saturation is reached or define the stopping criterion; (3) the analysis should be conducted by at least two independent coders; (4) report the saturation criteria so that readers can independently evaluate the evidence.

In essence, researchers need to report and explain how saturation has been established in their study, referring to the study's objective and saturation assessment. Most likely, there will be potential for new categories, codes, or themes to emerge, especially if additional data is collected. Therefore, saturation refers to a certain degree where additional data collection produces diminishing returns. Saturation is more of a process than a point (Saunders et al. 2018b). As researchers might be interested in gathering greater coherence across their informants, cases, and concepts, or may alternatively be interested in finding differences among them, we propose that the relationship between purposeful sampling and saturation pivots around the concepts of harmony and discord (Fig. 1). Harmony and discord tie in with the research

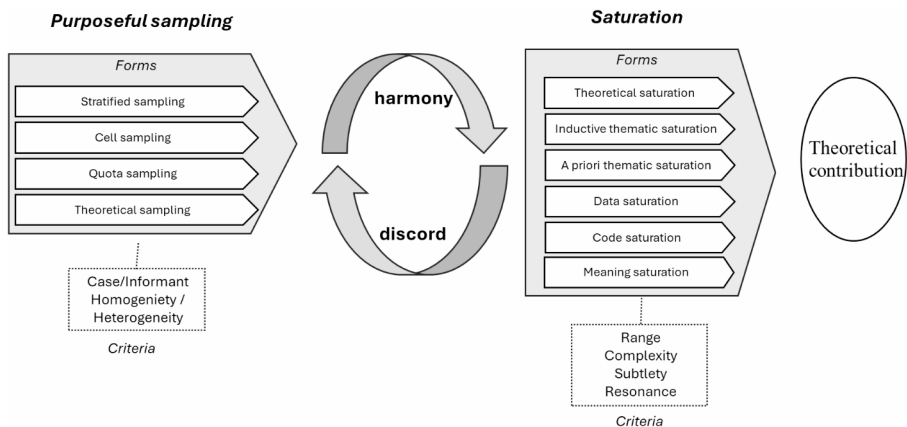


Fig. 1 The pivotal role of harmony/discord in case study design

objective of the researcher. Yet, researchers might also start without an objective on harmony and discord of informants, cases, concepts, or even relationships, but over their coding and interpretation process become aware of harmony and discord that they then decide to study more intensively.

When researchers can transparently report how harmony was achieved and saturation is reached, the research process continues toward addressing the research question. The criteria is especially key when following the aim to detect harmony. However, when discord is discovered, then a loop back to purposeful sampling is needed. In the other direction, following the aim of detecting discord implies finding differences across informants, cases, concepts, and relationships. In general, discord encourages researchers to cover more informants and cases. It also demands, over the process, to select additional cases or to alter the sampling strategy, when the discord has not been meaningful so far. Hence, discord and harmony play a crucial role in case study design and execution.

4 Turning in on management research

Purposeful sampling in fields other than business and management tends to focus on one level of case analysis, that is, the individual level. For example, in health sciences, a case is a patient or a disorder. Yet, management research is often about different levels of cases. Cases in management research may be identified in (Tables 1, 2, 3): (1) micro-level (e.g., single decision, response to a stimulus or an act); (2) individual level (e.g., CEO characteristics, preferences, behaviors); (3) team level (e.g., dynamics, leadership, technology adoption); (4) organization level (e.g., strategies, processes, legitimacy); (5) industry level (e.g., competition, collaboration, practices); (6) meta-organizational level (e.g., collaborative innovation, ecosystems). Defining cases involves an explicit indication of the level of analysis, which is consequential for data collection and saturation assessment.

While there are several sampling avenues, as explained before, the different levels addressed in management research add complexity and uncertainty about how to deal with divergent or coherent insights. There is no cookbook or recipe for qualitative research in the business and management field offering a step-by-step plan to go through and get to a satisfying result (Graebner et al. 2012). General guidelines, or rules of thumb, suggested larger samples and related numbers of interviewees, ranging from 30 to 50 interviews but very small numbers of cases, no lesser than 4–6 (Marshall et al. 2013). A systematic review of 83 information systems studies suggests that the number of cases/interviews reported in published work tends to increase over time. It is typically expected that researchers assess ex-post whether the data collected reach data saturation as indicated by the absence of new emerging from additional data collected—referring to data saturation or that no new properties of the construct under scrutiny can be found (Thorne 2020).

Therefore, we suggest a simplified perspective on harmony versus discord for purposeful sampling. Harmony versus discord aligns with previously advocated terms of homogeneity versus heterogeneity of cases (Palinkas et al. 2015). While hetero- and homogeneity are ex-ante design criteria for sampling, harmony and discord play a

Table 1 Exemplary studies in the Gioia approach

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Weniger and Jarchow (2024)	16	16 interviews Senior Managers (Investment Manager, Venture partner, Managing Director)	Selection: purposeful sampling of cases that fill different conceptual categories. specifically focused on incorporating globally active corporations from various industries more or less affected by the COVID-19 crisis. Case homogeneity high (case and informant) Saturation: coding until most relevant categories could be integrated into theoretical framework.	Industry level (corporate venture units)
Fehrer et al. (2024)	10	10 interviews Expert interviews	Selection: purposeful sampling of experts from CE practitioner community, no further specification. Case homogeneity high (case and informant) Saturation: not explicitly reported.	Meta-organizational level (circular economy)
van Offenbeek et al. (2024)	1	59 interviews In 8 departments of 1 hospital	Selection: purposeful sampling, stratified sampling for relevant heterogeneity. No predetermined number assigned to each category. Case homogeneity high, Informant heterogeneity high Saturation: not explicitly reported.	Team level (clinical departments)
Klammer et al. (2023)	30	30 interviews. Multiple roles in decision-making roles	Selection: purposeful sampling approach Suri 2011; stratified sampling approach/influence. Case homogeneity high, Informant Saturation: Referencing (Guest et al. 2006)	Industry level (incumbents and start-ups)
Jia et al. (2023)	1	28 interviews Sales agents.	Selection: no specific information. Interviewee selection: random sample of sales agents. Case homogeneity high, Informant heterogeneity high. Saturation: not explicitly reported.	Organization level (AI assistance within companies)
Bouncken et al. (2023)	14	Number of interviews not reported. Founders, managers, and users of the co-working spaces.	Selection: purposeful sampling, theoretical sampling approach for inductive research (Strauss and Corbin 1998b) Homogeneity high (case and informant) Saturation: Relying upon the principles of appropriateness and adequacy: data collection process until reaching a saturation point where further data collection did not bring any additional insights.	Organization level (co-working spaces)
Buesching et al. (2023)	1	13 interviews. Project managers. Senior staff Politician and Google manager.	Selection: No specific information on case/interviewee selection, interviewees selected to ensure a wide range of roles to represent the case holistically. Saturation: interviews and archival documents until no new views or additional insights, additionally archival data.	Meta-organizational level (COVID-19 contact tracing)

