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**Designing, writing-up and reviewing case study research: an equifinality perspective**

**Purpose** – Several researchers struggle with designing, writing-up and reviewing case study research, but constructing a template for describing and justifying methodological choices is – in contrast with quantitative research – undesirable due to the creative nature of qualitative research. Therefore, this research aims to provide insight into the multitude of paths to rigorous case study research and promote rigorous case study research in the service community.

**Design/methodology/approach** – Based upon a review of seminal articles and textbooks, different paths to rigorous case study research are identified. Subsequently, these paths are compared with existing practices in case studies in service research published between March 2017 and April 2019.

**Findings** – Seminal articles and textbooks detail different paths to achieve rigor with regard to research purpose, design, data, analyses, and write-up. Overall, the most popular paths in the service community are those proposed by Eisenhardt and Yin. Meanwhile, service researchers increasingly challenge the dichotomy between the inductive and deductive logic by choosing an abductive logic. Transparency and reflexivity are the main points of attention among service researchers doing case study research.

**Originality/value** – By providing insight into the multitude of paths to rigorous case study research along with their popularity in the service community, this article helps service researchers to balance rigor and creativity when engaging in case study research. Additionally, this article offers a framework for reviewing case study research in terms of rigor and creativity.

**Key words:** case study research, qualitative research, research methods, reflexivity, service research, transformative service research

**Designing, writing-up and reviewing case study research: an equifinality perspective**

Service research is characterized by not only theoretical but also methodological diversity. Indeed, a recent review of 158 Journal of Service Management articles revealed a wide variety of research methods, which are situated along a continuum from quantitative to qualitative research methods (Benoit, Scherschel, Ates, Nasr and Kandampully, 2017). Although methodological pluralism is welcomed and even encouraged by service and marketing researchers, the way in which these research methods are described and justified is decisive for getting a manuscript published in high-impact scientific journals (Summers, 2001, Benoit *et al.* 2017, LaPlaca, Lindgreen and Vanhamme, 2018). The literature on how to get scientific manuscripts published in business and management journals points to the importance of describing and justifying the research design, the mode of data collection, the sampling method, the data analyses procedure, and the presentation of the results (Palmatier, 2016; Kumar, 2017; LaPlaca *et al.,* 2018). Unlike quantitative research, however, qualitative research lacks an accepted template for describing and justifying the aforementioned methodological choices (such as agreed-upon significance levels) and constructing such a template goes against the creative nature of qualitative research (Pratt, 2009; Fawcett *et al.* 2014; Piekkari and Welch, 2018). In the meanwhile, Pratt (2009) argues that “there are *many* paths to good qualitative research, but this does not mean that *all* paths are good ones” (p. 857).

This research aims to provide insight into this equifinality – i.e., the multitude of paths to rigorous research – in service research based upon a case study approach, as this is the most common qualitative research approach in the service research domain (see Table 1). To generate a better understanding of equifinality in case study research, this research gives an overview of different paths to rigorous case study research, thereby relying on methodological textbooks and journal articles about case study research. Next, insights about research objectives, design, data, analysis, and write-up – which are key elements in case study research (Creswell and Poth, 2018) – were compared with existing practices in case studies in service research. As case study research has recently enjoyed “something of a renaissance” (Piekkari and Welch, 2018, p. 346), the focus is on case study articles published between March 2017 and April 2019. To identify these articles, the present research relies on the SERVSIG database that systematically searches service research publications in 36 service-specific and non-service-specific journals. This database is preferred above other databases, as all articles with "service" in the abstract are identified by means of a computer-aided system and two researchers screen these articles in terms of relevance (see SERVSIG 2019 for more information). The SERVSIG database contained 895 publications within the aforementioned time frame. In line with systematic review procedures, a first step involved reading all abstracts of these publications – and if necessary the methods section in the article – to identify the research method. Overall, 15% of these publications were pure qualitative research papers and out of these papers 52% involved case study research (*n*=67), with few differences across disciplines (except for operations journals with exclusive attention for case studies in qualitative papers) but huge differences among journals per discipline (see also Table 1 for more details). This set of case study articles were – in line with the case study research method literature – analyzed in terms of the research objective, design, data, analysis, and write-up, thereby engaging in systematic combining with case study theory (Dubois and Gadde, 2002). Based upon this abductive approach, different case study practices were elicited in the service literature and ways to push case study research in the service research community forward were proposed.

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Insert Table 1 about here

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The identification of different paths to rigorous case study research along with an overview of existing case study practices in the service research domain contributes to the service research community in three ways. First, an overview of paths to rigorous case study research helps the service research community to report about case study research and evaluate case studies performed by other researchers. Indeed, studies on reporting and evaluating quantitative research in service and marketing journals propose checklists, while qualitative research – and especially case study research – is gaining importance and more difficult to report and evaluate than quantitative research (Summers, 2001). Second, a comparison of the different paths to rigorous case study research and the existing case study practices allows to reflect upon the way in which service researchers conduct case studies. These insights can inspire case study researchers to adhere to existing practices when designing case study research or come up with new case study practices in the service research domain. Third, case study research has the potential to outperform quantitative research in terms of research impact, but this also depends on the description and justification of methodological considerations (Bluhm, Harman, Lee and Mitchel, 2010). Indeed, case study research is a powerful method to tackle “grand challenges”, such as urban poverty and climate change (Eisenhardt, Graebner and Sonenshein, 2016). By providing insight into paths to rigorous case study research, this research also paves the way for transformative service research, which is one of the research priorities (Anderson *et al*., 2013).

The remainder of the article discusses equifinality in case study research, thereby paying specific attention to paths to rigorous case study research. Subsequently, this article explores different paths to case study research used in the service research community, thereby proposing new case study paths for service research and ways to ensure rigor along these paths.

**EQUIFINALITY IN CASE STUDY RESEARCH**

Any research project involves a number of important elements, starting from the research aim/ questions, the theoretical/conceptual framework, the research design, the data, the analysis procedures, and the write-up (Creswell and Poth, 2018). This section details different views on these elements in the context of case study research, thereby identifying different paths to rigorous case study research. An overview of the different paths is depicted in Figure 1.

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Insert Figure 1 about here

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**Research objective**

Robert Yin, a very influential voice in case study research, contends that this research method focuses on the holistic and meaningful characteristics of real-life events, thereby considering the context in which the phenomena are embedded (Yin, 2003; 2009; 2018). Indeed, case study researchers acknowledge that the boundaries between the phenomena and the context are not clearly evident (Creswell and Poth, 2018; Piekkari and Welch, 2018). Specifically, a case study research approach allows to gain insight into complex contemporary phenomena in-depth and in real life with relevant contextual conditions over which the investigator has little or no control (Eisenhardt, 1989; Yin, 2009). As a consequence, Yin (2018) contends that case study research is very well suited when researchers focus – unlike surveys or modeling studies - on “how” or “why” questions (cf. in-depth) and – unlike experiments – on a contemporary set of events over which a researcher has little or no control (cf. real life). By focusing on contemporary events in a specific context, case study research also differs from phenomenological research with its focus on understanding experiences, narrative research with its focus on stories told by individuals, and ethnographic research with its focus on describing and interpreting culture-sharing groups (Creswell and Poth, 2018).

