HOW TO PREPARE FOR CASE STUDIES

Anton Melén

Halmstad University
Dated: 05-01-2017

Abstract

There are several discussions in scientific articles that points out the lack of knowledge and understanding of methodological aspects in case studies. The uncertainties can harm the overall quality of the methodological practises and the results of case studies. The ambition of this paper is to describe and analyse the method of case study research with a specific insight in how to prepare for case studies. The result shows that there is of importance to make solid preparations including written protocols and established databases to control the research process of case studies. The case study research also requires a well prepared and educated researcher who has a sensible and caring approach towards the research process.

Keywords: Case Study, Case Study Methodology, Preparation

Introduction

The methodological aspects of case studies are often discussed in scientific articles. Thomas (2011) calls out for an overall structured guide for case study design. Eisenhardt (2007) is worried that misunderstandings of methods by researchers will harm the general quality of case studies and make it difficult for scientists to be able to publish their works. Gerring (2004) argues that there is a low overall knowledge-level in the scientific arena about the methodological aspects of case studies. Those who practice the case studies have trouble to spread the method their using to possible students and other interested individuals. The result of the statement from the author is a non-existent case study design. One other opinion about the lack of methodology in case studies comes from Meyer (2007) who states that there is not an existing overall guide in how to make a case study. Yazan (2015) has the opinion that researchers' uncertainties about how to design and accomplish case studies has resulted in upcoming general critics, which can hammer the development in this field of study. Tellis (1997) highlights the versatility of case studies and that it can be used in multiple researches but the fulfilment of the potential in this kind of research can only be accomplished if there is a better understanding of the methodology. The preparation for case studies is due to Yin (2007) a significant aspect that the researcher should be taking seriously. A poorly conducted preparation can jeopardize the whole research.

The discussions above clarify the overall objective of this paper, to make a description of the methodological aspects of case studies with a specific insight about how to prepare for a case study.

Methodology
The findings in this paper are gathered from secondary sources, which includes scientific articles, books about case studies and webpages with information about this field of study. The scientific databases of Summon, Web of Science, Scopus and Google Scholar have been used and frequent searches to get the data were "Case Study", "Case Study Methodology" and "Case Study Design". The theory from Merriam (1994) and Yin (2007) brings the paper an overall framework about the methodological aspects with case studies and the chosen scientific articles delivers valuable theorizing perspectives and discussions.

Literature review
The definition of case study
The concept of case studies can be defined and described in various ways. According to Merriam (1994, p. 24), a case study is built-up by an interesting practical phenomenon, which for instance can be single person, a constitution of individuals or an event that occurs. Schramm (1971) considers that case studies involve descriptions of decision-makings over time and the objective is to answer why those were made, how the implementation were set and what were the results of those decisions. Yin (2007, p.31) brings together the real context and the occurring phenomenon and specifies that case studies are set when there is not solid boundary between the context and the phenomenon. Stake (1978) also has the opinion that the boundaries are an important aspect to define where the focus of the case study research should be. The phenomenon inside of the boundaries are considered as a part of a case study and that is where the investigator should put his or her attention. The phenomenon within the boundaries can according to Jacobsen (2002) be divided in a hierarchic way into different units from the individual person to whole organisations and communities. Stake (1978) also discusses about that the broad description of case studies can involve the relationship between reality events and science. Practical happenings can be a source to scientific findings and answers to previous gaps in different areas of science (Gustavsson 2004, p.116). Eisenhardt (2007) explains that you as a case study investigator make your theory from the on-going relationships practices within the cases.

Merriam (1994, p.24-27) suggest that there is a way to define case studies through the various characteristics it contains. Firstly, an individual event, person or phenomenon is a primary source that creates a case study. The focus

by the investigators is set on one or few variables. You can therefore suggest that case studies are *particularistic*. The result of a case study is made with an in-depth research about the chosen subject, which makes it attributed in a *descriptive* manner. A case study can widen the general knowledge about the area of research and the knowledgeable side and it makes it therefore *heuristic*. The conclusions that occur in case studies are often made by experiences from the specific context within the study. Case studies are in that sense an *inductive* approach.

