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Describing Case Study Method and Identifying the Factors that Contribute to the Successful Conduct of Case Studies

Introduction

Case study methodology, unlike many other methodologies in social science, does not consist entirely of agreed and accepted techniques and procedures. Although case studies have been increasingly portrayed as a method, its practitioners have specified no particular data gathering techniques other than to exclude statistical analysis (Stocker, 1991).

In describing case study method and identifying the factors that contribute to the successful conduct of case studies, this article is organized as follows: the first section, after the introduction, tries to define case study research. The second section discusses limitations and critiques on the case studies. The third section focuses on theory building from case study research. The debate between Eisenhardt

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Summary

This article has attempted to describe case study, the limitations and critiques on case study methodology and how the proponents have responded to these. Our special focus have been on the debate on theory building from case study research, and a framework for conducting case study research as well as the factors for a successful case study research. The overall conclusion is that the case study has been inappropriately used to generate theories.

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(1989, 1991) and Dyer and Wilkins (1991) also shows how interesting the research methodology literature can be. The discussion about theory-building from case study research is, at the same time, conducing to a discussion of factors that contribute to the successful conduct of case studies based on Eisenhardt (1989) “road map” for theory-building from case study research. A successful conduct of case study research is discussed in the fourth section. The final section presents the final remarks.

Case Study Research

A case study can, according to Bromley (1986), be defined as “the description and analysis of a particular entity that is usually a natural occurrence with definable boundaries, although it exists and functions within the context of surrounding circumstances”. Mitchell (1983) describes case studies as “a detailed examination of an event (or series of related events) which the analyst believes exhibits (or exhibit) the operation of some identical principle.” The case study is a research strategy that focuses on understanding the dynamics present within single settings. Case studies can involve either single or multiple cases, and numerous levels of analysis (e.g., industry versus firm). Case studies typically combine data collection methods such as archives, interviews, questionnaires, and observations. The evidence may be qualitative, quantitative, or both (Hakim 1994, Stake 1995). A common misconception is that case studies are solely the result of ethnography or of participant observation.

Case studies can be used to accomplish various aims: to provide description, test theory (Pinfield, 1986, Anderson 1983) and generate theory (Gersick 1988, Harrison and Sutton 1986). At the simplest level, they provide descriptive accounts of one or more cases. If case studies are used in an intellectually rigorous manner to achieve experimental isolation of selected social factors, they provide the strengths of experimental research within natural settings. Case studies may have varying combinations of exploratory work, description and testing of hunches, hypotheses and ideas. “The case study is the social research equivalent of the spotlight or microscope, its value depends on how well the study is focused” (Hakim 1994, p. 61). Yin (1993) states that case study method is underutilized in social research despite the availability of key works on how to do case study research.

Yin (1981, 1984) defines case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used”. The case study represents a research strategy, to be likened to an experiment, a history, or a simulation, which may be considered as alternative research strategies.

According to Yin (1981), the distinguishing characteristic of the case study is that it attempts to examine a contemporary phenomenon in its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Therefore, experiments differ from case studies in that they deliberately divorce a phenomenon from its context. Histories differ in that they are limited to phenomena of the past, where relevant informants may be unavailable for interview and relevant events unavailable for direct observation (Yin 1981).

Case studies are usually used when the research is attempting to understand complex organization problems or the diffuse causes and effects of change. In essence, case studies allow the researcher to focus on issues that are sufficiently manageable to be understood in all their complexity (Moore 1987, Merriam, 1998, Chetty 1996, Bresman et. al. 1999).