Although Yin (2018) points out that case studies can – like any other research method – serve exploratory, descriptive, and explanatory purposes, case study research often goes beyond exploring, describing or explaining phenomena. With more than 50.000 citations of her 1989 article in Academy of Management Review, Kathleen Eisenhardt was very successful in emphasizing the relevance of case study research for building theories. Specifically, she contends that the development of testable, relevant and valid theory requires intimate connection with the real world, which is enabled by case study research. In a more recent paper, Eisenhardt points out that “theory building from cases is an inductive approach that is closely related to deductive theory testing” (Gehman *et al.*, 2018, p. 292). Piekkari and Welch (2018), however, contend that case study research is more than a first exploratory step in the search for generalization and call for expanding the role of case study research in the theorizing process. Inspired by the work of Dyer and Wilkins (1991) and Stake (1995), these researchers contend that “the richness and contextualization of a case study are a source of theoretical insight” (p. 352). Overall, Ann Langley – another influential qualitative researcher – suggests that case study research allows to build two types of theories: variance theories and process theories. Here, variance theories provide explanations for phenomena in terms of the linkages between independent and dependent variables, whereas process theories focus on explaining how sequences of events lead to an outcome (Langley, 1999; Kouamé and Langley, 2018).

**Design**

A case study starts with identifying the unit of analysis, or put differently, defining what the case is (Yin, 2018). Miles, Huberman and Saldana (2020) define a case as “a phenomenon of some sort occurring in a bounded context” (p. 25). An individual, an organization, a partnership, an event, a project, a process – all aforementioned units of analysis can serve as cases if they relate to the research questions and/or theoretical propositions. Yin (2009) points out that “If your questions do not lead to the favoring of one unit of analysis over another, your questions are probably either too vague or too numerous” (p. 30). The selection of an appropriate unit of analysis or case, however, is challenging, both for novice and seasoned researchers (Baxter and Jack, 2008). Once researchers have identified the case, Creswell and Poth (2018) call for binding the case in terms of activities, times and places and decide about the type of case study design. Indeed, case study researchers can opt for not only single and multiple case study designs but also holistic or embedded case study designs, that is single versus multiple levels of analysis (Eisenhardt, 1989; Yin 2018, Piekkari and Welch, 2018).

In any type of design, case studies are never generalizable to the population (statistical generalization), but only to the theoretical propositions (analytical generalization) (Yin, 2018). As a consequence, purposive sampling is preferred over random sampling. In this context, Eisenhardt (1989) calls for theoretical sampling, by which cases are chosen to replicate results from previous cases or extend emergent theory through elimination of alternative explanations or contrary replication (Eisenhardt and Graebner, 2007). In Yin’s (2018) terminology, these sampling strategies boil down to literal replication by selecting cases that will predict similar results or theoretical replication by selecting cases that predict contrasting results for anticipatable reasons (Voss *et al.*, 2002, Yin, 2018). If extreme cases are sampled to facilitate the observation of contrasting patterns in the data, researchers engage in “polar types” (Eisenhardt and Graebner, 2007).

The aforementioned researchers emphasize that a replication strategy allows to increase the robustness of case study findings, provide a stronger base for theory-building, and achieve wider generalization. Yin (2018), however, acknowledges that a single case study design is appropriate under a number of circumstances, more particularly when cases represent (1) critical cases in testing a well-formulated theory (i.e., a clear set of propositions along with the circumstances within which the propositions are believed to be true), (2) extreme or unique cases focusing on rare phenomena, (3) typical or representative cases, (4) revelatory cases where a previously inaccessible phenomenon can be investigated, and (5) longitudinal case studies where phenomena are studied over time. Piekkari and Welch (2018) go a step further by suggesting that a single case study design may offer more learning opportunities than a multiple case study design, as a multiple case study design reduces cases to a few dimensions to enable cross-case comparison and generalization. In contrast, a single case study design can provide a particularized understanding of the case and rich contextual insights, which paves the way for learning and hence more novel theory (Piekkari and Welch, 2018). Moreover, single case studies also allow to theorize about the way in which a particular outcome emerged over time, which is a specific form of process research (Kouamé and Langley, 2018).

**Data**

Case study research typically involves many more variables of interest than data points. As a consequence, combining multiple sources of data, such as interviews, observations, and archival documents, has become a hallmark of case study research (Baxter and Jack, 2008; Yin, 2018). Interviews, for instance, are highly efficient to gather rich data, but these data might be biased through retrospective sensemaking and impression management (Eisenhardt and Graebner, 2007). By triangulating interviews with other types of data, case study researchers can overcome its drawbacks (Gibbert *et al.*, 2008; Yin, 2018). In a similar vein, researchers call for having transcripts and drafts reviewed by key informants and peers (Gibbert *et al.*, 2008) and collaborating with other researchers and triangulate their observations (Eisenhardt, 1989). The aforementioned researchers contend that different types of triangulation contribute to increased robustness of the findings and construct validity. Piekkari and Welch (2018), in turn, caution against these expectations and argue – in line with Stake (1995) – that different types of triangulation merely contribute to a better understanding of the different ways in which cases are seen and interpreted.

In any way, case study research strives for an in-depth understanding of the focal phenomenon. Hence, it makes sense to iterate data/observations and analyses/interpretations (Eisenhardt, 1989, Piekkari and Welch, 2018). To keep track and organize all these data/observations along with the preliminary analyses/interpretations, researchers can use a digitalized case study database (Yin, 2018). A case study database allows to increase the reliability of the study (Gibbert *et al.*, 2002), but it also incorporates a risk of distancing researchers from the data (Baxter and Jack, 2008). Whether or not using a case study database, researchers need to be able to detail the data and the process of gathering these data with their own critical reflections, as this demonstrates reflexivity defined as the ability to expose and question the way of doing (Corlett and Mavin, 2018).

**Analysis**

According to Eisenhardt (1989), “analyzing data is the heart of building theory from case studies, but it is both the most difficult and the least codified part of the process” (p. 539). In this context, several researchers call for a detailed explanation of the way in which data were analyzed, either to increase the validity and reliability (Gibbert *et al.*, 2008) or to show reflexivity (Corlett and Mavin, 2018). First of all, researchers can detail their own role during the data analysis, thereby including reflections about the way in which their motivation, identity, and power relationships with the research subjects/participants may have shaped the findings (Corlett and Mavin, 2018). Second, case study researchers can specify whether they performed case-by-case analyses before comparing different cases with another. If so, researchers engaged in within-case analysis followed by cross-case analysis, as suggested by several authors (e.g., Eisenhardt, 1989; Yin, 2018). Third, researchers can discuss the role of theory. Ketokivi and Choi (2014) identified three modes of using theory: theory testing, theory elaboration, and theory generation.