Table 1 (continued)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Principato et al. (2023)	1	14 interviews 8 informants	Case selection: opportunity to study case, no specific information on sampling strategy. Informant homogeneity high. Saturation: not explicitly reported.	Organization level (platform for food surplus distribution)
Schell et al. (2023)	19	67 C-Level Expert interview	Selection: no specific information; according purposeful, quota/theoretical sampling approach, defined characteristics of interviewee groups, additional interviews were conducted until theoretical saturation was reached. Case heterogeneity high and informant homogeneity high. Saturation: Cases and interviews were added until theoretical saturation was reached.	Organization level (family firm-specific process of selecting top management members)
Piepponen et al. (2022)	1	59 interviews Managers	Selection: theoretical and purposive sampling logic. Informant homogeneity high. Saturation: integration of the emerging categories in an overarching theoretical framework Corbin and Strauss 2014 and final round of focused coding Miles et al. 2014 to ensure that all the emerging categories and reached data saturation were exhausted.	Organization level (digital transformation process of the provider's value proposition)
Diaz-Moriana et al. (2024)	8	59 interviews 49 informants Senior management teams (family and nonfamily)	Selection: theoretical sampling method, cases that are likely to replicate or extend theory (Eisenhardt 1989); interviewee selection following quota sampling, defining characteristics and a minimum of five informants per firm were interviewed. Homogeneity high (case and informant) Saturation: collected cases up to the point of theoretical saturation (Eisenhardt 2021)	Organization level (Goal Tensions in Family Firms)
Suseno and Abbott (2021)	1	17 interviews women entrepreneurs in Perth, Western Australia	Selection: theoretical sampling, interview informants from women entrepreneurs' networks in WA. Informants can offer rich information about issues related to the research purpose. Informant homogeneity high. Saturation: not explicitly reported.	Individual level (Women entrepreneurs in Australia)
Tiberius et al. (2021)	11	11 interviews Owner, Founder, CEO, Senior Managers	Selection: Purposive sampling technique for in-depth analyses that aimed for maximum variation. No further specification. Case heterogeneity high, informant homogeneity high. Saturation: analyzed the data immediately after its collection and continued until a saturation point was reached: that is, no substantial additional insights could be gained (Eisenhardt 1989).	Organization level (dynamic capabilities in family businesses)

Table 1 (continued)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Soto-Simeone and Kautonen (2021)	21	21 interviews Senior entrepreneurs in the UK	Selection: purposeful sampling with defined criteria for participants, no further specification. Case and informant homogeneity high. Saturation: not explicitly reported.	Individual level (entrepreneurial endeavors of individuals aged 50 or over who start businesses when unemployed)
van Burg et al. (2014)	1	30 informants, 42 interviews Longitudinal design over five years.	Selection: pre-established access to sample case; snowball sampling to identify key informants. Informant homogeneity high. Saturation: not explicitly reported.	Industry level (Collaborative Innovation in the Aircraft Industry)
Nag and Gioia (2012)	22	53 interviews Six-month period. CEOs and senior managers.	Selection: Purposeful sampling, seeking “maximum variation” vs. random sampling. Interviewees: senior managers and such identified by a foundry’s senior executives as beneficial to interview. Case and informant homogeneity high. Saturation: coding interviews in this manner until they could not ascertain any more distinct, shared patterns among informants. (Glaser and Strauss 1967)	Organization level (firm specific use of knowledge as a resource)
Clark et al. (2010)	2	33 interviews TMT	Selection: purposeful sampling of cases (extreme situation for both organizations and their executive teams) and interviewees (members of the two top management teams over the 11-month period). No further specification. Case and informant homogeneity high. Saturation: not explicitly reported.	Organization level (organizational identities of two top management teams)

crucial role in the data collection and analysis process, indicating whether the collected dataset is sufficient to move towards research findings or whether the data collection process needs to be continued/alterd. In this section, we review recent qualitative studies conducted in the three analytical approaches.

5 Zooming in on the Gioia approach

5.1 Explanation of the Gioia approach

The Gioia approach views reality as messy and complex and focuses on identifying concepts rather than analyzing or comparing individual cases (Gioia 2021; Gioia et al. 2013). Gioia et al. (2013) claim that constructs, as abstract theoretical formulations concerning phenomena of interest, serve as the focal point of analytical efforts. Thus, the approach aims to develop aggregate dimensions that collectively capture

Table 2 Exemplary studies in the Eisenhardt approach

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Liu et al. (2024b)	1	69 interviews Senior managers, middle managers and grassroots managers.	Selection: Theoretical sampling; rich data on the process of change, which is important for the construction of the theory (Eisenhardt 1989); Informant homogeneity high. Saturation: until the coded content was able to embody the key constructs and achieve theoretical saturation.	Industry level (China's tourism)
Séran et al. (2024)	1	57 interviews 4 key informants, 2 elite informants, directors, managers.	Selection: Snowballing procedure, recommendations to contact colleagues made it easier to obtain new interviews with additional informants (Corley and Gioia 2004; Miles and Huberman 1994): Informant homogeneity high. Saturation: stopped the second round of interviews once theoretical saturation was reached, i.e., when no new codes emerged to expand the current list of codes.	Organization level (Business Units in French bank)
Crosina (2024)	1	116 interviews Founders 49 informants interviewed twice.	Selection: Theoretical sampling (Glaser and Strauss 1967); first-time founders in coworking space, because their situations presented considerations beyond focus, interviewees selected on a rolling basis; Informant homogeneity high. Saturation: to realize that conducting additional interviews was unlikely to expand my developed understanding	Organization level (Co- working space)
Su et al. (2023)	4	31 interviews Executives and senior management.	Selection: Theoretical sampling as preferred method for case selection, as it aligns with objective of exploring the dynamic evolution (Santos and Eisenhardt 2009); Case and informant homogeneity high. Saturation: Five remote video conferences during 2020–2022, which supplemented the data and allowed us to reach saturation	Industry level (enterprises balance their needs for legitimacy and distinctiveness)
Zeng et al. (2023)	1	34 interviews Senior management	Selection: Tencent (case) provides excellent research setting because of its exponential growth over 21 years, Theoretical sampling for interviewees (Miles and Huberman 1994a); Informant homogeneity high. Saturation: continued coding interview transcripts until reached theoretical saturation (Glaser and Strauss 1967).	Meta-organi- zational level (Platform- Based En- trepreneurial Firms)
Dattée et al. (2022)	1	77 interviews 50 informants Multiple functions and levels.	Selection: Exclusive access to luxury automobile brand was established before within other projects. Theoretical sampling stated for interviewee selection; Informant homogeneity high. Saturation: Data collection and preliminary analysis proceeded concurrently. 2015, reaching saturation in the data collection for our initial research question.	Organiza- tion level / industry level (Organizational autonomy car company and parent)

Table 2 (continued)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Soluk and Kammerlander (2021)	15	127 interviews. CEOs, directors, and managers	Selection: Theoretical sampling; identification of case firms based on databases, reports, and newspaper articles; cases added with regard to their digital initiatives and progress to achieve variance in the sample ("polar types;" Eisenhardt 1989); Case and informant homogeneity high. Saturation: Following a theoretical sampling approach Eisenhardt and Graebner 2007; Yin 2013; cases are added to replicate or extend theory and to rule out alternative explanations for outcomes until a stable theory emerges and new data do not influence the findings, indicating that theoretical saturation has been reached (Corbin and Strauss 2008).	Organization level (Digital transformation in family owned Mittelstand firms)
Zuzul and Tripsas (2020)	4	18 interviews Analysts, founders, and CEOs.	Selection: Theoretical sampling of cases and interviewees. Case & informant homogeneity high. Saturation: 'finished analysis once we felt we had reached theoretical saturation'.	Industry level (air taxi market)
Li and Piezunka (2020)	7	183 interviews Founder, successor, founder's wife, top managers, members of the extended family.	Selection: Theoretical sampling; select cases of succession; comparable set of cases (Yin 1994) Case & informant homogeneity high. Saturation: From initially 31 cases, number of cases and cases were reduced wave by wave.	Individual level (inter-generational leadership successions in seven Chinese family firms)
Ozcan and Hannah (2020b)	5	56 interviews. Marketing executives.	Selection: Theoretical sampling (Eisenhardt 1989). Case & informant homogeneity high. Saturation: We continued engaging in repeated iterations among data, literature, and theory until we had a strong match between theory and data.	Meta-organizational level (global consumer goods manufacturers & ad partners)
Murray et al. (2020a)	8 (four matched pairs)	38 interviews. Focal founders.	Selection: Theoretical sampling of cases, using campaign similarities pertaining to certain criteria. Interviews with founders as providing the most information (stratified sampling) Case & informant homogeneity high. Saturation: the multiple data sources we used and the interview techniques we employed provided convergent information.	Meta-organizational level (entrepreneurs)