Investigate if you need to choose a case study method
Merriam (1994, p.50-51) states that the opportunities for a researcher to choose a case study lies in his or her own hands. It is about the objective with the study, what the researcher wants to accomplish when the work is done. Yin (2007, p.23-25) sets the attention on that the type of research question will determine which kind of investigation you will choose. There are especially the "how?" and "when?" questions that can be matched with case studies. Those questions are giving you the chance to have an explanatory theme on your research and it also suits you to follow the case over a certain timeframe. Gerring (2004) puts together several reasons to use case study researches. Case studies are suitable when the goal is to make a descriptive view of the case rather than investigations that make assumptions from differences or similarities between different factors. Gerring (2004) continues to describe that case studies can be used to gather internal data from one or few units. Dasgupta (2015) are discussing about series of conditions to consider when you are thinking about to choose case study as a research method. Case studies are applicable to circumstances that are tough and complex to describe and there is a need of a detailed explanation. You can also use a case study when the existing theory cannot be the source that answers the problems that have occurred in the specific phenomenon. Case studies are suitable when you need information inside of a phenomenon to accomplish the investigation. Due to Runesson and Höst (2009) a case study gives the researcher a solid picture about the reality but it is harder to control the study process. Flyvberg (2006) change the focus to the researchers own perspective and shows the benefits of experiencing close interactions to real-life happenings. Researchers need to accept that actions and events made by human beings in a certain context can create important theories. The choice to make a case study research can also improve researchers own level of achieving valuable science. The closeness to the reality can prohibit the tendency to be blinded from the benefits of case study research as a source to scientific findings.

The general knowledge of a researcher

Harland (2014) describes that the possibility of making valuable findings in case studies are dependent on the individual investigators perceptions and experiences and the assumptions and conclusions from this kind of study can be different from person to person. Yin (2007, p.81) clarifies that the difficulties to have an overall perspective about the theoretic and problematic questions used in the study and upcoming findings shows that the task is suitable for someone who is experienced and educated in the field of study. According to Merriam (1994, p.51-52) a case study researcher has to respect that there is a lack of structure in this type of research. The notion of uncertainty dominates throughout the whole investigation and you need to accept that the work you have planned can change into new structures and directions. A researcher also needs to have a sensible approach towards the environment, the human beings and the context they are working in. Merriam (1994, p.53) believes that a case study investigation requires a researcher with high level of communication skills, which for instance can be to have an attentive and caring relationship with the respondents.

Define the case and research issue

It is according to Eisenhardt (1989) significant that a case study research is based on a defined research question and issue. With a stated issue, it is easier to create theories from the research. Jacobsen (2002, p.65) describes that a scientific issue is formed by a scientist quest to get more knowledge about a certain subject that interest him or her. The researcher often starts to ask himself an overall question. He or her will after the creation of the problematic question make speculations about the reality. The speculations can be named as hypothesises. There are several ways to find out which issue that are suitable for an upcoming research. An overall view on what has been written historically about a chosen subject can create a possible interest followed by the definition of an issue. You can also put your attention on unfulfilled researches were the valuable results can be accomplished from your perspective. There is finally a possibility to make your own individual approaches on previously successful researches (Shuttleworth, 2008). Case study researches involve additional aspects to have knowledge about. As a researcher, you need to consider that a case study is about the making of in-depth analysis about an issue in a certain phenomenon and your interpretations will create recommendations to further improvements in real contexts. The case you are about to define have to follow those criteria (Libguides , 2016).

Single or multiple case studies?