An understanding of the epistemological issues surrounding social science research points to the requirement to use an appropriate method for the research problem. According to Smith (1991), the debate about positivism has illustrated the limitations of traditional research methods when applied to many social science problems. An alternative and seemingly more potentially fruitful path would employ qualitative and inductive approaches. The case study is included in such approaches. Yin (1993, 1994, 1998) has constructed a case study model from the positivists’ perspectives.
Limitations and Critiques on the Case Study

The problem of definition concerns whether the case study is a method at all! Platt (1986) suggests that one reason for the decline of the case study may have been the results of splitting methodological issues into ‘design features’ and ‘methods of data collection’. However, since the case study has been increasingly portrayed as a method, and yet its practitioners specify no particular data gathering techniques, the case study fits neither category”. Researchers in case study use qualitative research to describe a phenomenon and exclude the classical statistical analysis that includes an empirical approach of choosing a sample, analyzing the data and reaching a conclusion. The lack of a clear definition, the confusion over the relation of methodology and theory to case study research, are interwoven with confusion over the purpose of case study research (Stoecker 1991, p. 99).

The way of conducting case studies represents another criticism in the perspectives of the empiricist researchers. For example, Jensen and Rodgers (2001) state that a preference for case studies as a form of scientific inquiry is behind the criticism of public administration research that the knowledge in the field is not being cumulated. This problem could be solved when researchers combine findings across different research studies to accumulate knowledge and verifying evidence obtained from case studies.

The increasing use of quantitative scientific methods in sociology, especially probability statistics and prediction has created two basic problems for case study researchers (Stoecker 1991, pp. 90-91). The first is related to ‘bias’ and its assumed impact on internal validity. Researchers ‘bias’ or their effects on case study research (Bromley 1986), or the possibility that investigators may have ‘feelings’ for the subjects they study have a direct impact on the research internal validity (Becker 1968). In addition, absence of experimental control is assumed not to allow for ‘scientific distance’ and this has no ‘built-in corrective’ to reduce the researcher’s possible biases (Stoecker 1991). In general, the charge is that the case study suffers from a lack of rigor and excessive bias. “Too many times, the case study investigator has been sloppy, and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusion” (Yin 1984, p. 21). This implies that there is no assurance of either reliability or internal validity.

To increase greater scientific rigor into the case study, some authors have provided a number of strategies to increase the internal validity of case study research. Some of the proposed strategies are:

- using continual rather than sporadic data collection,
- gathering data on the history of the client’s condition,
- treating the case as a single case experimental design with pretest, treatment, and post-test conditions.
- using ‘triangulation’ (i.e. the use of multiple methods, Browley, 1986)
- treating a single case study as a cluster of units of analysis,
- using a case comparison (Becker, 1968, Platt 1986), and
- using a ‘case survey’ method that treats a collection of case studies as a sampling population.

The second problem researchers face is that the case study does not allow them to generalize their findings to other settings. In other words, how researchers can generalize from a simple case, since there is no way to measure external validity (see for example, Dyer and Wilkins 1991, Smith 1991, Berg and Smith 1988). External validity is made more difficult because ‘generalizability’ is not dependent simply on the units observed but also on the kind of unit observed. Without a probability sample drawn from a population, however, there is no ‘scientific’ basis to generalize beyond the specific case at all. However, Platt (1988) argues that one can more confidently generalize if we can show our generalizations apply to a diverse array of cases. This strategy again moves beyond single case study to case comparison.

Yin (1989, p.21) states that case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. Smith (1991) argues that concerns with representativeness may be irrelevant. His position rests on accepting the two-way street concept of the theory and practice of research, namely that there is
an interrelationship between epistemology and research methods and hence concern with whether cases are typical or not is epistemologically erroneous. He notes that epistemology and research methods are interrelated, but a position on the former does not simply give rise to the latter. Accepting this two-way street prompts a reappraisal of the accepted wisdom that the case study method is inferior to quantitative methods because it lacks representativeness.

Alternatively, representativeness may be viewed as absolutely irrelevant. This position, contrary to accepted wisdom, reflects either an acknowledged difference in purpose, as in the concern of an ethnographic study to describe a simple society as a part of an anthropological study, or recognition of the epistemological distinction between statistical inference and logical inference (Smith 1991, Coffey and Atkinson 1996).