Table 2 (continued)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Cohen et al. (2019)	8	70 interviews 37 ventures nested in 8 accelerator programs.	Selection: Following similar studies, that used a homogenous sampling strategy Miles et al. 2014. For informants, a theoretically driven, within-case sampling is applied. Polar sampling Elsbach and Kramer 2003. Case & informant homogeneity high. Saturation: continued conducting interviews until responses no longer added novel insights Glaser and Strauss 1967.	Organizational level (accelera- tors programs)
Mc- Donald and Gao (2019)	2	89 interviews	Selection: No specific information on sampling. Case & informant homogeneity high. Saturation: iterative process continued until reach of a point of theoretical saturation (strong correspondence among data, litera- ture, and theory).	Industry level (ventures in a nascent finan- cial-technology sector)
Han- nah and Eisen- hardt (2018)	5	95 interviews Executives and complementors,	Selection: No specific approach mentioned but criteria for cases and informants. Case & informant homogeneity high. Saturation: not explicitly reported. Several steps to ensure data validity.	Meta-orga- nizational level (nascent ecosystems)
Dalpiaz et al. (2016)	1	26 interviews. 20 informants: CEO, senior managers.	Selection: Alessi is an extreme case (Pet- tigrew 1990); Theoretical sampling for interviewees. Case heterogeneity high & informant hetero- geneity high. Saturation: Code saturation. Not explicitly reported.	Organizational level (combin- ing logics to transform organizational agency)
Davis and Eisen- hardt (2011)	8	72 interviews Directors, product-line general manag- ers, laboratory and technical heads, scientists, and engineers	Selection: Dyadic Sample (pairs); focus on collaborations between strategically interdependent partners that have the key antecedents of superior collaboration performance. No specific information on informants' selection. Case heterogeneity high & informant homo- geneity high. Saturation: not explicitly reported.	Industry level (global computing and com- munications industries)

the structure of relevant topics identified in the structures while acknowledging the nuanced differences between cases (Gioia 2021; Gioia et al. 2013).

The sheer volume of potential categories requires a more focused and systematic approach— a multi-stage process (Gioia et al. 2013). Gioia et al. (2013) suggest that for the coding of the interviews, researchers should identify similarities and differences among the numerous categories—akin to Strauss and Corbin (1998a) concept of axial coding. This process gradually distills the initial array of categories into a more manageable set, often reducing them to around 25 or 30. Then, the researcher has to assign labels or descriptive phrases to these refined categories, ideally using the informant's own terminology. At this stage, the researcher evaluates the array to

Table 3 The flexible pattern approach (Bouncken approach)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Kallmuenzer et al. (2024)	7	7 interviews	Selection: Purposeful sampling with strict criteria, selected based on the maximum variation criterion (Palinkas et al. 2015; Patton 2002) Saturation: Data collection was carried out until data saturation was reached; this was assessed via researcher triangulation.	Organizational level (digitalization in SME)
Leso et al. (2024)	4	13 interviews C-level positions and managers	Selection: Diverse-case process Seawright and Gerring 2008; the selected cases should meet a minimum logic based on three selection criteria Lindgreen et al. 2020 Saturation: not explicitly reported.	Organizational level (digital transformation capability)
Gernsheimer et al. (2024)	3	34 interviews Middle and senior management	Selection: Detailed criteria for case sample and industry (purposeful sampling), no detail on approach; key informant approach Taylor and Blake 2015. Respondents were first contacted based on previous professional links. Additional contacts following the snowball method Miles and Huberman 1994b Saturation: continued to contact new respondents until theoretical saturation was reached.	Industry level (coopetition between MNE)
Antonio et al. (2024)	15	21 interviews Managers or founders	Selection: Purposeful sampling (Patton 2002); snowball sampling technique Bryman and Bell 2007. Sampling technique following theoretical sampling to look for unique, revelatory information for theory building Eisenhardt 1989. Saturation: collected interview data until we could not gain further theoretical insights from additional interviews (Corbin and Strauss 1990; Glaser and Strauss 1967).	Organizational level (entrepreneurial ventures)
Gartner et al. (2024)	1	3 interviews CEO, director, and senior strategist.	Selection: Theory-based case sampling, no further specification. Saturation: By using multiple types of data, creating a database of materials, and following our case study protocol, able to ensure triangulation, reliability, and quality control.	Meta-organizational level (digital technologies in small businesses)
Bouncken and Tiberius (2023)	17	114 interviews, 52 informants Providers and customers of co-working spaces.	Selection: Purposive sampling approach, following the principle of appropriateness and adequacy (Eisenhardt 1989). Saturation: not explicitly reported.	Organization level (Legitimacy Processes in co-working spaces)
Cardinali et al. (2023)	19	19 interviews, Founders, Co-founders, consultants.	Selection: Cases selected in line with maximum variation principle; size was not predefined Patton 2015; Informants reported selected according to theoretical sampling. Saturation: the research continued until theoretical saturation was reached Corbin and Strauss 1990	Organization level (Digitalization processes in small professional service firms)

Table 3 (continued)

Source	Case #	Informants	Sampling (case selection; homo-/heterogeneity, saturation)	Level of analysis
Bootz and Lievre (2023)	1	8 interviews 2 informants.	Selection: single case for both intrinsic and instrumental reasons; No details on informant selection. Saturation: not explicitly reported.	Organizational level (resilience construction, piloted communities of practice)
Schönherr et al. (2023)	12	24 interviews,	Selection: Purposeful sampling, the selection of tourism organizations was built on the researchers' judgement. Interviewees were selected according to the principle of judgmental sampling Miles et al. 2014 Patton 2015 Saturation: until theoretical saturation was reached	Meta-organizational level (Sustainable tourism policies)
Gatignon and Capron (2023)	1	> 50 interviewees different levels and functions	Selection: Case selected based on multiple factors, approach not explicitly reported. Interviews: snowball sampling technique, which led to conduct additional interviews upon the recommendation of respondents. Saturation: not explicitly reported.	Industry level (open institutional infrastructure (OII))
Yigit and Kanbach (2023)	13	17 interviews Lower/middle/top managers	Selection: Purposive and theoretical sampling Ligita et al. 2019 Glaser and Strauss 1967 Saturation: detailed information. Searching for additional data based on concepts derived from the initial analysis. (Glaser and Strauss 1967; Vander Linden, 2023 #30863)	Organizational level (technology-driven entrepreneurship in SME)
Czakov et al. (2023)	15	15 Interviews Owner, C-Level	Selection: Purposeful sampling (Palinkas et al. 2015), sample case selection criteria reported. Participants were recruited partly from the social circle of the researchers and partly through an invitation posted on the University's social media site. Saturation: Initial categories that emerged during the first round of coding allowed us to modify the interview scenario to obtain greater theoretical saturation Saunders et al. 2018b during the second round of interviews.	Organizational level (Antecedents of family firm resilience)
Lingens et al. (2022)	8	52 interviews Ecosystem orchestrators, managers	Selection: Sample cases needed to correspond to the view being used in the paper; sampling techniques for cases and informants followed the approach of previous studies on ecosystems and related subjects. Saturation: get as many as possible (internally and externally) to check for any inconsistencies with statements made in the interviews and to get more background knowledge on the cases.	Meta-organizational level (ecosystems)
Smiljic et al. (2022)	5	39 interviews	Selection: Purposive sampling of cases after expert interviews; snowballing procedure for interviewees. Saturation: not explicitly reported. Trustworthiness of the data explained with triangulation and discussions between authors and peers.	Industry level (coopetition)