In a theory testing mode, case study analyses are to a large extent driven by theoretical deduction, but not exclusively limited to it due to the small set of cases. This mode fits with the approach proposed by Yin (2018). Specifically, this author calls for formulating theoretical propositions before engaging in the data collection and analysis, while also urging case study researchers to identify and address rival explanations. This means that cases cannot only support a theory but also reject an equally plausible rival theory. Theory generation, in turn, is applied when a theory does not exist or a priori theory might create undue bias (Ketokivi and Choi, 2014). By merely relying on the empirical data, this mode relates to the grounded theory approach of Glaser and Strauss (1967) and the inductive case study approach (Eisenhardt, 1989). Both approaches refer to coding and grouping these codes in more abstract categories, thereby constantly comparing data and the emergent categories or concepts – also labeled as the constant comparative method (Glaser and Strauss, 1967). If researcher wish to use the empirical data to not only test but also challenge existing theory, the theory elaboration model is most appropriate. Here, researchers identify a general theory, but explore the data with latitude and serendipity (Ketokivi and Choi, 2014). As such, the theory elaboration mode adopts an abductive logic, by which theoretical insights and empirical data are systematically combined (Dubois and Gadde, 2002, Gioia *et al*., 2013). Taken together, theoretical insights play an integral role in each of these modes, but the relative importance of theory in relation to the empirical data differs (Ketokivi and Choi, 2014).

**Write-up**

Case study researchers need to go beyond pure descriptions (Creswell and Poth, 2018). To achieve this end, Siggelkow (2007) proposes three strategies: (1) using the case as motivation, (2) using the case as inspiration, and (3) using the case as illustration. The first strategy is relevant when researchers encounter a case that cannot be explained by existing theories due to missing elements in the theory or wrong theories. The second strategy is applicable when limited theoretical knowledge exists about the phenomenon, thereby necessitating an inductive research strategy. In those situations, case study research is used to address research gaps. The third strategy involves using cases as an illustration. Here, researchers use cases to illustrate concepts that are employed in a conceptual argument. With regard to the structure of the text, the main difference between the second and third strategy revolves around the order in which the case and the theory are presented. If cases serves as inspiration, researchers start by proposing the case and then the theory, while the theory precedes the case discussion if cases are used as illustration (Siggelkow, 2007). In both situations, researchers are expected to establish a chain of evidence, which refers to integrating the specific data or evidence to support the research findings and conclusions (Yin, 2014).

Beyond the way in which the case is presented and a chain of evidence is established, Siggelkow (2007) holds that “the persuasiveness of the arguments is greatly strengthened if serious attention is given to alternative explanations – and why these alternative explanations are unlikely to hold” (p. 23). In other words, researchers benefit from extensively discussing their interpretations of the findings with alternative ones. To achieve this end, researchers can share their description and interpretation of the case with the participants, so that participants also get a voice in the write-up of the results (Creswell and Poth, 2018). As the position of case study researchers in relation to the research subjects/participants and other research aspects may also differ, several authors call for reflexivity (e.g., Hammersley and Atkinson, 1995, Weis and Fine, 2000, Creswell and Poth, 2018). More particularly, these authors urge researchers to reflect upon their own stance or position and disclose themselves during the write-up, as the write-up cannot be separated from the positionality of the researcher in relation to the researched and the research context (Corlett and Mavin, 2018). By making the stance or position explicit in the introduction to the research or in the methods section and demonstrating reflexivity, researchers contribute to the attainment of good qualitative research (Creswell and Poth, 2018).

**CASE STUDY RESEARCH PATHS IN SERVICE RESEARCH**

**Research objective**

With regard to the *research objective*, almost 30% of the case studies focus on gaining insight into innovation. These studies are published in service, marketing, management, operations and other journals. All aforementioned journals – except for the management journals – also include case studies designed to explore value co-creation, which represents more than 20% of the article set. Next, more than 15% of the case studies aim to contribute to a better understanding of servitization, but here most publications stem from service and operations journals. The remaining case studies center on actor engagement, well-being, process design, outsourcing, service triads, offshoring, experience design, service failure, organizational identity, and strategic fit. Table 2a details the research objectives for each of these themes, thereby showing that most case studies center on exploring how and why these phenomena manifest themselves and/or its underlying mechanisms. Although a number of studies do not justify the choice for a case study to achieve the research objective (9 studies), most studies provide an extensive rationale – often referring to the work of Yin and/or Eisenhardt and colleagues or discipline-specific case study specialists in service research (e.g., Gummesson, 2007; Gummesson and Mele, 2010) and operations research (e.g., Voss *et al.,* 2002; 2016).

As shown in Table 2b, the main *reasons for a case study approach* revolve around the exploratory nature of the research due to a lack of theoretical frameworks and/or empirical evidence (38 studies), the need for in-depth and richer descriptions of the phenomena (44 studies) and/or the appropriateness for building new theories and/or expanding or refining existing theories (31 studies) A study about the co-formation of organizational and industry identities, for instance, opts for a case study with a grounded theory approach to illuminate sensemaking and sensegiving processes (Stigliani and Elsbach, 2018). A case study about scaling up innovative service ecosystems, in turn, aims to refine the Service-Dominant Logic (Di Pietro *et al.*, 2018), which often serves as a starting point for case studies in service research (see other theoretical frameworks in Table 2b). If theoretical insights contribute to a better understanding of process dynamics, researchers often rely on the work of Ann Langley (12 studies). One of the case studies, for instance, aims to explore the relationships between resourcing across organizational practices and strategic change (Wiedner *et al.,* 2017). Another example involves a case study that strives for a better understanding of the way in which service production system change as a consequence of offshoring (Brandl *et al.,* 2017). An overview of the justification of case studies in service research is depicted in Figure 2.

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Insert Table 2a and 2b and Figure 2 about here

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**Case study design**

The case study researchers in our dataset investigate different *types of cases*: ecosystems (12 studies), triads (1 study), dyads (7 studies), organizations (22 studies), business units/teams (3 studies), projects/processes/practices (20 studies), or individuals (2 studies). As shown in Table 3, most of these types of cases are not unique to a specific research theme. Further inquiry reveals that most researchers select cases in the private sector (49 studies), public or social profit sector (15 studies), or a combination of both (3 studies). The settings in which cases are selected range from manufacturing (e.g., food, pharma, vehicles, high-tech, aerospace) to service settings (e.g., healthcare, tourism, banking, service engineering, utility providers). With regard to the geographical location of the cases, 19 studies did not provide details, sometimes invoking confidentiality as an argument (e.g., Eija *et al.*, 2017). A small number of studies involve cases from two or three continents (3 studies). The large majority of the remaining studies are conducted in Europe (36 studies), followed by Oceania (7 studies), Asia (4 studies), and the USA (1 studies). Except for case studies about value co-creation, there are twice as many multiple case studies than single case studies (see Table 3). Figure 3 contrasts the single case study design (23 studies) and multiple case study designs (44 studies).

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Insert Table 3 and Figure 3 about here

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Figure 3 shows that *single case studies* are merely longitudinal cases (e.g., the development of high-tech solutions in Internet-of-Things - Chandler *et al.,* 2019) or embedded cases (e.g., value co-creation in the healthcare systems with two hospital districts with primary and special healthcare services – Kaartemo and Känsäkoski, 2018). If the sampling strategy is specified, researchers refer to the representativeness of the case for some phenomena of interest (2 studies), the complexity of the case (5 studies) and/or the revelatory or extreme nature in relation to the focal phenomenon – whether or not framed as theoretical sampling (8 studies). The selection of single cases relies thus on purposive sampling, in that cases need to satisfy an eligibility criterion.

