

BUSINESS DEVELOPMENT SERVICES (BDS) OFFERED BY MICROFINANCE INSTITUTIONS (MFIS) IN SRI LANKA: CASE STUDY AS A RESEARCH STRATEGY

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Abstract

Research methodology refers to an overall approach to a problem, which can be put into practice in a research process; from the theoretical underpinning, to the collection and analysis of the data. Research methodology consists of components such as research philosophy, process, strategy, choice and techniques. Strategy provides overall direction including the process to conduct a research. Case studies, experiments, action research and ethnography are strategies that can be used in a research. A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between the phenomenon and its context are not clearly evident. Choosing the correct research strategy is very important for a doctoral study. Thus, Case study method was used for a doctoral study to explore the business development services (BDS) offered by the Sri Lankan Microfinance Institutions through the lenses of coproduction concept. Case study method addresses the research objectives and questions at hand and improves the reliability of the research process. Further case study method contributes to understand the complex relationships in BDS and addresses the call for improved methodological pluralism in BDS research.

Keywords: Case Study Method, Research Methodology, Business Development Services, Microfinance, Research Strategy

Introduction

Research methodology provides the overall process that researcher has to follow when carrying out a research that includes philosophical stance, research process (i.e. qualitative or quantitative) and research strategy (i.e. survey, experiments, case study method, action research, ethnography). Research strategy can be defined as the overall direction of research, including the process by which the research is conducted (Remenyiet al., 2003). The selection of the research strategy depends on many factors such as philosophical stance, the nature of research questions, the extent of knowledge available and amount of time and resources available. Case study method was used to undertake the doctoral study on business development services (BDS) offered by the microfinance institutions in Sri Lanka. Theory of co-production was used as the theoretical underpinning for the study.

This paper presents a rationale for selecting case study over other strategies. The paper is composed of three main sections, justifying case study method adopted for this research. The first section explains the positioning of this research within the overall philosophical continuum. Secondly, the suitability of a particular approach used and the

case study method are presented. Thirdly, the techniques used in the data collection and data analysis are discussed. Finally the conclusions are drawn.

Research Philosophy

The research philosophy characterizes the researcher's particular beliefs about the world, which will be reflected in the nature of the data collection, analysis and overall phenomena to be perceived and interpreted (Denzin and Lincoln, 1998). Hence, the researcher needs to recognize and understand the personal philosophical position (paradigm) that will determine the entire course of the research study undertaken.

Positivism and social constructivism are the two contrasting views that can be taken to carry out research (Collis and Hussey, 2003; Remenyiet al., 2003; Easterby-Smith et al., 2003). The main idea behind positivism is that the social world exists externally and its properties should be measured through objective methods rather than inferred subjectively through sensation, reflection or intuition (Easterby-Smith et al., 2003). In contrast, the social constructivist philosophical stance believes that reality is not objective (subjective consciousness) or external, but is socially constructed and given meaning by people (Easterby-Smith et al., 2003). The main differences between positivism and social constructivism are given in Table 1.

Table 1: Differences between positivism and social constructivism

Element	Positivism	Social constructivism
The observer	Must be independent	Is part of what is being observed
Human interest	Should be irrelevant	Are the main drivers of the science
Explanations	Must demonstrate causality	Aim to increase general understanding of the situation
Research progress through Concepts	Hypotheses and deduction Needs to be operationalized so that they can be measured	Gathering rich data from which ideas are induced Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to the simplest terms	May include the complexity of 'whole situation
Generalization through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Source: Easterby-Smith et al. (2002)

By considering the characteristics between the two contrasting views, the social constructivist approach is deemed to be more appropriate for this study. As set out in the aim, objectives and questions, the study aims to explore the business development services provided by microfinance institutions in Sri Lanka. The research requires the researcher to be part of the environment and that reality is created with and through the relationships or interactions (e.g. between counsellor, trainer, and owner manager) in the environment. Moreover, it is believed that there is multiple realities and no pre-existing one reality. Hence, this invalidates the method to embrace a strong positivistic approach.

According to Saunders (2007), research philosophy can be thought of in three major ways: 1. ontological; 2. epistemological; and 3. axiological. These ontological, epistemological and axiological assumptions refer to the nature of reality, the acceptable knowledge in the field of study and the values, respectively. These three assumptions will allow the researcher to position the research within the philosophical continuum.

Ontological Assumptions

Ontology refers to the assumptions that we make about the nature of reality (Easterby-Smith et al., 2008). It is characterized by two aspects: objectivism and subjectivism (Saunders et al., 2007; Johnson and Duberley, 2000). Objectivism asserts that the social entities which exist in reality are external to the social actors, whereas in subjectivism the perceptions and consequent actions of social actors create the social entities. Since this study deals with the perceptions and actions of stakeholders in business development services, it fits into subjectivism.