discern any underlying structures. Afterward, the researcher should be capable of thinking at multiple levels simultaneously: to consider both the informant's terms and codes as well as the more abstract, second-order theoretical themes.

Within the second-order analysis, the researcher can depart from the initial arrangements while exploring whether the emerging themes can offer concepts that enhance understanding and explanation of the observed phenomena. A departure from existing theory may form nascent or established concepts that stand out due to their relevance to new contexts. The evaluation of relevance hinges on the researchers' perception (Czakon and Czernek-Marszałek 2020).

After having developed a viable set of themes and concepts and achieved what Glaser and Strauss (2009) refer to as theoretical saturation, these "second-order themes" should be distilled into broader, overarching "aggregate dimensions." The research process involves a cyclical movement between emergent data, themes, concepts, dimensions, and the relevant literature (Heath and Cowley 2004). When researchers establish the complete set of first-order terms, second-order themes, and aggregate dimensions, they gain a comprehensive framework. It enables researchers to systematically organize and interpret the data, facilitating a deeper understanding of the underlying patterns and relationships within the research.

Gioia et al. (2013) recognize that when finalizing the data analysis, researchers inevitably encounter the challenge of differing interpretations regarding certain informant terms and passages. When there is significant disagreement about some coding, researchers are encouraged to revisit the data, engage in collaborative discussions, and work towards a consensus on interpretations. Gioia et al. (2013) mention establishing consensual decision rules for coding various terms or phrases, or, additionally, employing independent coders unfamiliar with the study to code portions of the data and to calculate intercoder agreement percentages (O'Connor and Joffe 2020).

However, the diversity in cases or insights is only considered because they need to be integrated into the circular interpretation process and comparison with prior literature. If discussions between coders cannot produce agreement—hence harmony—then additional information is needed to integrate the diverging views into a coherent set of codes. In other words, discord between coders collides with saturation and justifies further data collection following the predetermined sampling strategy or altering the cases and informant selection.

5.2 Case selection and saturation of the Gioia approach

The construct development within the Gioia analysis is naturally tied to guiding the case selection with high levels of saturation. The data saturation criterion and data coding procedures implicitly assume that there is a unique data structure that can be unveiled by examining enough cases, thus by saturation. Homogeneous samples can be helpful in identifying phenomena, particularly when the criterion for selecting cases is *i-* (importance) or *e-* (extreme). Such a sampling strategy helps identify those cases that exhibit anticipated characteristics or exceed the normal, making the examined phenomenon likely more visible than in a heterogeneous sample (Palinkas et al. 2015; Fehrer et al. 2024). Notwithstanding, the implicit assumption is that the

phenomenon under scrutiny is singular and possibly has various degrees of characteristics with a unique substance.

Still, the matter of purposeful sampling is only indirectly present. The construct development aligns with the development of coherent aspects of new categories by the second order and aggregate dimensions. The approach is not only about fully understanding existing categories but also about examining and providing new codes that inform theory. The new development may additionally permit the validation of existing theories. Commonly, the approach can integrate redundancy in assembling first-order concepts. As such, it is tightly connected with saturation which tends to be achieved more smoothly by interpreting information from informants in single cases or across similar cases. As indicated in Table 1, the focus is on harmonious insights.

The cases presented in Table 1 show, in brief, our review of previous studies. It varies from single case to multiple case studies, highlighting the methodological advantage of qualitative research. Specifically, single-case studies include works as the one by van Offenbeek et al. (2024) which focus on the contextual aspects of the focal environment. On the other hand, multiple-case studies (Fehrer et al. 2024; Klammer et al. 2023) offer heterogeneous views across different contexts, increasing their research's external validity. The nature of case selection is informed by the research question and the context in which the observation is made.

Informant heterogeneity can be regarded as an advantage (Jia et al. 2023), when the informants are divided into different roles and skill levels to achieve a diversity of views, typically by higher numbers of informants. Likewise, van Offenbeek et al. (2024) use cross-sectional variation in departments as a source of variation to reveal organizational factors affecting technology use.

Nevertheless, several works contain cases of informant homogeneity (Fehrer et al. 2024; Weniger and Jarchow 2024), where participants act in a specific domain and are known regarding their area of expertise. Although such homogeneity enhances the depth and credibility of the study, it is a drawback in terms of the generalizability of the results to other client groups. More emphasis should be placed on reporting saturation thresholds, which could improve the assessment of informant generalizability and data adequacy.

Some studies indicate data saturation (Bouncken and Tiberius 2023; Buesching et al. 2023), code saturation (Nag and Gioia 2012), and theoretical saturation (Diaz-Moriana et al. 2024; Piepponen et al. 2022; Schell et al. 2023). Yet, saturation practices are not detailed on a regular basis. Out of the 16 reviewed studies that followed the Gioia approach, only 6 report saturation.

From the review of studies, we deduct that the question of harmony and discord has not been explained for the selection of cases and informants for the specific case. While the reviewed studies specify the final sample, the sampling design, including a predetermined number of cases and informants and saturation assessment indicating the stopping point, are systematically absent. Hence, the process of addressing discord or establishing harmony during data collection and analysis is seldom reported. In short, we deduct that to grasp the phenomenon, some diversity of views is important, but complete discord is not purposeful. Strong discord does not permit to develop a clear system of concepts. Strong discord, when not used for specific theory development, may reflect an unsatisfactory status of data collection and analy-

sis that encourages further scrutiny. Instead, to develop the conceptual framework, researchers will search for coherence of the second order or aggregated level, in particular. Such harmony within or among two levels may exist within a case across diverse informants but also across cases that may be heterogeneous.

Gioia et al. (2013) assume that many concepts and processes exhibit similarities and structural equivalencies across different domains (Morgeson and Hofmann 1999). The equivalencies may exist among and across levels. However, more discord helps extract transferable concepts and principles (Lincoln and Guba 1985) that increase the relevance of qualitative findings to a broader audience. This potential transferability of Gioia et al. (2013) diverges from that of pure interpretivists, who often argue that socially constructed structures and processes are inherently idiosyncratic due to their formation by unique individuals within specific contexts.

We add that the Gioia approach can make specific use of discord. We suggest that the researcher following the Gioia approach does not only extract concepts over the levels but also identifies and ‘clusters’ discriminating criteria, which are then aggregated into the second order or aggregate level. These criteria can be used afterwards for modeling the discord and different categories or relationships.

When searching for concepts that cover or explain discord, the researcher can step forward in delineating differences and generalizations. Typically, generalization from a case study is feasible if the case reveals concepts or principles with clear relevance to other domains (Bansal and Corley 2011).