*Multiple case studies*, in turn, range from 2 to 68 cases. Here, researchers also rely on purposive sampling. Although a number of researchers do not provide more details about the sampling strategy (5 studies), most researchers refer to theoretical sampling (18 studies). If specified, researchers often mention pronounced experience with the focal phenomenon – including being very successful and/or showing a high performance (cf. intensity sampling – Jaaron and Backhouse, 2018). Meanwhile, some of these researchers also strive for variety among the cases (e.g., cases with variety in terms of size and sector – Kreye, 2017). A similar strategy is adopted by researchers who label their case selection strategy as maximum variation sampling (3 studies), stratified purposive sampling (2 studies) or purposive sampling (3 studies) or do not use a label for their approach (6 studies). In some of the aforementioned studies with purposive sampling, researchers select cases in which the focal phenomenon is present in different degrees (e.g., service dyads with different levels of customer participation to explore the perceived value outcomes – Mustak, 2019) or extreme cases with regard to the focal phenomenon – also labeled as ‘polar types’ – to observe contrasting patterns (e.g., insourcing versus outsourcing cases in a study about customer-company transfers – Rouquet *et al*., 2017). The remaining studies rely on typical cases (2 studies), or snowball sampling (1 study).

Overall, several researchers associate a multiple case study design with a stronger base for theory-building and/or wider opportunities for generalization by balancing consistency and variation through cross-case comparison (28 studies). To achieve these ends, researchers adopt a replication logic, but the exact criteria are often unclear (see Tuominen and Martinsuo, 2018, Wang *et al.*, 2018, and Lehrer *et al.,* 2018 for exceptions). In some situations, researchers engage in ‘casing’, which implies that information is gathered about a number of cases and subsequently researchers select the cases that best fit with research objectives (4 studies).

**Case study data**

Almost 45% of the studies provide a timeline, thereby showing that data gathering ranges from a couple of months to four years and/or occurs in 2 to 4 waves. As shown in Figure 4, about 40% of the researchers report the use of a digital case study database to manage these data, such as Nvivo, MAXQDA, Atlas.Ti, and MS Word and Excel. Less than 25% of the researchers, however, add information about the way in which confidentiality of the data and anonymity were guaranteed. The most important data source for case studies in the service research domain are interviews (except for Chysikou *et al*., 2018 and Pengtao *et al*., 2017). In some case studies, these interviews were not complemented with other data (5 studies). The majority of the case studies, however, combines interviews with observations, secondary data and/or other data, as visualized in Figure 4.

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Insert Figure 4 about here

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Researchers rely on *interviews* with actors in different roles or positions within the organization, dyad or ecosystem, thereby opting for purposive sampling (e.g., Mustak, 2018, Lyons and Brennan, 2019) or snowball sampling (Beltagui, 2018). Overall, researchers conduct between 10 and 112 interviews per study with differences in the number of interviews per case (see Figure 4). Most researchers opt for face-to-face semi-structured interviews, sometimes complemented with phone interviews. If researchers engage in unstructured interviews, they use a narrative and conversational style and/or join respondents in their daily activities to achieve this end. More details about the interview procedure merely relate to the key topics/questions and the sequence of interviews. Interestingly, about 70% of the researchers report that all interviews are recorded and transcribed, but verification of the accuracy of the interview transcript in mentioned in less than 20% of the case studies.

With regard to the *observations*, researchers rely on visits of the company, store or project, workshops, conferences, meeting, roundtables, and trade fairs. Although researchers can engage in non-participatory and participatory observations, most researchers do not detail their role during observations. Notable exceptions are a study where researchers participated by carrying out voluntary work as picker, delivery man and receiver to gain insight into customer-provider transfers (Rouquet *et al.,* 2017) and a study about the manifestation of service modularity in which the researchers acted, with the knowledge if the company but not its customers, as participant-as-observer and observer-as-participant in field trips organized by the case companies (Avlonitis and Hsuan, 2017). If researchers specified the way in which the observational data were documented, they refer to audio-visual material and/or field notes – sometimes making a distinction descriptive and reflexive notes (e.g., Goduscheit and Faullant, 2018). If researchers use *secondary data*, they merely rely on publicly available data sources (such as websites, press releases, annual reports and other public reports) or company documents and archival records (such as internal presentations and plans, strategy reports, financial data, e-mails, survey analyses, and other confidential data).

In about 60% of the case studies with interviews, researchers point out that observational data and/or secondary data enable data triangulation. In studies without interviews, researchers also applied data triangulation, either between observations and documents (Chrysikou *et al.,* 2018) or between different types of secondary data (Pengtao *et al*., 2017). Additionally, 10% of the case studies report that multiple researchers were involved in gathering data, thereby enabling investigator triangulation. As shown in Figure 4, 25% of the case studies report that the data gathering process along with the data analyses ceased when data or theoretical saturation emerged.

**Analysis**

About 60% of the case studies emphasize that the data analysis is an iterative process, which involves 2 to 4 data analysis components. These components – timing of development of conceptual model, coding, triangulation, and member check – are detailed in Figure 5.

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Insert Figure 5 about here

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Due to a lack of theory and empirical evidence, most authors restrain themselves to discussing relevant literature associated with the key concepts in the introduction to the case studies without explicating a conceptual model. In these studies, researchers mostly engage in open or in-vivo coding during the data analysis, whether or not preceded by re-reading the data and/or writing case narratives or histories. Other researchers point out that they opt for an a priori thematic focus, such as the three engagement dimensions when aiming to understand the antecedents of stakeholder engagement in service ecosystems (e.g., Jonas *et al.,* 2018). The remaining studies do not give details about the start of the data analysis.

A number of researchers go a step further by proposing a framework with key themes and gaps (1 study), a set of key concepts for the research (10 studies) or a conceptual/theoretical framework (26 studies). Here, several analytical strategies are identified. A first strategy involves the use of the conceptual/theoretical framework as starting point for the data analysis and further refinement of the framework based upon the data. In one of these studies, researchers proposed the Peirceian Semiotic Triangle View as starting point for a semiotic analysis (Oshri *et al.,* 2018). An alternative strategy starts with open or in-vivo coding, whether or not after familiarizing with the data by reading and/or writing case narratives. In these studies, researchers use the inductive codes as input to a more deductive process inspired by the conceptual framework. One study deserves particular attention, as researchers used the specialist content analysis software Leximancer designed for automatic and unobstructed extraction of themes along with the size and proximity of these themes (Malik *et al*., 2018). In the remaining studies, researchers engage in quantitative analyses or do not specify the data analysis strategy.