That ‘case studies take too long and result in massive, unreadable documents’ may, according to Yin (1984), be appropriate, given the way case studies have been done in the past, but it is not necessarily the way case studies should be done in the future. Yin shows alternative ways of writing the case study—including ones in which the traditional, lengthy narrative can be avoided altogether. Yin (1984) suggests composing the case study early and continuing to draft various pieces of the report rather than waiting until the end of the data analysis process. As for compositional structures, six alternatives are suggested:

- linear-analytic,
- Comparative,
- chronological,
- theory building,
- ‘suspense’, and
- un-sequenced structures (Yin 1984).

A more effective response to the scientific critique has been, according to Stoecker (1991), a critique of quantitative science that shows the gaps which case study research fills. There are three basic critiques of the quantitative scientific perspective that highlight the strengths of the case study research:

- probability samples and significance tests do not ensure accurate explanation,
- scientific method does not control for researcher bias, and
- survey research preferred by scientific method advocates is not useful for applied questions (Stoecker, 1991).

**Building Theory from Case Study Research**

Yin (1981, 1984) describes the design of case study research. He defines case study as a research strategy, develops a typology of case study designs, and describes the replication logic that is essential to multiple analysis. His approach also stresses bringing the concerns of validity and reliability in experimental research design to the design of case study research. Yin (1998) suggests that a good test for bias is the degree to which one is open to contrary findings.

Confusion surrounds the distinctions among qualitative data, inductive logic, and case study research. Also, there is a lack of clarity about the process of actually building theory from cases, especially regarding the central inductive process and the role of literature ... it appears that no one has explicitly examined when this theory-building approach is likely to be fruitful and what its strengths and weak (Eisenhardt 1989).

Eisenhardt (1989) summarizes the process of building theory from case study research by eight steps that are as follows:

- **Getting started**: focusing research question helps researcher in obtaining sufficient and minimum quantity of data and in getting shape of the initial design of theory building research.
- **Selecting cases**: defining the population is crucial, because it, in turn, defines the set of entities from which the research sample is to be drawn.
• **Crafting instrument and protocols:** case study can involve either qualitative or quantitative data or both. Case study uses multiple investigators. This enhances the creative potential of the study, complementary insights to the data and confidence in the findings.

• **Entering the field:** "Overlapping data analysis with data collection not only gives the researcher a head start in analysis but, more importantly, allows researchers to take advantage of flexible data collection. Indeed, a key feature of theory-building case research is the freedom to make adjustments during the data collection process. These adjustments can be the addition of cases to probe particular themes which emerge" (Eisenhardt 1989, p. 539).

• **Analyzing within-case data:** importance of analyzing case data is driven by one of its realities, the staggering volume of data. In a detailed case study, descriptive write-ups contribute to the generation of insight. Although, there is no standard format for this analysis, the overall idea is to become familiar with each case as a stand-alone entity, which enables the researcher to identify the patterns of each case before generalizing pattern across cases.

• **Shaping hypotheses:** within-site analysis, cross-site tactics and overall impressions help in emerging tentative themes, concepts and possible relationships among variables. A closer fit of data with a theory gives these theory new insights and yields an empirically valid theory. Replications could confirm emergent relationships that enhance confidence in the validity of the relationships and replications that do not confirm the relationships can often provide an opportunity to refine or extend the theory.

• **Enfolding literature:** comparison of the emergent concepts, theory or hypotheses within extant literature involves a broad range of literature. Comparing the emergent theory with conflicting literature represents an opportunity for the researcher to become more creative and adopt a frame-breaking mode of thinking. The result can be a deeper insight into both the emergent theory and the conflicting literature.

• **Reaching closure:** researcher should stop adding cases when reaching theoretical saturation and stop iteration when the incremental improvement to the theory is minimal.

In Eisenhardt’s (1989) description process of theory building from cases, one strength is its likelihood of generating novel theory. Creative insight often arises from the juxtaposition of contradictory or paradoxical evidence. The process of reconciling these contradictions forces individuals to reframe perceptions into a new ‘gestalt’ (i.e. appearance). Case studies attempt to reconcile evidence across cases, type of data and different investigations and between cases and literature increase the likelihood of creative reframing into new theoretical vision. A myth surrounding theory building from case studies is that the process is limited by investigators’ preconceptions. However, this constant juxtaposition of conflicting realities tends to “unfreeze” thinking. Thus, according to Eisenhardt (1989), the process has the potential to generate theory with less researcher bias than theory built by incremental armchair studies, which result in axiomatic deduction.