One choice the researcher has to make is whether to use a multiple or single case study design (Meyer, 2007). Yin (2007, p.67) proposes four ways to describe a single case study. There is a critical judgement of theorizing aspects, the researched phenomenon is unique and there are revealing or longitudinal purposes with the study. One advantage with single case study is the possibility to make an in-depth analysis. (Meyer 2001). It is however more complicated do draw general conclusions that can be generalized to other contexts. (Eisenhardt 1989). A researcher who has chosen multiple case studies can with the involvement of different types of phenomena and contexts analyse the research from different perspectives but there is on the other hand a need of a well-structured plan to be able to compare the cases. (Dubois and Gadde, 2002). One more advantage with multiple cases is that the use of them can answer the research question in a more comprehensive way (Brown and Eisenhardt, 1997). Leonard-Barton (1990) are making few conclusions from different perspectives about multiple and single case studies. It is easier to make cause and effect assumptions from single case studies compared to the use of multiple cases. Single case studies are suitable for making research about one phenomenon through a certain timeframe while a study of many cases can create a comparative view of different situations.

Prepare for the collection of data

Due to Marrelli (2007) the collection of data in case studies involves the use of different sources at the same time. There is a possibility to both use qualitative and quantitative data to gather the desired information, and sources can for instance be individual interviews, observations of the environment within the case, sampled survey questionnaires and historical documents. This type of data sampling method is called triangulation and the idea about it is that you will reach a higher validity with multiple data sources because they will provide you with different aspects from the empirical reality. The combination of qualitative and quantitative methods can lead to a complete picture of the specific phenomenon (Patton, 1999). Jick (1979) supports the benefits of triangulation and points out how the method can shape confidential results of the studies. The use of multiple sources can also be the key to find solutions and descriptions of the somewhat unintelligible phenomena that are studied. This type data gathering method is at the same time expensive and time-consuming (Meyer, 2007).

Soy (1997) recommends the researcher to start to contact the sources of the information to receive clearance to perform the interviews and to be able to have access to certain documents. According to Yin (2007, p.94) a case study researcher has to control the practical process of data gathering with a written

protocol. The protocol states the overall object of the study, practical procedures during the process, important questions for the investigator to keep in mind and a wide description of how the final case study report will be implemented. A case study protocol can also be available for an external review. Experts and other relevant individuals can see the study from other angles and their thoughts and opinions can help to enhance the quality of the research (Runesson and Höst, 2009). Yamashida and Moonen (2014) emphasize the importance of performing a pilot study in order to control the protocol. With a pilot study, you have the ability to foresee threats to the validity and other issues that can only be discovered through practical actions. Pilot studies will also give you a perspective about how much time and resources that are required for the study. Rowley (2003) believes that a researcher needs to establish a database where all the information is collected and sorted. Every action during the case study process can be saved in the database to provide the investigator with a better control of the work. The collection and sortation is also an important aspect for Jacobson (2002, p.230-231) who proposes that the collected data should be divided into different categories. The purpose of the creation of categories is to enable the researcher to have a better overall view of the data and it is easier to make comparisons and draw conclusions.

Prepare for the interview
Yin (2007, p.117) has two instructions of how to make a case study interview: first you need to follow the preparation you made before the interview and the second instruction is to be as clear as possible when you ask your questions to avoid the threat of misunderstandings between the person who interviews and the informant. Misunderstandings can result in unfulfilled research objectives. The preparation can be a protection for the investigator against potential incidents. Turner (2010) also highlights the importance of compiling a preparation plan before the performance of the interview. McNamara (2009) states a couple of guidelines to follow when you prepare the interview. An important aspect is the environment the interview is performed in and there is a need of a silenced setting where the interviewee cannot be disturbed by unpleasant noise. The person who is interviewed need to get information about the target of the interview and the investigator should state the respect of his or her anonymity. Another information that the respondent should receive is about the format and timeframe of the interview. It is also of great significance that the researcher can record the interview in order to remember and collect the valuable information and data. One way to record an interview is to have a tape-recorder. Jacobsen (2002) are discussing about the advantages and disadvantages about having a tape-recorder as a tool in an interview. You will as an investigator collect every single word the informant is saying but the

recording can both influent the interviewee and the researcher in an unproductive manner. The person who is interview can be unsecure with the presence of a tape recorder and too much trust in the recorder can create difficulties for the investigator. It is of importance for the investigator to listen carefully and take valuable notes.