After the first coding stage, several researchers engaged in grouping codes in ever more abstract categories and reflecting about the links between these categories, thereby relying on the constant comparison technique proposed by Strauss and Corbin (1990, 1994, 1998) or Corbin and Strauss (2015) or the work of Glaser and Strauss (1967). In these studies, researchers often refer to first-order categories, second-order themes and aggregate dimensions (16 studies). Another strategy centers on the identification of emerging themes that are iterated with literature to facilitate theory-building, which is labeled as an abductive approach. Here, researchers engage in systematic combiningof insights from the case with emergent themes and relevant literature, thereby relying on the work of Spiggle (1994), Dubois and Gadde (2002, 2014), Van Maanen et al. (2007), or Braun and Clarke (2006) (13 studies). In a number of studies, researchers combine the aforementioned strategies by opting for categorization with an abductive logic. This implies that the second-order themes and/or aggregate dimensions are inspired by extant theory, which corresponds with the approach proposed by Gioia et al. (2013) (14 studies). Finally, researchers may engage in process analyses (3 studies) or quantitative analyses (4 studies).

Each of the aforementioned data analysis strategies can be applied when researchers decide to start with a within-case analysis followed by a cross-case analysis, which occurs in the majority of the multiple case studies (26 studies) and a number of single case studies with an embedded design (2 studies). Besides engaging in cross-case analyses to increase the credibility and trustworthiness of the findings, several case studies report that the analyses are often performed by multiple researchers (30 studies). Although a number of studies are unclear about the way in which – often two to four – researchers collaborate (8 studies), most studies report that researchers independently engaged in reviewing, coding and/or analyzing data and afterwards discussed the similarities and differences (17 studies). Other researchers used a similar approach, but relied on inter-coder reliability scores (3 studies). The remaining studies contend that the data analysis is performed by a single researchers, while other researchers act as a devil’s advocate (2 studies).

Finally, several studies refer to member checks during or after the data analysis to identify inaccuracies and misunderstandings, most often via workshops or meetings (23 studies). In one case study, researchers even went a step further by engaging in a continuous codevelopment process with the service providers in each of the cases (Raja and Frandsen, 2017).

**Write-up**

With regard to the write-up, few researchers use case studies as an illustration. Two notable exception are case studies that serve as an illustration that supports or rejects previously developed propositions or hypotheses (Beltagui, 2018; Cheung *et al.*, 2017). In another study, researchers introduce the case in the introduction and report: “As we tried to make sense of these surprising developments, we were confronted with an unexpected finding” (Wiedner *et al.,* 2017). Here, the case is used as motivation. The large majority of the researchers, however, use cases as inspiration in response to a lack of theoretical frameworks or empirical evidence and/or the need for in-depth and richer descriptions of the phenomena. Figure 6 summarizes these findings along with the way in which researchers structure the findings, thereby showing that thematic structuring is most popular.

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Insert Figure 6 about here

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In each of these write-up styles, researchers can integrate case evidence in multiple ways to establish a chain of evidence. The most popular way of integrating case evidence is by including quotes in the text (45 studies). Next, several researchers propose a figure or table in which the data structure along with case evidence is presented (27 studies). Additionally, researchers also add figures or tables to compare different cases with one another in terms of the different categories or themes, by which some researcher also refer to the extent to which a category or theme is present in a case (21 studies). To convey the key findings, researchers often propose a visual summary of the results and/or a conceptual model (38 studies). In all aforementioned situations, researchers can or cannot integrate propositions in the results or the discussion section (see Figure 6).

**RIGOROUS CASE STUDY PATHS FOR FUTURE SERVICE RESEARCH**

Seminal articles and textbooks suggest a wide range of paths to rigorous case study research (see Figure 1), but not all these paths are equally popular in the service research community (see white versus grey boxes in Figure 2 to 6). Table 4a summarizes frequently accessed paths along with paths to be further explored and ways to ensure methodological rigor along these paths. In what follows, we elaborate on these paths for future case study research, thereby paying specific attention to ways to balance methodological rigor and creativity.

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Insert Table 4a and 4b about here

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In recent years, case study research in the service community merely centers on exploring, describing, and explaining innovation, servitization, and value co-creation, which represent three of the twelve service research priorities proposed by Ostrom *et al.* (2015). In these case studies, most service researchers center on building variance theories, even though innovation, servitization, and value co-creation are often conceptualized as complex processes. As a consequence, future research might benefit from building process theories to generate a better understanding of how these service phenomena and its underlying mechanisms unfold over time. Furthermore, future research can dedicate more attention to case studies about other research priorities in the service community, such as service networks and ecosystems, organizational and employee issues, the use of big data and new technologies in service, and service experience and performance management. To date, several of these research topics are described in conceptual papers or studied by means of experiments and surveys, but case study research about these topics in the real world may generate a better understanding of these phenomena (see Table 4b for an overview of sample research objectives).

Next, service researchers often focus on organizations as cases or the processes, projects, or units/teams within those organizations. Most of these organizations are European private firms, which calls for case study research about non-European private organizations or non-profit or social profit organizations within and beyond the European boundaries. Indeed, case studies in other types of organizations and/or other continents can significantly advance service theory with its ambition to address grand challenges (cf. transformative service research movement – Anderson *et al.,* 2013) and understand service in a global context (cf. service research priorities – Ostrom *et al.,* 2015). Service theory, however, might also benefit from case studies about service dyads, triads, and ecosystems, because these units of analysis characterize recent advancements to service theories as Service-Dominant Logic. To capture the complex and dynamic nature of service dyads, triads, and ecosystems, researchers may – in line with the recommendations of Piekkari and Welch (2018) – opt for a single case study design rather than the more popular multiple case study design. Indeed, a single case study design allows for more richness and contextualization, which may contribute to a better understanding of the complex dynamics in service dyads, triads, and ecosystems. If possible, researchers can opt for an embedded case study design in which multiple subunits – such as individuals and organizations – are considered. Alternatively, researchers can also engage in a longitudinal analysis of a single case by investigating how dyads, triads, and ecosystems evolve over time.

With regard to the selection of the cases in single and multiple case study designs, the importance of purposive sampling is well-established in the service research community. Few researchers, however, detail (1) the eligibility criteria, (2) the set of cases considered before the final selection of the case(s), (3) the replication logic if researchers opt for a multiple case study design, and/or (4) the final set of cases with descriptive information (see ‘not specified’ in Figure 3). More transparency about why and how cases are selected and an in-depth description of these cases may contribute to more rigor in case study research. Moreover, researchers can even detail the impact of their case selection choices on the research, thereby showing reflexivity (Corlett and Mavin, 2018). A lack of transparency and reflexivity is also observed in relation to the case study data. Indeed, not all researchers detail the time frame for gathering data with its different stages, the number and type of interviews/observations/secondary data per case along with its substantive focus and the way in which these data were documented. Meanwhile, few researchers discuss the way in which the data gathering process affected the research.

With regard to the data, major attention is paid to interviews while observational and secondary data serve as complements – as also reflected in the amount of information provided about the interviews as opposed to the observational/secondary data (see ‘not specified’ in Figure 4). Future research might benefit from moving away from the overreliance on interviews, as this type of retrospective data may be subject to inaccuracies due to poor recall, social desirability among interviewees, and/or other problems of bias (Yin, 2018). Instead, case study researchers might benefit from paying more attention to observational data. Although time-consuming, this type of data covers the case and its context in real-time (Yin, 2018). By giving equal weight to retrospective data and real-time data, researchers contribute to not only true data triangulation but also more rigorous case study research.