Still, the question of harmony or discord has not been explicitly addressed or discussed by proponents of the Gioia approach. We suggest that the Gioia approach demands both harmony for the framework development and that discord is to be expected along the way towards harmony, with differences being useful for defining boundaries and generalizations. As indicated before, discord can be specifically used and integrated into concepts within the framework to develop theory on differences and criteria for generalizations.

The concepts along the framework might be derived from very different but also homogeneous perspectives of interviewees who might be located in the same areas but also in different or disparate areas (roles, departments, firms, geographical and national contexts) to allow for a variety of perspectives as well as generalizations or stylizations. As aforementioned we also suggest that increasing divergence may add to finding the typicality of the cases or specific configurations, something that is discussed under the umbrella of purposeful sampling.

We argue that developing a compatible structure across informants and cases implies that there is overlap or agreement among the interviewed individuals. Yet, previous research in using this approach has not explicitly addressed whether a greater degree of harmony in responses can be beneficial for identifying common concepts, even though these concepts may still vary across different cases, appear in some, be more prominent in others, or absent at times. Hence, our ideas may point toward a new direction not intended by previous research. Yet, we believe that contrasting firms, functionalities of respondents, or higher hierarchy levels by following thoughts about discord may lead to diverse and novel insights that allow to develop new models. Results that discord can be used for enriching insights. With greater

coverage of discord and finding reasons for it, allows finding generalizations. It can lead to various possible, equifinal patterns that inform new theory.

Hence, following our suggestions here, researchers may reach greater levels of harmony when they can aggregate more coherent codes to common dimensions across different informants or cases. Greater harmony may also come from a better understanding of discord by identifying its reasons. For example, discord may inform contingency factors, categories of effects, or conditions. As such, discord sparks additional analyses, turns researchers' attention back to data collection, and fosters interpretative efforts. In short, iterations typical to qualitative research (Locke et al. 2022) are nurtured by discord.

Heterogeneity or homogeneity at case and informant levels can be designed or presumed a priori, but harmony or discord emerges in the minds of researchers as the data collection and data analysis processes unfold. In this sense, harmony and discord play a pivotal role in the Gioia approach. Therefore, transparency and reporting harmony or discord among informants, cases, or their occurrence through the identification of explaining factors are crucial for qualitative research.

6 Eisenhardt and case comparisons

6.1 Explanation of the Eisenhardt approach

The grand reception among management scholars of the case study design (Yin 1981), as typically employed by Eisenhardt and colleagues, led to the so-called Eisenhardt method (Eisenhardt 1989, 2021; Eisenhardt and Graebner 2007; Eisenhardt et al. 2016; Gioia et al. 2022). The Eisenhardt method (Eisenhardt 2021) aims at theory building (Cousins et al. 2008) by linking constructs through mechanisms useful for explaining the phenomenon under scrutiny.

Researchers following this approach need to explain the theoretical generalizability, empirical testability of emerging propositions, and the logical credibility of the arguments (Eisenhardt 2021). Notably, the Eisenhardt method incorporates the sampling process into the theory generation by explicitly specifying the boundary conditions that are important for the scope of the theory. A particularity of the Eisenhardt method is its cross-case analysis implying that multiple cases offer a higher chance of contributing to theory generation.

However, direct indications of how many cases are to be included in a-priori arguments are absent from the method. Defining the number of cases is not central to this approach, but rather defining the theoretical reasons and pragmatic boundaries that influence the case selection (Eisenhardt 2021; Gehman et al. 2018).

6.2 Case selection and saturation in the Eisenhardt approach

The Eisenhardt (1989) approach incorporates less inherent saturation steps. Instead, it prioritizes identifying varying contingencies or mechanisms through the analysis. To prevent excessively broad data collection, studies in this tradition followed certain practical guidelines, typically ranging between four and ten cases (Eisenhardt

1989: 545). The focus of the approach lies in capturing subtle distinctions to grasp not just relationships but also variations and contingencies that contribute to theoretical advancement. Cases may exist within a single case setting or span multiple cases, such as firms. A core principle is an in-depth comprehension of case-related concepts and effects, emphasizing depth over variety. Researchers may exclude firms that fall outside theoretical relevance, which is an explicitly formulated guideline for discord use during the process of data analysis. Differently from the Gioia approach, researchers are encouraged to reduce the number of cases as a valid option for finding harmony, rather than expanding the sample.

In this vein, Kirtley and O'Mahony (2023) selected early-stage ventures characterized by significant uncertainty—both technological and market-related—to heighten the probability of strategic shifts, such as pivots, which were central to their study. Cohen et al. (2019) opted for eight leading accelerators to maintain quality. Given that saturation is closely linked to the informant(s), multi-case studies feature varying numbers of informants per case (Su et al. 2024) or repeated interviews with the same participants (Dattée et al. 2022). Interestingly, case numbers can be as low as one, provided multiple informants contribute, such as 20 (Dalpiaz et al. 2016), 69 (Liu et al. 2024b), or even 119 (Crosina 2024). Saturation appears to be highly dependent on context rather than solely dictated by study design.

The guideline of “careful case selection” generally aligns with theoretical sampling, emphasizing cases where the phenomenon in question is most likely to manifest or where multiple cases provide converging and diverging insights (Eisenhardt 2021). Cases may be purposefully chosen to achieve greater consistency and comparability while enhancing coherence through intentional selection. Several strategies commonly used within this approach guide case sampling, including selecting cases, are: (1) with similar antecedents, (2) matched pairs, (3) racing models, and (4) polar types. Conversely, cases may be purposefully selected from distinct contexts or phases, ensuring diverse perspectives on the central phenomenon, thereby increasing generalizability or facilitating the transferability of findings across various settings.

Cases sharing common antecedents are expected to shape focal outcomes, allowing researchers to analyze the intermediary process. For instance, Davis and Eisenhardt (2011) examined R&D collaborations among firms, selecting cases where prior research indicated factors such as comparable size and national culture would predict successful partnerships. They then explored the internal mechanisms within these collaborations. This design “controls” for well-known alternative explanations, enabling a sharper focus on intermediary processes and their effects on primary outcomes. The interesting aspect of this design is that, despite initial similarities, cases often expose distinct processes and varying outcomes.

Researchers following this approach have also pursued matched pairs, selecting two cases with comparable—or even identical—antecedent conditions to contrast subsequent developments and results (Bechky and O'Mahony 2015). Navis and Glynn (2010) examined two firms that pioneered the new category of satellite radio. Though the firms started under similar conditions, they followed divergent paths and achieved different outcomes. Likewise, DiBenigno and Kellogg (2014) analyzed collaboration within a hospital by comparing two medical units with similar staffing and

structural conditions. Despite these parallels, one unit fostered successful cooperation between nurses and technicians, whereas the other did not.

Another purposeful sampling approach is the racing model, where cases—often startups—commence simultaneously under comparable starting conditions, such as founding team, geographic setting, and financial backing. They then progress toward a defined milestone, such as an IPO, unicorn status, or another significant temporal benchmark (Hannah and Eisenhardt 2018; McDonald and Eisenhardt 2020; Ozcan et al. 2017).