Castillo- Montoya (2016) highlights a guideline established for research interviews that are referred as *The Four-Phase Process to Interview Protocol Refinement*, shorted as *IPR*. The purpose of IPR is to manage to match the findings from the interviews with the objective of the research. The questions and the conversation in the interview have to support the objective of the research. When following the IPR you are also taking account of feedback on the protocol and test the interview in a similar environment as the chosen phenomenon.

The key to receive a valuable outcome from an interview is to make the person who is interviewed behave like an "informant" instead of a "respondent". The "informant" is a part of a discussion where the researcher both can collect general facts and the informants open minded thoughts and opinions about the case (Yin, 2007 p.117). It is important to create a trustful relationship with the informant (Meyer, 2001). Eisenhardt (2007) has the opinion that you to achieve valuable theory from your interviews should choose informants that can represent the whole phenomenon of the study. The individuals you interview need to have different backgrounds, roles and positions to give you as an investigator an overall picture about the case to reduce the possibility of not conducting the relevant information. Merriam (1994, p.93-95) suggest that an investigator who makes good questions contributes to a well-made interview. It is important to communicate to the interviewee in a correct and understandable manner. The questions have to be objective and it is forbidden to make questions that are influenced by the researchers own view of the specific case or topic. The investigator has to know before the interview which kind information he or her wants to receive during the interview. Questions that should be asked are if the interviewed person is going share his or her feelings, opinions, experience, knowledge, basic information and so on.

Analysis
One way to manage to establish a case study preparation is to have a sense of control and make plans over the research. Yin (2007), Turner (2010), McNamara (2009), Rowley (2002), Yamashida and Monnen (2014) and Runesson and Höst (2009) highlights the importance of establishing written protocols and preparation plans. The protocols and plans can either be created to control the practical process of data gathering or to be guidance to the interview process.

Yin (2007) and Harland (2014) are focusing on how important it is that the research investigator has knowledge and experience about how to make case studies. Herland (2014) suggest that the result of a case study lies in the investigators own hands and Yin (2007) emphasises the complex structure of case studies as a reason for having educated researches. A researcher also needs to have a sensible approach towards the environment, the human beings and the context they are working in (Merriam, 1994).

Conclusion

The analysis of the literature review suggests two main advices to consider for a case study investigator when preparing for the research. Firstly, plans and protocols of how to make the researches are significant for the researcher to be able to keep track of the investigation and follow the general objectives and problematic issues. The involvement of different sources, perspectives and individuals in case studies makes it significant to have protocols and databases where it is easy to collect and sort the findings into usable and comparative categories.

The second advice emphasises that researchers with more experience and knowledge about how to manage case studies have an advantage about how to make case studies. You can with more experience learn by your own or others mistakes and have a more sensible approach towards the study process. One possible way to be more experienced and educated is to read various articles and books about how to manage case studies as a preparation before you start the research process. One aspect for the researcher to keep in mind is to be sensible and relaxed towards the study and the context where the study is set.

Implication

Researchers of case studies can with the support of this paper consider the seriousness of having a solid preparation before the actual research begins. It is of importance for a researcher to make carful plans and protocols where potential threats and opportunities of the future study are predicted. Preparatory education is also significant because it creates a base of knowledge about the methodological aspects of case studies and the studied phenomenon that are shaping opportunities to provide valuable outcomes of the case study.

Future studies

An interesting future research is to make a comparison between the scientific findings that comes from case studies with other types of researches. The objective of the research can be to investigate how much the methodological differences affect the scientific findings.

References

Brown, S., Eisenhardt, K. (1997). The Art of Continuous Change: Linking Complexity Theory and Time-Paced Evolution in Relentlessly Shifting Organizations. *Administrative Science Quarterly, 42*(1), 1-34. doi:10.2307/2393807

Dasgupta, M. (2015). Exploring the Relevance of Case Study Research. *Vision*. 19(2), 147-160. DOI: 10.1177/0972262915575661.

Dubois, A. Gadde, L.-E. Systematic combining: An abductive approach to case research. *Journal of Business Research*. 55 (7) (2002). pp. 553–560

Eisenhardt, K., M, Graebner, M. E. (2007). Theory building from cases: opportunities and challenges. *Academy of Management Journal*. 50(1), 25-32.

Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review* 14 (4): 532–50.

Flyvberg, B. (2006). Five misunderstandings about case study research. *Qualitative Inquiry*. 12(2), 219-245. DOI: 10.1177/1077800405284363

Gerring, J. (2004). What Is a Case Study and What Is It Good for? *The American Political Science Review*. 98(2), 342-354.

Harland, T. (2014). Learning about case study methodology to research higher education. *Higher Education Research & Development*. 33(6), 1113-1122. DOI: 10.1080/07294360.2014.911253.

Gustavsson, B. (red.) (2004). Kunskapande metoder inom samhällsvetenskapen. (3., [rev.] uppl.) Lund: Studentlitteratur.

Jacobsen, D.I. (2002). Vad, hur och varför: om metodval i företagsekonomi och andra samhällsvetenskapliga ämnen. Lund: Studentlitteratur

Jick, T. (1979). Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Administrative Science Quarterly, 24*(4), 602-611. doi:10.2307/2392366

Leonard-Barton, D. (1990). A Dual Methodology for Case Studies: Synergistic Use of a Longitudinal Single Site with. *Organizational science*. 1(3), 248-266.

Libguides. Organizing Your Social Sciences Research Paper: Writing a Case Study (2016). Retrieved 2016-12-03, from http://libguides.usc.edu/writingguide/casestudy

McNamara, C. (2009). *General guidelines for conducting interviews*. Retrieved November 26, 2016, from http://managementhelp.org/evaluatn/intrview.htm

Marrelli, A. F. (2007), Collecting data through case studies. Perf. Improv., 46: 39–44. doi:10.1002/pfi.148

Meyer, C.B (2001). A Case in Case Study Methodology. *Field Methods*, 13(4), 329-352. Doi: 10.1177/1525822X0101300402

Merriam, S.B. (1994). Fallstudien som forskningsmetod. Lund: Studentlitteratur.

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5 Pt 2), 1189–1208

Rowley, J. (2002). Using case studies in research. *Management Research News*, 25(1), 16-27.

Runesson, P., Höst, M. (2009). Guidelines for conducting and reporting case study research in software engineering. *Empir Software Eng*. 14, 131-164. DOI 10.1007/s10664-008-9102-8.

Schram, W. (1971). Notes on Case Studies of Instructional Media Process. *Institute for Communication Research Stanford University*.

Soy, Susan K. (1997). *The case study as a research method*. Unpublished paper, University of Texas at Austin

Stake, R. E. (1978). The Case Study Method in Social Inquiry. *American Educational Research Association*. 7(2), 5-8.

Shuttleworth, M. (2008). Defining a Research Problem. *Explorable.com* Retrieved. Nov 28, 2016. https://explorable.com/defining-a-research-problem

Tellis, W. M. (1997). Introduction to Case Study . Qualitative Report, 3(2), 1-14. Retrieved from h p://nsuworks.nova.edu/tqr/ vol3/iss2/4

Thomas, G. (2011). A typology for the Case Study in Social Science Following a Review of Definition, Discourse and Structure. *Qualitive Inquiry*. 17(6), 511–521. DOI:10.1177/1077800411409884

Turner, D. W. (2010). Qualitative Interview Design: A Practical Guide for Novice Investigators. *The Qualitative Report*. 15(3), 754-760. http://www.nova.edu/ssss/QR/QR15-3/qid.pdf

Yazan, B. (2015). Approaches to Case Study Methods in Education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), 134-152. Retrieved from http://nsuworks.nova.edu/tqr/vol20/iss2/12

Yin, R.K. (2007). Fallstudier: design och genomförande. (1. uppl.) Malmö: Liber.

Yamashita, A. Moonen, L. (2014). Assembling Multiple-Case Studies: Potential, Principles and Practical Considerations. Proceedings of the 18th *International Conference on Evaluation and Assessment in Software Engineering*. 36. Doi:10.1145/2601248.2601286.