A closer examination of the description of the way in which researchers gather data also revealed that the large majority of service researchers considers themselves as objective actors in relation to the case study subjects, such as the interviewees or observed actors. Only a minority of service researchers involves the interviewees or observed actors as participants in the case study research, for instance by allowing them to review interview transcripts or comment on observation notes (see ‘no member check’ versus ‘member check’ in Figure 4). Moreover, the same goes for the data analysis, as very few researchers fed data interpretations and/or conclusions back to the interviewees or observed actors (see ‘no member check’ versus ‘member check’ in Figure 5). If the research aim is – as proposed in the transformative service research movement – to change the world rather than exploring, describing, or explaining it, Grant and Giddings (2002) call for involving research subjects/participants as co-researchers. By engaging in cycles of collaborative planning, acting, and critical reflection with these co-researchers, case study research contributes to empowerment.

Regardless of the way in which case study researchers engage with actors involved in the case, future case study research might benefit from more reflexivity and transparency with regard to the analyses. To follow the derivation of any evidence from the original research objective to the final interpretations of the data, case study researchers can provide insight into the timing of the development of the conceptual model, the coding procedure, and the way in which multiple data sources and insights from multiple researchers are triangulated. By providing this type of information, case study researchers contribute to the establishment of a chain of evidence (Gibbert *et al.*, 2002). To maintain a chain of evidence, researchers are advised to integrate case evidence in figures, tables and/or the text. Here, the main challenge is to balance showing the richness of the case study evidence while conveying key take-aways from the case study research to the reader. Additionally, researchers can also discuss the impact of the data analyses process on the research, thereby generating a better understanding of how the process of doing research shaped its outcomes (Corlett and Mavin, 2018).

In the end, case study research is supposed to advance service research theory and practice. Several service researchers use the case as inspiration and develop new models and/or propositions associated with the focal phenomenon and afterwards discuss its theoretical and practical implications. Future research, however, might also take insights from conducting case studies and relevant or surprising cases in the real world as motivation or illustration for their research. In other words, immersion in the field through case study research and alertness for relevant and surprising cases in the field can contribute to bridging the gap between service theory and practice.

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**Table 1. Service research methods between 2017 and 2019**

1. Service research methods per year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **# CS papers** | **CS/qualitative papers** | **Qualitative/total papers** | **CS/total papers** |
| 2017 | 28 | 54% | 17% | 9% |
| 2018 | 33 | 52% | 13% | 7% |
| 2019 | 6 | 40% | 14% | 5% |
| **TOTAL** | **67** | **52%** | **15%** | **8%** |

1. Service research methods per journal

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Journal category** | **Journal** | **# CS papers** | **CS/qual papers** | **Qual/total papers** | **CS/total papers** |
| Service | Cornell Hospitality Quarterly | 0 | 0% | 0% | 0% |
| Industry Service Journal | 0 | 0% | 0% | 0% |
| Journal of Service Management | 6 | 40% | 24% | 10% |
| Journal of Service Research | 4 | 50% | 17% | 8% |
| JSTP | 6 | 46% | 22% | 10% |
| Journal of Services Marketing | 6 | 33% | 17% | 6% |
| Service Industries Journal | 8 | 47% | 16% | 7% |
| Service Science | 2 | 100% | 4% | 4% |
| **TOTAL** | **32** | **44%** | **15%** | **6%** |
| Marketing | Industrial Marketing Management | 6 | 60% | 31% | 19% |
| IJRM | 0 | 0% | 0% | 0% |
| Journal of Business Research | 3 | 33% | 12% | 4% |
| Journal of Consumer Research | 0 | 0% | 0% | 0% |
| Journal of Interactive Marketing | 0 | 0% | 0% | 0% |
| Journal of Marketing | 0 | 0% | 0% | 0% |
| Journal of Marketing Research | 0 | 0% | 0% | 0% |
| Journal of Retailing | 0 | 0% | 0% | 0% |
| JAMS | 0 | 0% | 10% | 0% |
| Marketing Letters | 0 | 0% | 0% | 0% |
| Marketing Science | 0 | 0% | 0% | 0% |
| Psychology & Marketing | 0 | 0% | 6% | 0% |
| **TOTAL** | **9** | **41%** | **12%** | **5%** |
| Management | Academy of Management Journal | 1 | 33% | 43% | 14% |
| Academy of Management Review | 0 | 0% | 0% | 0% |
| European Management Journal | 0 | 0% | 0% | 0% |
| International Journal of HRM | 0 | 0% | 100% | 0% |
| Journal of Management | 0 | 0% | 0% | 0% |
| Journal of Management Studies | 1 | 100% | 50% | 50% |
| Journal of Product Innovation Management | 4 | 80% | 50% | 40% |
| Management Science | 0 | 0% | 0% | 0% |
| Strategic Management Journal | 0 | 0% | 0% | 0% |
| **TOTAL** | **6** | **60%** | **16%** | **10%** |
| Operations & production management | IJOPM | 14 | 100% | 38% | 38% |
| Journal of Operations Management | 0 | 0% | 0% | 0% |
| MSOM | 0 | 0% | 0% | 0% |
| POM | 0 | 0% | 0% | 0% |
| **TOTAL** | **14** | **100%** | **17%** | **17%** |
| Other | **TOTAL** | **6** | **60%** | **16%** | **10%** |

*Note*. CS=case study; Qual=qualitative; JSTP=Journal of Service Theory and Practice; IJRM=International Journal of Research in Marketing; JAMS=Journal of the Academy of Marketing Science; IJOPM=International Journal of Operations & Production Management; MSOM=Manufacturing & Service Operations Management; POM=Production & Operations Management.