This racing model functions as a natural experiment, aligning seamlessly with the growing emphasis on causal identification within the research community. It is especially valuable for examining shifts in momentum throughout the “race” (Tidhar and Eisenhardt 2021) and across successive temporal phases (Hannah and Eisenhardt 2018). Tidhar and Eisenhardt (2021) observe that ventures achieving sustainable growth begin with a slow-paced business model design but gain speed as they scale. In contrast, less successful firms develop their models rapidly. They experience initial rapid expansion yet ultimately lose momentum. The racing model proves particularly effective for studying new ventures, where frequent failures often yield clear-cut outcomes.

A comparable approach is the polar types design, where cases are selected based on extreme contrasts—such as rapid versus slow decision-making or strong versus weak performance—while remaining alike in many other respects (Langley and Abdallah 2011). In a similar vein, Martin and Eisenhardt (2010) examined collaborations with both high and low performance within six software firms, effectively holding the company and its leadership constant. Their analysis revealed distinct collaborative dynamics that tended to drive success or failure.

Murray et al. (2020b) explore how ventures secure crowdfunding by selecting comparable startups with both highly successful and less effective fundraising efforts. Zuzul and Tripsas (2020) examined four companies within the emerging air taxi category—two that adapted over time and two that remained rigid. Their analysis reveals how distinct founder identity dynamics set off reinforcing cycles of either adaptability or stagnation. The polar types approach is particularly valuable for highlighting stark contrasts between cases (Eisenhardt 2021).

Typically, the Eisenhardt approach determines both case selection criteria and number in advance. While refining the initial set to enhance depth is justifiable, cases are generally chosen based on criteria aligned with the study’s objectives (Eisenhardt 2021). The number of cases emerges as a result of these criteria rather than being a concern in itself. Eisenhardt emphasizes the importance of a more intentional focus on boundary conditions, competing explanations, and theoretical linkages, especially in multi-case research (Gioia et al. 2022).

In the studies summarized in Table 2, we note a substantial variation in the number of cases while studies follow purposes. The single-case designs dominate with 6 out of 18 studies (Crosina 2024; Zeng et al. 2024; Séran et al. 2024). Interestingly, these studies involve various and typically high numbers of informants ranging from 26 (Dalpiaz et al. 2016) to 116 (Crosina 2024), often interviewed over extended periods of time more than once. This clearly suggests a high context dependency and

pragmatic reasons, including resource constraints and access to informants that may shape the final set.

For multiple case studies, their number ranges from 2 (McDonald and Gao 2019) to 15 (Soluk and Kammerlander 2021), with a majority involving an even number of cases, e.g. 8 (Davis and Eisenhardt 2011) or 4 (Zuzul and Tripsas 2020), but also odd numbers, e.g. 5, (Ozcan and Hannah 2020a) or 7 (Li and Piezunka 2020). In multiple case studies, the number of informants ranges from 15 (Soluk and Kammerlander 2021) to 183 (Li and Piezunka 2020). Most studies show a high level of informant similarity. These sources include the works of Liu et al. 2024a), which call for informant consistency to gain focused insights into a study (Crosina 2024); Zeng et al. 2024). Still, the method of Su et al. (2023) is the midpoint between the case selection homogeneity and the diversity of informants, that is, industry coverage. Regarding saturation, these works refer to theoretical saturation (Liu et al. 2024a) consistently with the basic assumption of the Eisenhardt approach, which is aimed at theory development. However, meaning saturation is also reported (Crosina 2024) and data saturation (Su et al. 2023). In 3 out of 16 cases, we find no information about saturation, which may suggest that, differently from the Gioia approach, reporting saturation occurs more systematically in the Eisenhardt approach.

In conclusion, the Eisenhardt approach seems to embed heterogeneity and some homogeneity into the case selection design by intentionally involving cases that display similarities and differences across cases, thus encouraging a theory development effort by researchers to reach harmony. Interestingly enough, while single cases „may not generalize well“ (Eisenhardt 2021: 151) they are still a popular design among researchers, as they offer the unique opportunity to gain deep insights. However, this implies carefully considering informants to achieve a diverse set of insights, which typically involve way more informants per case than in multiple case studies.

7 The Bouncken approach - Flexible pattern matching

The goal of studies following the Flexible Pattern-Matching Approach is to delve into how discrepancies and disruptions arising from the pattern-matching process can be leveraged to challenge, refine, and evolve theoretical constructs (Alvesson and Kärreman 2007). Conversely, the identification of consistencies through this process serves to test or broaden the contextual boundaries of established theories, enriching their explanatory power (Bouncken et al. 2021b).

The logic behind this spans the space between partial and full pattern matching (Yin 1981). The approach is based on the development of expected patterns (e.g., propositions or configurations) from theorizing that then are compared with the observed patterns (Bouncken et al. 2021a). The dive into empirical patterns may include the understanding of phenomena and the development of their concepts as suggested by the Gioia approach (Bouncken et al. 2021a). The comparison is not static. As typical for qualitative research, flexible pattern matching includes a dynamic research process that weaves together the iterative comparison between theoretical patterns drawn from scholarly literature, and the organic patterns that emerge from empirical data (Sinkovics 2018).

Theoretical patterns are distilled from existing related theories, while observed empirical patterns gradually take shape through an ongoing cycle of iteration and comparison between these theoretical constructs and the data gathered (Bouncken et al. 2021a). In short, the assumption underlying the Bouncken approach is that discord between theoretical and empirical patterns is a starting point, purposefully built in the study, rather than emerging at the data analysis stage like in the Gioia and Eisenhardt approaches. The role of researchers is to achieve harmony, and the method offers an audit trail for this harmony-seeking process in several steps (see Fig. 2).

To effectively compare a predicted theoretical pattern with an observed empirical one, scholars must first craft a robust and nuanced theoretical framework grounded in existing literature, which serves as the guiding compass for the research design. This initial framework forms the foundation for systematic inquiry and analysis.

Initial ideas about the use of flexible patterns for literature analysis (Sinkovics 2018) inspired empirical qualitative research (Bouncken and Barwinski 2021; Gati-gnon and Capron 2023; Sinkovics et al. 2014) and guided further method developments (Bouncken et al. 2021a, b). Since then, a growing number of empirical studies applied the flexible pattern method (see Table 3).

To allow for more effective theorizing upfront and dynamic research designs, the Bouncken method follows the idea of scrutinizing especially the contrasting findings and cases but also offers avenues for looking at more granular patterns by adding empirically grounded elements missing from the theoretical patterns (Czakon et al. 2023). Ross and Staw (1993) sought to deepen the foundation of escalation theory, aiming to fill a theoretical gap at the organizational level by testing two propositions conceptualized as theoretical patterns. Through meticulous examination of archival records and interview data, Ross and Staw (1993) not only identified congruence with their initial propositions, reinforcing the existing theories, but also cultivated a nuanced understanding of the phenomena of organizational escalation, exit, and its resolution. The early work using flexible patterns explains the strong comparison of theory and cases.