A second strength is that the emergent theory is likely to be testable with constructs that can readily be measured and hypotheses that can be proven false. Measurable constructs are likely because they have already been measured during the theory-building process. The resulting hypotheses are likely to be verifiable because the hypotheses have already repeated verification during the theory building process. However, theories that take direct evidence may have a testability problem. This construct has proven difficult to operationally for many organizational researchers. One reason may be its obscure definition, which hampers measurability.

A third strength is that the resultant theory is likely to be empirically valid. The likelihood of valid theory is high because the theory-building process is so intimately tied with evidence that it is very likely that the resulting theory will be consistent with empirical observation. In well-executed theory-building research, investigators answer to the data from the beginning of the research. This closeness can lead to an intimate sense of things – “how they feel, smell, and seem”. This intimate interaction with
actual evidence often produces theory, which closely mirror reality (Eisenhardt 1989).

However, some characteristics that lead to strengths in theory building from case studies also lead to weaknesses. For example, the intensive use of empirical evidence can yield theory that is overly complex. Theories working from case data can lose their sense of proportion as they confront vivid, voluminous data. Since they lack a quantitative gauge such as regression results or observations across multiple studies, they may be unable to assess which are the most important relationships and which are simply idiosyncratic to a particular case. Another weakness is that building theory from case study may result in a narrow and idiosyncratic theory. Case study building is a bottom-up approach such that the specifics of data produce the generalization of theory. The risks are that the theory describes a very idiosyncratic phenomenon or that the theorist is unable to raise the level of generality of the theory (Eisenhardt 1989).

Dyer and Wilkins (1991, p. 613) state that Eisenhardt’s building-theory is a paradoxical because its purported purpose is theory generation that includes many of the attributes of hypotheses-testing research. Its strengths mask some important weaknesses and this form of case research will not create an exemplar or a story against rich theoretical insights. Also single or multiple cases will not guarantee insight. Applying the paradigm of hypothesis testing to case study work without the goal of telling good stories is likely to miss both the caliber and quantities of theory that have been seen as a result of classic story-telling through case studies of the past.

Eisenhardt (1991, p. 626) state that the critique on case studies has important flaws. However, it is difficult to substantiate that classic case studies have had greater impact than multiple case studies. Many classic case studies are fundamentally case studies, employ the comparative multiple case logic of replication and extension to develop theoretical insight and rest on rigorous methods, including specification of research issues, sampling, measurement of constructs and control. A good theory is fundamentally the result of rigorous methodology and comparative multiple case logic. This is present in classic case studies as it is in contemporary multiple case researches.

Rethinking the case study - Definition and purpose

Stoecker (1991) suggests we should use the term ‘case study’ for “those research projects which attempt to explain holistically the dynamics of a certain historical period of a particular social unit” (p. 98) and notes that the case study is not a ‘method’ in the most typical sense, but more a ‘design feature’ or, even more broadly, a frame determining the boundaries of information gathering.

The lack of clear definition, and the confusion over the relation of methodology and theory to case study research, is interwoven with confusion over the purpose of case study research. There are numerous uses to which case studies can be put. The ‘configurative-idiographic’ case study attempts to explain only the particular case. The ‘disciplined-configurative’ case study also attempts to explain only that case, but uses more general concepts. These two forms are closest to the initial case study. The ‘heuristic’ case study dives more deeply into a particular problem to better grasp its complexity and suggests possible new theoretical tasks and generalizable principles. The ‘plausibility probe’ uses the case to pilot test hypotheses to determine if full-scale research is warranted. Finally, the ‘crucial case’ study is the careful selection of a case for the purpose of testing theory (Stoecker 1991).