**Table 2. Overview of research objectives in case study research**

1. Research objectives per case study theme

|  |  |  |
| --- | --- | --- |
| **# studies** | **Theme** | **Research objective** |
| 19 | Innovation | * explore the different ways in which innovation can manifest itself, as exemplified by case studies about open service innovation archetypes (Myhren *et al.,* 2018) and organizational structures for innovation (Jaakkola and Hallin, 2018) * examine how innovation is shaped by specific phenomena, such as service design (Yu and Sangiorgi, 2018), resourcing across organizational practices (Wiedner *et al.,* 2017), ICT and partnerships (Chen, 2017), and capabilities (Beltagui, 2018) * explore how and/or why specific types of innovation emerge or evolve, such as radically new services (Goduscheit and Faullant, 2018), service innovation (Baron *et al.,* 2018), and innovative service ecosystem (Di Pietro *et al.,* 2018) |
| 14 | Value  co-creation | * assess value propositions or outcomes in specific value co-creation situations, such as knowledge-intensive business processes with customer participation (Mustak, 2019) and business-to-business service relationships (Lyons and Brennan, 2019) * examine how value co-creation is shaped by specific phenomena, such as information and knowledge processes (Kaartemo and Känsäkoski, 2018), proto-institutions (Kleinaltenkamp *et al.,* 2018) and ecotones (Simmonds and Gazley, 2018) * explore how and/or why value co-creation emerges in specific contexts, such as multiplex value co-creation in unique service exchanges (Razmdoost *et al.,* 2019) and value co-creation in many-to-many contexts (Best *et al.,* 2018) |
| 12 | Servitization | * examine how servitization is shaped by specific phenomena, such as agency problems (Reim *et al.* 2018), uncertainty (Kreye, 2018), capabilities (Raddats *et al.,* 2017), organizational resistance (Lenka *et al.,* 2018), organizational ambivalence (Lenka, Parida, Sjödin and Wincent, 2018), and supply chain design and management (Watanabe and Mochimaru, 2017) * explore how and/or why servitization emerges (Salonen *et al.,* 2017) |
| 4 | Actor engagement | * explore how and/or why specific types of actor engagement emerge, such as multi-actor engagement (Pengtao *et al.,* 2017) and actor engagement in inter-organizational service ecosystems for innovation (Jonas *et al.,* 2018) * examine how actor engagement is shaped by specific phenomena, such as service features (Russell-Bennett *et al.*, 2017) and gamification mechanisms (Hammedi *et al.,* 2017) |
| 4 | Well-being | * examine how well-being is shaped by specific phenomena, such as mobilization of social capital (Cheung *et al.,* 2017), participation (Sharma *et al.,* 2017), engagement (Hepi *et al.,* 2017), and architectural hybrids (Chrysikou *et al.,* 2018) |
| 4 | Process design | * examine the way in which modularization can manifest itself in a specific context, such as the design of services (Avlonitis and Hsuan 2017) or specialized hospital services (Silander *et al.,* 2017), * investigate how formalization/standardization are shaped by specific phenomena, such as employee agency (Tuominen and Martinsuo, 2018) and franchisee experiences (Kellner, 2017) |
| 3 | Outsourcing | * explore the different ways in which outsourcing can manifest itself, such as insourcing versus outsourcing (Rouquet *et al.,* 2017) * examine how outsourcing is shaped by specific phenomena, such as conventions to make sense of work packages (Oshri *et al.,* 2018) and organizational resources and capabilities (Malik *et al.,* 2018) |
| 2 | Service triad | * provide insight into how service triads are shaped by specific phenomena, such as purchasing practices (Broekhuis and Scholten, 2018) or manufacturer-supplier relationships (Karatzas *et al.*, 2017) |
| 5 | Other themes | * provide insight into offshoring (Brandle *et al.,* 2017), experience design (Ponsignon *et al*., 2017), service failure (Harviainen *et al.,* 2018), organizational and industry identities (Stigliani and Elsback, 2018), and strategic fit (Hill *et al.,* 2017) |

1. Case study themes in relation to justification, dominant theories, and journals

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **# studies** | **Theme** | **Justification** | | | |  | **Dominant theories** | **Service journals** | **Marketing journals** | **Management journals** | **Operations journals** | **Other disciplines** |
| **E** | **D** | **T** | **P** |
| 19 | Innovation | x | x | x | x |  | SDL, RBV, DC | 10 studies | 1 study | 5 studies | 1 study | 2 studies |
| 14 | Value co-creation | x | x | x | x |  | SDL, institutional theory | 7 studies | 4 studies |  | 2 studies | 1 study |
| 12 | Servitization | x | x | x | x |  | Organizational theory | 5 studies | 2 studies |  | 5 studies |  |
| 4 | Actor engagement | x | x | x | x |  | n.a. | 4 studies |  |  |  |  |
| 4 | Well-being | x | x |  |  |  | n.a. | 4 studies |  |  |  |  |
| 4 | Process design | x | x | x |  |  | Modularity theory | 2 studies |  |  | 2 studies |  |
| 3 | Outsourcing | x | x | x |  |  | n.a. | 1 study |  |  | 1 studies | 1 study |
| 2 | Service triad |  | x | x |  |  | n.a. |  |  |  | 2 studies |  |
| 5 | Other themes | x | x | x | x |  | n.a. | 1 study |  | 1 study | 2 studies | 1 study |

*Note.* E=exploratory purpose; D=descriptive purpose; T=theory-building; P=process theory; SDL=service-dominant logic, RBV=resource-based view; DC=dynamic capabilities.

**Table 3. Overview of case study design**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Theme**  **(# studies)** | **Type of case**  **(# studies)** | **Sector**  **(# studies)** | **Continent**  **(# studies)** | **Type of design**  **(# studies)** | **Proportion longitudinal case studies (period)** |
| Innovation (19) | * organization (8) * project/process (8) * ecosystem (2) * team/unit (1) | * private (16) * public or social profit (2) * combination (1) | * Europe (9) * Asia (2) * Oceania (1) * Europe and USA (1) * not specified (6) | * multiple case study (13) * single case study (6) | 🡪 2 out of 13 (3 to 5 years)  🡪 3 out of 6 (2 to 30 years) |
| Value  co-creation (14) | * ecosystem (4) * organization (4) * dyad (2) * project/process (3) * individual (1) | * private (9) * public or social profit (4) * combination (1) | * Europe (6) * Oceania (1) * Asia (1) * not specified (6) | * multiple case study (8) * single case study (6) | 🡪 2 out of 8 (2 to 9 years)  🡪 2 out of 6 (2 to 3 years) |
| Servitization (12) | * dyad (4) * organization (3) * project/process (3) * ecosystems (2) | * private (11) * combination (1) | * Europe (8) * Europe and Africa (1) * not specified (3) | * multiple case study (8) * single case study (4) | 🡪 0 out of 8  🡪 1 out of 4 (4 years) |
| Actor engagement (4) | * project/project (2) * individual (1) * ecosystem (1) | * private (2) * public or social profit (2) | * Europe (2) * Oceania (1) * USA (1) | * multiple case study (2) * single case study (2) | 🡪 0 out of 2  🡪 2 out of 2 |
| Well-being  (4) | * ecosystem (3) * organization (1) | * public or social profit (4) | * Oceania (3) * Europe (1) | * multiple case study (2) * single case study (2) | 🡪 0 out of 2  🡪 0 out of 2 |
| Process design (4) | * dyad (1) * organization (1) * team/unit (1) * project/process (1) | * private (3) * public or social profit (1) | * Europe (1) * Oceania (1) * not specified (2) | * multiple case study (4) | 🡪 0 out of 4 |
| Outsourcing (3) | * organization (2) * project/process (1) | * private (3) | * Europe (2) * Asia (1) | * multiple case study (2) * single case study (1) | 🡪 0 out of 2  🡪 0 out of 1 |
| Service triads (2) | * triad (1) * practices (1) | * private (2) | * Europe (2) | * multiple case study (2) | 🡪 0 out of 2 |
| Other themes (5) | * organization (2) * project/process (2) * team/unit (1) | * private (3) * public or social profit (2) | * Europe (1) * Europe, Asia, USA (1) * not specified (3) | * multiple case study (3) * single case study (2) | 🡪 1 out of 3  🡪 0 out of 2 |