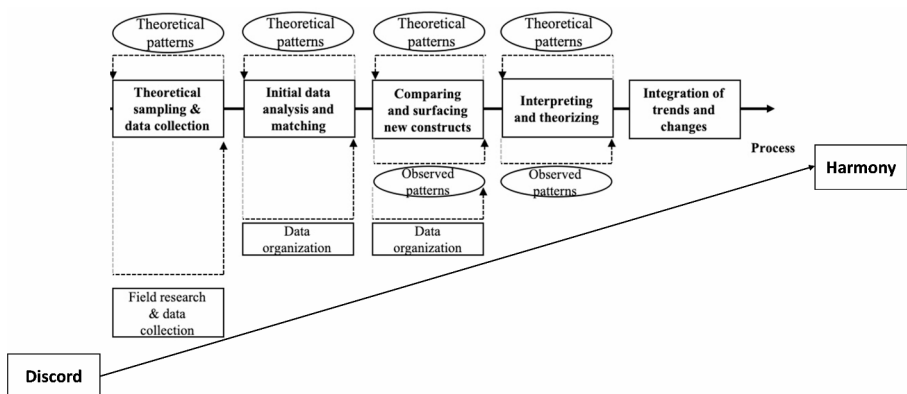


Fig. 2 Flexible pattern matching design from data collection to process identification, adapted from Bouncken et al. (2021b)

7.1 Case selection and saturation in the Bouncken approach

At the heart of theoretical development lies the task of illustrating and elucidating deviations from established theories. As such, the explicit assumption of the Bouncken approach is to build discord in the case selection process. While some cases and observations may affirm the initial theoretical propositions, the true theoretical contributions often emerge from the comparative analysis and the novel, often more granular insights derived from these deviations. Thus, the heterogeneity of insights and cases becomes the cornerstone of the method. To uncover and juxtapose concepts, the flexible pattern approach can seamlessly incorporate elements of the Gioia analysis, enriching the overall framework with diverse and innovative perspectives, including patterns that unfold over time (Bouncken et al. 2021b).

However, the flexible pattern approach might consider different informants or mechanisms by using a single case study. In this, researchers may follow the assumption that single case studies often yield more complicated and over-determined theories than multiple cases, while single case theories may not generalize well. In contrast, multiple cases make it easier for researchers to identify and sharpen theoretically relevant construct definitions at an appropriate abstraction. Curiously, although understanding overlap, departure, and emergent insights are at the heart of the flexible pattern approach, there is a notable lack of discussion regarding how to manage the diversity of cases and perspectives (Bouncken and Tiberius 2023).

Specifically, there is little debate on whether researchers should aim for greater homogeneity -respectively harmony- to support their finding of overlap, departure, and emergent ideas or embrace a wider heterogeneity in the selection and analysis of respondents and their respective cases.

In the Bouncken approach, homogeneous samples are likely to help identify an empirical pattern by matching it to a pre-identified, literature-driven one. Yet, it might fail to detect an emergent pattern that really pushes on the theory end. However, when sampling is heterogeneous, then the Bouncken approach helps to identify several different or emerging empirical patterns, rather than seeking a unique phenomenon description. As a result, the initial sampling heterogeneity is not expected to end up in a coherent single outcome finding but instead offers a clear opportunity to identify different ones. Still, the differences identified provide greater likelihood of departing from initial theoretical assumptions and guiding emergent patterns, which might occur as boundary conditions or additional mechanisms.

Studies within the Bouncken approach vary in choosing a single-case or multiple-case selection. However, the majority follows a multi-case approach where cases are connected either within an industry framework or a network or relational framework that might set some commonality. Hence, they encapsulate the possibility of differences within a common- homogeneous frame.

For instance, Bouncken and Barwinski (2021) used a multi-case cross-sectional case study design with purposeful sampling to identify 10 firms positioned in the 3D printing value chain. They considered their cases to be composed of both similar and contrasting instances following the selection criteria: (a) their position within the value chain, (b) the extent of their global and local networks, and (c) the significance of 3D printing to their business models. The consideration of agreement and

departure was further organized by two distinct pattern-matching exercises. They first focused on examining various forms of knowledge and their respective exchange methods. For the second pattern match, Bouncken and Barwinski (2021) narrowed the sample to include only those cases that deviated from the theoretically anticipated patterns, allowing them to delve deeper into the mismatches and explore their underlying causes. Later, Bouncken and Tiberius (2023) followed the same criteria in a long-term analysis of coworking spaces, covering several space-level informants and user-level informants over time and aligning them with interpretations of written narratives for sorting the cases.

Gernsheimer et al. (2024) localized their analysis in one industry, researching three firms and 34 interviews from different functions. The findings largely support theoretical expectations. Gernsheimer et al. (2024) compared expected and observed cases but did not add the emerging or departing findings. Potentially as laid in the very similar cases, the results do not deliver great discrepancies but refinements of cooperative tensions and structural solutions. The setting of very similar cases, even when following a method directed at contrasting findings, tends to deliver more coherent results and refinement.

The Bouncken approach is especially about finding new insights from the harmony and discord (during the analysis and less upfront) of the theoretical framework and the empirical insights. Discord seems to increase when researchers consider some variety of cases or from a comparison among timelines, where change occurred to cause internal or external challenges. In this vein, we find single-case longitudinal analysis (Gatignon and Capron 2023) and multi-case comparisons over time (Bouncken and Tiberius 2023). What sets the flexible pattern matching approach apart from the two other approaches considered here is its keen focus on the nuanced interplay between theory and observation, a distinction that elevates it beyond the Gioia approach, which emphasizes capturing the essence of informant meaning, and the Eisenhardt approach, which hones in on refining distinctions within particular settings.

The studies presented in Table 3 vary from single case (Gartner et al. 2024) to multi-case studies with 15 cases (Antonio et al. 2024; Bouncken and Tiberius 2023). Exploratory qualitative studies, for instance, Gartner et al. (2024), focus on one organization, providing a close look at digital scaling in small businesses. By contrast, Antonio et al. (2024) use the multi-case research approach to derive comparisons across various types of ventures with different digital business models. Other intermediate studies are Kallmuenzer et al. (2024), with seven cases, and Artyukhov et al. (2024), with four cases. The number of informants for single cases ranges from 3 (Gartner et al. 2024) to more than 50 (Gatignon and Capron 2023). For multiple case studies, informants vary from 1 per case (Kallmuenzer et al. 2024) to more than 10 (Gernsheimer et al. 2024). Regarding saturation, 6 out of 13 studies did not report it; others reported data saturation (Kallmuenzer et al. 2024) and theoretical saturation (Czakov et al. 2023). From the comparison of studies, that greater departure in the form of emerging patterns/findings tends to occur with a greater variety of cases. Interestingly, we could not identify a study that actively mentioned the integration of contrasting cases. Potentially, researchers aimed not to use the approach to actively build discord.

Essential to the Bouncken approach is the possibility that cases depart from previous theoretical beliefs for developing novel theory. Still, not all studies include a departure that justified the evolvement of new theory. The departure may rely on cases that contrast established theory but also cases that contain concepts or relationships that depart from previous theorizing. The departure might stem from insights provided by a single case study studied over time, especially when the environment changed. The variety might also stem from different firms included in the design but also informants from different functions.

We believe that the discord between theoretical expectations and observed realities, as well as the revelation of unforeseen patterns, provides the researcher with a fertile landscape for constructing new theoretical insights. What may at first glance seem like a “flaw” in the form of mismatches is, in truth, a hidden “opportunity” to reimagine, refine, or expand upon existing theories or even to spark the genesis of entirely new theoretical paradigms. These divergences offer a rich and dynamic foundation upon which to cultivate deeper understanding and pave the way for intellectual innovation.

8 Concluding Discussion– and the matter of harmony and discord

Our work was interested in providing explanations and guidance for qualitative research on case selection and saturation helpful in selecting appropriate numbers of cases, informants, and their degree of similarity. Initially, we presented an overview of established concepts and suggested measures of purposeful sampling and saturation. The review shows variations and overlaps of different models across different research domains and research models. By assessing studies from diverse academic fields on purposeful sampling and saturation, we contribute a rich view of how to rigorously conduct case studies in business and management research. We synthesize and illustrate our review with Fig. 1, which emphasizes the pivotal role played by harmony and discord in qualitative research.