(Re)developing the Case Study Research Frame

We need to consider, according to Stoecker (1991), four issues in building the case study frame: the role of theory, the historical perspective, the multi-methodological approach, and the researcher’s role. Determining the frame of the case study means determining the boundaries of the case. If, for example, the researcher wants to know why unemployment is high in a community, he may ask about the educational of the work force, or whether certain industries have left the area. The answers to these questions may expand the frame beyond the community to macro-industrial change, availability of cheap labor elsewhere, or broad-scale changes in work force characteristics. Which questions the researcher asks should initially be
determined theoretically. When we initially establish the frame we need to employ all relevant theoretical perspectives, buttressed by extensive research findings, to determine the extent to which they apply in our particular case. As we determine the relevance of each to our case, we can begin to specify our frame.

**How should we determine which theoretical perspectives apply?** We need to note the extent to which the concrete empirical processes specified by different theoretical perspectives exist in our case. When we are studying a particular case, we need to develop a theory of idiosyncrasies of the case. As we learn enough about the dynamics of this particular case we can begin to ‘prescribe treatment’ based on our prediction of the impacts of specific interventions. ‘Theorizing Idiosyncrasy’, then, refers to bringing all possible theoretical perspectives to bear, and discarding and weighing each until we have built a valid and useful explanation. The difficulty, however, involves determining the extent to which we rely on theory to guide us in choosing what we look for and how to explain what we find (theory vs. idiosyncrasy debate). Just how much to rely on theory, and thus risk missing important idiosyncrasies of particular cases, or restrain theory and thus risk overemphasizing the idiosyncratic, is a tricky question. The resolution to this debate rests, according to Stoecker (1991), in the type of theoretical and empirical work we do. Historical logic looks for the cause in the past rather than the future.

Counterfactual analysis explains an outcome by also explaining why alternative, historically possible outcomes, did not occur. The only way we can contend that intensive research more effectively explains causal relations that extensive research is by showing how cause and effect occur over time and how actors construct and act on intentions based on their interpretations of cause and effect. That is, we need to look into the past to determine whether our theoretical arguments have concrete referents. Theory guides us, but to avoid functional explanations which can remain ‘reality-free’ we need to invoke a historical method which further complicates our task since we are now not only setting structural boundaries for the case study frame we are also setting historical boundaries.

**How to choose historical boundaries?** The best advice is to borrow from the experimental method their emphasis on treatment effects, which are in the case study, however, best characterized as ‘events’. An event in historical research is described as a marker of transition from one form of social organization to another. While this sounds obvious, these transactions are defined theoretical and, therefore, events will also be defined theoretically. Arguing that transitions are theoretical issues returns us to the theory vs. idiosyncrasy debate.

Theory should not be used to produce hypotheses so we can simply go out and confirm or disconfirm the theory. Rather, theory suggests how we recognize cause and effect. Out of all the events we can notice in a particular case, which events are important. We can use cross-sectional statistical research, along with the theory, as a guide to what to look for in conducting our research. We will find that the general processes indicated by general theories hold true to varying extends and we can specify how. We will also, however, find that only some of the general processes hold true, and here we begin to explain the ‘unexplained variance’ and rebuild the theory.

As we build and rebuild theory through this process we are also aiding our ability to generalize because we are employing theory, which we assume to be general by definition, we are assuming that the case is somehow a reflection of the general whole. It is suggested that we can generalize from case studies because of the belief that general resides in the particular and because what one learns from a particular one applies to other situations subsequently encountered (Eisner and Peshkin 1991)

It is important to recognize here that the research frame, and the events which bound it, are constructed by the researcher as an a priori step in research of ‘constructing explainable objects of explanation’. The researcher specifies the event, arranges the facts, and analyses them which means that the researcher presents both a narrative of the sequence of action and an explicit analysis of causation within that sequence. These activities not only involve theoretical choices, they also involve recognition of the researcher’s inextricable involvement in the research process.

**How to determine the validity of our analysis within this frame?** Some of the best measures of our reasoning would be whether our research leads to accurate prediction. However, we do not wait for each of our predictions to test themselves out. As an alternative, we
employ counterfactual comparisons, which show how and why other possible historical outcomes did not occur. We should also follow multi-methodological approaches. When we find the same results through different methods we can be more confident of our results.