**Table 4. Inspiration for designing, writing-up and reviewing case studies in service research**

1. Methodological inspiration

|  |  |  |  |
| --- | --- | --- | --- |
| **Case study element** | **Frequently accessed**  **case study paths** | **Case study paths open for further exploration** | **Criteria for a rigorous case study path** |
| PURPOSE | case study research about innovation, value co-creation, and servitization | other research priorities in the service community and business practice/society | clear research objective (exploration, description or explanation) – see Table 4b for sample research objectives |
| case study research to build variance theories | focus on building process theories from case study research | reflection about the type of theory-building (variance versus process theory) |
| DESIGN | multiple case study designs | single case study designs (including embedded and longitudinal case study) | specification of the number of cases (single versus multiple) and levels of analyses (holistic versus embedded) |
| purposive sampling strategy with major attention for organizations or the processes, projects, units/teams within those organizations as cases - often European organizations in the private sector | case studies about (1) non-European organizations in the private sector, (2) non-profit or social profit organizations within and beyond the European boundaries, and (3) service dyads, triads, and ecosystems | in-depth explanation of the case selection  - eligibility criteria  - set of cases considered before final selection of the cases  - replication logic  - the final set of cases with descriptive information  reflexivity about impact of case selection process on the research |
| DATA | interview data as dominant source of evidence in case study research, whether or not complemented by observations and/or documents | equal weight for multiple sources of evidence with specific attention for observational or other type of real-time data in case study research | use of multiple data sources with detailed information about  - the time frame for data gathering (including different stages)  - the number of interviews/observations/secondary data per case  - the type of interviews/observations/secondary data  - the substantive focus of the different type of data  - the way in which different type of data are documented |
| case study researchers acting as objective actors in relation to the case study subjects | case study with actors involved in cases as active participants or even co-researchers | reflexivity about impact of data gathering process on the research with explication of the role of the researcher(s) in relation to the research subjects/participants and research context |
| ANALYSIS | combination of inductive and deductive analytical approaches, usually involving multiple steps | application of multiple types of triangulation, including data and investigator triangulation | detailed description of different components of the data analysis  - the role of theory (inductive, deductive, abductive logic)  - triangulation (data and investigator triangulation) |
| multiple researchers independently engaging in reviewing, coding, and analyzing data and sharing their insights with one another | involving not only researchers but also other case actors in reviewing, coding, and analyzing data and sharing insights with one another | reflexivity about impact of data analyses process on the research with explication of the role of the researcher(s) and other actors involved in the case during the data analyses |
| WRITE-UP | use of case study research as inspiration | case study research as motivation or illustration | establishment of chain of evidence by means of figures, tables, and quotes in text |
| presentation of conceptual model, whether or not complemented with propositions | information about what has changed due to the case study in theory and practice | clear overview of the theoretical and practical implications of the research |

1. Substantive inspiration

|  |  |
| --- | --- |
| **Theme** | **Sample research objectives** |
| Innovation | * investigate how design capabilities can interact in the development of complex product-service systems (Beltagui, 2018) * explore how the interplay between capabilities and mindset can shape innovation over time (Töytäri *et al.,* 2018) |
| Value  Co-creation | * examine how customer participation can influence the perceived value outcomes of multiple actors in networks (Mustak, 2019) * explore how expectations of relationship value are formed and how they evolve over time (Lyons and Brennan, 2019) |
| Servitization | * examine the way in which uncertainty types can manifest themselves (Kreye, 2018) * explore how servitization can influence the interface between customers and product-service systems (Resta *et al.,* 2017) |
| Actor engagement | * examine how to maintain stakeholder engagement over time (Jonas *et al.,* 2018) * explore the nature of engagement dispositions and their role in the engagement process (Pengtao *et al.*, 2017) |
| Well-being | * understand how participation of vulnerable customers in value co-creation can influence value outcomes experienced by the group or society (Sharma et al., 2017) |
| Process design | * explore the design of interfaces according to the different stages of the service concept (Avlonitis and Hsuan, 2017) * analyze how formalisation projects can influence the level of employee agency over time (Tuominen and Martinsuo, 2019) |
| Outsourcing | * explore the role of design teams in different organizational arrangements through a semiotic lens (Oshri *et al*., 2018) * investigate different ways in which firm/customer activity transfers manifest themselves (Rouquet *et al.,* 2017) |
| Service triad | * explore how buyers attempt to synchronize various service components to create a comprehensive service offering for its customers (Broekhuis and Scholten, 2018) |
| Service networks & ecosystems | * examine how the meta-space of a service ecosystem can influence different types of innovation (Chandler *et al.,* 2019) * explore how networks of vulnerable consumer-citizens evolve over time (Cheung *et al.,* 2017) |
| Organizational & employee issues | * understand the motivations and reasons for employee responses during specific phases of servitization along with the way in which these responses change over time (Lenka *et al.,* 2018) * explore the role of external actors in the co-formation of organizational and industry identities (Stigliani and Elsbach, 2018) |
| Big data & new technologies | * explore how digital technologies support (or hinder) the servitization of manufacturing companies (Resta *et al.,* 2017) * investigate service features to determine whether a service should be automated or provided as a human-material practice (Lehrer *et al.,* 2018) |
| Experience management | * explore how contracting and contract management practices in a service triad influence customer experiences (Broekhuis and Scholten, 2018) * examine how the gaps between the intended and realized experience change over time (Ponsignon *et al.,* 2017) |
| Performance management | * examine how cross-cultural interactions affect relationship quality and overall firm performance (Malik *et al.,* 2018) * explore how firms can maintain ‘high performance’ once they have achieved (Hill *et al.,* 2017) |

**Figure 1. Different paths for case study research.**



**Figure 2. Case study purpose in service research.**

process theory (12)

variance theory (19)

*Note.* The number of case studies is mentioned between brackets The most popular case study purpose is in grey boxes.

**Figure 3. Case study design in service research.**

sampling strategy

sampling strategy

not specified (4)

purposive sampling strategy (40)

purposive sampling strategy (15)

not specified (8)

*Note.* The number of case studies is mentioned between brackets. The most popular case study design is in grey boxes.

**Figure 4. Case study data in service research.**

publicly available information (3)

company documents and archival records (4)

audio-visual recordings and field notes

audio-recordings and transcripts

combination (13)

not specified (36)

yes (9)

not specified (21)

yes (44)

no member check (43)

not specified (26)

data management

case study database (25)

not specified whether case study database was used (42)

member check (12)

end point data gathering not specified (50)

data gathering until theoretical saturation (17)

*Note.* The number of case studies is mentioned between brackets. The most popular paths for gathering data are in grey boxes. \*=details about interviews based on 48 studies, \*\*=details about observations based on 14 studies; \*\*\*=details about secondary data based on 8 studies.

**Figure 5. Case study analyses in service research.**

data triangulation (21)

data and investigator triangulation (18)

investigator triangulation (12)

not specified (26)

triangulation

no member check (44)

member check (23)

*Note.* The number of case studies is mentioned between brackets, by which \* refers to studies with a within-case analysis followed by a cross-case analysis. The most popular data analysis paths are in grey boxes.

**Figure 6. Case study write-up in service research.**

coding overview - no quotes in text (8)

not specified (14)

no coding overview - only quotes in text (26) (19)

coding overview and quotes in text (19)

*Note.* The number of case studies is mentioned between brackets. The most popular case study write-up paths are in grey boxes.

1. References with a \* refer to case studies in service research published between March 2017 and April 2019 [↑](#footnote-ref-1)