In business and management research, the complexity and ambiguity of how to design qualitative research is high because research questions typically do not only relate to the individual as one case. Instead, individuals are nested in groups, organizations, among organizations, or other collective entities such as industries or categories. As such, we contribute to previous research reflections on the purposeful sampling of cases and saturation that are typically related to different levels. The question expands to whether to concentrate on one level or to extend the analysis across levels, and what it means for the definition of what multiple cases are.

Especially saturation in business and management studies needs to take into account the level of analysis– such as the individual, group, hierarchical level but also firm, inter-firm, or industry level. While management scholars may follow recommendations from other fields for individual-level cases, they also need to study phenomena at team-, organization, or meta-organizational levels of analysis. Guidance regarding the selection of cases needs to be complemented by saturation regarding informants. Hence, the assessment of case selection refers to both purposeful sampling and informant saturation. The consideration of levels also extends the question

	Gioia approach	Eisenhardt approach	Bouncken approach
PROCESS	1. Purposeful sampling 2. First order analysis: coding to identify and label topics ideally in informants own terms 3. Second order analysis: discern structures and relate to abstract concepts 4. Distill aggregate dimensions: 1. IF HARMONY between coders then a comprehensive framework has been reached; 2. IF DISCORD then further data collection needed and/or altering sampling design.	1. Theoretical sampling focused on DISCORD 2. Categorization: organize and group raw data 3. Abstraction: conceptualize by comparing data and theory by focusing on DISCORD 4. Theorizing: develop explicit arguments explaining the relationships between constructs. 5. Examine alternative explanations to identify boundary conditions to findings by examining DISCORD and HARMONY	1. Distill expected theoretical patterns from existing related theories 2. Theoretical sampling expecting DISCORD 3. Organize data 4. Compare theoretical patterns with empirical patterns: 1. If DISCORD then flexibly match additional constructs, mechanisms, or outcomes 2. HARMONY is the objective of research.
OUTCOMES	1. Identify concepts 2. Identify concept dimensions 3. Establish concept's structure	1. Theory building 2. Define constructs and measures. 3. Identify relationships between constructs as explicit mechanisms 4. Identify boundary conditions	1. Refine, challenge, evolve theoretical constructs 2. Add missing constructs to theory 3. Expand or alter theoretical mechanisms linking constructs.

Fig. 3 Comparison of the three approaches to qualitative data analysis in business and management research

of how many informants are needed for each level or case and how the number of informants has to be balanced.

We encourage further research to specify and explain in cross-level studies where they identify harmony or discord. Regarding discord, its role differs across the three approaches. It is, hence, important that researchers explain the role discord played in the design and iterations of their study. For further theory building, researchers should try to develop specific criteria, contingencies, or relationships that explain discord and if that leads to greater harmony in other terms.

Our work here examined three typical qualitative research methodologies in business and management. The qualitative inquiry serves different purposes in each of the portrayed approaches: the Gioia, Eisenhardt, and Bouncken approaches. While all serve the purpose of theory building, they do so in different ways (Fig. 3).

The Gioia approach offers a unique opportunity to identify the categories and their properties relevant to understanding phenomena. In this process iterative comparison of pieces of information among themselves and with the literature helps empirically grounding categories. The Eisenhardt approach follows a careful case selection in view of cross-case comparisons that help achieve a comprehensive coverage of the phenomena under scrutiny. Discord is anticipated among cases. By doing so, researchers start with categories but need to identify links between them and offer a theoretical explanation. The Bouncken approach follows a distinct procedure by first establishing the theoretical patterns from prior literature and then comparing rich insights from cases with those theoretical patterns. Discord is anticipated between the selected cases and theoretical patterns. By doing so, researchers depart from established views, gain in granularity, and make corrections to previously proposed patterns. Based on our analysis we suggest that the Gioia approach opts for harmony in seeking concept definitions, the Eisenhardt approach involves discord in the design

of studies, while the Bouncken approach incorporates a duality of harmony and discord in the research design.

Additionally, our overview of recent literature indicates a substantial variation in the number of informants relative to cases– from single informants (Cardinali et al. 2023; Kallmuenzer et al. 2024) to multiple informants per case (Bootz and Lievre 2023; Gatignon and Capron 2023). Interestingly, very few studies report multiple waves of interviews in search of saturation (Czakon et al. 2023).

Accordingly, our third contribution to theory refers to discussing purposeful case selection and saturation in the three approaches. We emphasize that each of the three approaches differs in purpose and, as such, sets different demands on what the often overstretched but still somewhat empty term ‘purposeful’ implies. In addition, we discussed the question of how strongly informants and cases should deliver harmony through discord. For example, the Gioia approach concentrates on creating a framework that shows harmony and in which the researchers gain consensus about the concept. In this, harmony across informants, levels, and cases helps to achieve alignment within the framework. Yet, for understanding when and how a phenomenon evolves, some departure can help. Still, the review of existing studies reveals that researchers have focused on single or similar cases.

In contrast, the Eisenhardt approach aims to understand different relationships from multiple cases. Prior criteria have been developed for developing various insights that might be afterward condensed into mechanisms. It explicitly demands reporting how researchers design their study by relating case selection with a data analytical approach. Furthermore, cases appropriate for the study are defined by their characteristics, not their numbers. Importantly, single cases can offer invaluable insights when researchers collect rich data through multiple informants, multiple interviews, and repeatedly over time. The Eisenhardt approach explicitly emphasizes that setting the number of cases a priori is helpful but is not a prerequisite of rigor. Importantly, the number of cases included in the final study might be lower as compared with the initially defined set, given saturation requirements. A dual approach of aiming for similarity but also for diversity is included in the Bouncken approach.

We identify three distinct ways of assessing saturation based on criteria, principles, and activities. We encourage authors, reviewers, and readers to use those ways to examine qualitative research. Our review of relevant management literature reveals that non-disclosure of saturation is quite frequent. Also, even those studies that report on saturation often do not explain why researchers opted for data saturation, theoretical saturation, or meaning saturation. We encourage a more systematic emphasis on transparent reporting of saturation choices.

9 Limitations and future research

Our reflections did not touch upon the controversial discussion on the use of templates in qualitative research. The discussion and criteria for case selection that we suggest here have a slight overlap with templates, so one might criticize us for some standardized suggestions. Templates can achieve standardization and coherence, for example, by forcing codes into second-order and aggregate dimensions. Yet, we fol-

low Patton (2002) in that qualitative analysis evolves data into findings but that there is no formula for this transformation, only guidance. Langley steering process case study research (Langley et al. 2013, 2023) concludes the merits of having tools for qualitative research but also the necessity to reflect and contemplate the analysis and implications (Gioia et al. 2022). A limitation may also be our brief overview of the Gioia and Eisenhardt methods, which have inspired numerous studies that we could not cover all in our overview. As a result, our review is far from exhaustive. Including additional studies, even from other disciplines, could offer fresh insights that either challenge or enrich our reflections. Future research may build upon our criteria for assessing homogeneity and apply these to their studies for a more comprehensive evaluation.

Similar to recommendations about recent quantitative methods (Dul et al. 2023) or systematic literature reviews (Kraus et al. 2024) further qualitative method research could focus on specific questions, exploring alternative research designs and case selection strategies in relation to homogeneity. From this, researchers may develop unique insights that they compare in the final stages of their analysis. We anticipate that such comparisons would yield valuable recommendations for qualitative research design.

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