The final crucial test of our validity is to turn out us and our 'subjects' to determine how valid our analysis is. Only when we recognize our personal involvement, and our 'subjects' personal involvement in the research process, do we understand, how our feelings and perceptions affect our analysis. Contrary to quantitative-scientific criticism, this is not bad. Perhaps the best validity check, however, comes from our 'subjects' themselves. Research subjects are assumed to be neither honest nor knowledgeable about their own behavior. Indeed, even the classic case study researcher who emphasized the study of meaning, which their subjects attributed to events, did not ask their subjects to react to the researcher's attribution of meaning to their meaning. While your participant may not agree with the theoretical explanation you provide, they must agree that the behaviors, motivations, and meanings we attribute to them are indeed their behaviors, motivations, and meanings.

Successful Conduct of Case Studies

Eisenhardt (1989), states that many of the case study theories are modest theories. Case study theories are likely to be testable, novel, and empirically valid, but they lack the sweep of theories like resource dependence, population ecology, and transaction costs. Case study theories are essentially theories about specific phenomena. To their credit, many theorists tie into broader theoretical issues such as adoption, punctuated equilibrium, and bounded rationality, but ultimately they are not theories about organization in any ground sense. Perhaps "grand" theory requires multiple studies, an accumulation of both theory-building and theory-testing empirical studies.

The theory-building process relies on past literature and empirical observation or experience as well as on the insight of the theorist to build incrementally more powerful theories. However, there are times when little is known about a phenomenon, current perspectives seem inadequate because they have little empirical substantiation, or they conflict with each other or common sense. In these situations, theory building from case study research is particularly appropriate because theory building from case studies does not rely on previous literature or prior empirical evidence (Eisenhardt 1989, p. 547).

The theory developed from case study research is likely to have important strengths like novelty, testability, and empirical validity, which arise from the intimate linkage with empirical evidence. Second, given the strengths of this theory-building approach and its independence from prior literature or past empirical observation, it is particularly well suited to new research areas or research areas for which existing theory seems inadequate. Thus, building theory from case study research is most appropriate in the early stages of research on a topic or to provide freshness in perspective to an already researched topic (Eisenhardt 1989).

Since learning from case study does not require reliability or validity, organizations may use case study for organizational learning. March, S payroll and Tamuz (1991) in "Learning from samples of one or fewer" state that: "a reliable learning process is one by which an organization develops common understandings of its experience and makes its interpretations public, stable, and shared. A valid learning process is one by which an organization is able to understand, predict, and control its environment. Neither reliability nor validity is assumed."

Conclusion

This article has attempted to describe case study, the limitations and critiques on case study methodology and how the proponents have responded to these. Our special focus has been on the debate on theory building from case study research, and a framework for conducting case study research as well as the factors for a successful case study research.

The overall conclusion is that the case study has been inappropriately used to generate theories. This is partly because of the inadequacy
of its defense. Much of the defense has attempted to address the critiques of extensive-design. Thus it is difficult to overcome those critiques. Generalizability is considered a problem not only for case study research but also for empirical research. Realists decline the idea that we reach theories by an inductive route, by moving from concrete observations to generalizations. Generalization from ‘some’ to ‘all’ is not equivalent to proceeding from the observable to the unobservable structures which may explain them. Therefore, inductive propositions can never warrant the postulation of unobservable entities (Keat and Urry, 1980, P.35).

Stoecker’s (1991) attempts to show that: (a) redefining case study as a research frame with structural and historical boundaries, and integral theory component, (b) an involved rather than distanced researcher, and (c) multiple methods which include collaborative methods, provide new standards for case study methodology.

Eisenhardt (1989) states that building theory from case study research is appropriate for new phenomenon. Organizations may use case study for organizational learning. For a successful conduct of case studies research, cases should be focused on an important issue, well defined, justified, relied on sufficient data, and transparent. Therefore, cases should not be considered for research topics because they are convenient to report on but rather because they will illustrate some general lessons or insights that the organization can benefit from.

References