Epistemological Assumptions

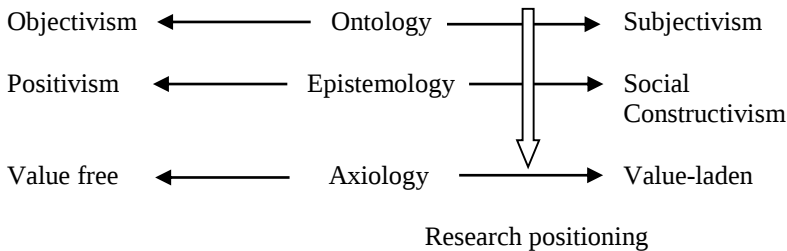
Epistemology relates to relationships between reality and the researcher (Healy and Perry, 2000). Burrell and Morgan (1979) recognize it as how one might understand the world and communicate knowledge to fellow human beings. The researcher who takes up the positivistic approach believes in a pre-existing reality and works with an observable and measurable reality. On the other hand, the researcher who takes up the social constructivist viewpoint does not believe in pre-existing reality and thus believes that reality is socially constructed, whereby differing viewpoints may emerge. The aim of the social constructivist researcher is to understand how people invent structures and explain what is going on around people. In this study, the researcher takes up the social constructivist stance, as the intention is not to measure things, but to understand business development services in Sri Lanka by gathering rich data.

Axiological Assumptions

Axiology studies judge values. It relates to personal values in relation to a research topic (Collis and Hussey, 2003). In the positivist approach, researchers believe that the research process is value free and that objects being studied are unaffected by their activities. In contrast, in the social constructivist approach researchers believe that the research process is value-laden and that research activities are affected by researchers' values and help to determine the facts and interpretations of the study. This research is closer to the value-laden approach; the researcher is highly involved in the research process and adds his values in all the steps of the research process.

Research Positioning

According to the previous discussion, a diagrammatic representation of how this study is positioned in the philosophical continuum is given in Figure 1.



Research Logic

Research logic has three components: induction, deduction and abduction (Eriksson and Kovalainen, 2008; Collis and Hussey, 2009). In the deductive approach, the researcher might begin with a specific theory of interest and then narrow it down to a few hypotheses. These hypotheses will be tested with sets of data to either prove or to disprove the original theory. The inductive approach works in the opposite way to the deductive approach, moving from more specific observations to broader generalizations and theories (Saunders et al., 2007, Creswell, 2007; Gill and Johnson, 2002). Thus theory emerges through induction and theories are tested through deduction. According to Eriksson and Kovalainen (2008), the term abduction is used to combine both induction and deduction and some studies use abduction logic (theory building and theory testing). Since this study focuses on theory building in the area of business development services (the concept of co-production is used only to guide the study), induction logic is considered.

Research Process

The research process consists of four steps, namely descriptive, analytical, predictive and exploratory (Collis and Hussey, 2009). Descriptive research describes a particular problem or issue, whereas analytical or explanatory research goes beyond this and analyses how and why phenomena are happening. Predictive research predicts (forecasts) the likelihood of something happening, while exploratory research is conducted when there is little or no information about the issue or problem. Therefore the idea of using exploratory research is to establish patterns, ideas or hypotheses, rather than to test or confirm hypotheses. This study on business development services provided by microfinance institutions in Sri Lanka is a novel study; the researcher attempts to explore the phenomena and hence this falls into exploratory research.

Research Approaches: Quantitative and Qualitative

Collis and Hussey (2003) identify two research paradigms: quantitative and qualitative. The quantitative, also known as the positivist approach, believes that the researcher is independent of what is being researched, whereas in the qualitative, also known as the interpretive approach, the researcher interacts with what is being researched.

Table 2 distinguishes between the two paradigms from the dimensions of ontology, epistemology, axiology and the rhetorical.

Table 2: Distinction between quantitative and qualitative research

Assumption	Questions	Quantitative	Qualitative
Ontological	What is the nature of the reality	Reality is objective and singular, apart from researcher	Reality is subjective and multiple as seen by participants in a study. Researcher interacts with that being researched
Epistemological	What is the relationship between researcher and the researched?	Researcher is independent from that being researched	Researcher interacts with that being researched
Axiology	What is the role of values?	Value-free and unbiased	Value –laden and biased
Rhetorical	What is the language of research?	Formal Based on set definitions Impersonal voice. Use of accepted quantitative words	Informal Evolving decisions Personal voice. Use of accepted qualitative words

Source: Collis and Hussey (2003).

Based on Collis and Hussey (2003), it is clear that this research is qualitative (e.g. the researcher interacts with that being researched; reality is subjective). According to Creswell (2009), qualitative research takes an inductive approach in the data analysis and builds general themes from the particular and the researcher interprets the meaning of the data. Since this study is an inductive research and it possesses the characteristics identified by Creswell, it is a qualitative research.

Research Strategy (Why Case Studies are Used?)

Research strategy can be defined as the overall direction of research, including the process by which the research is conducted (Remenyiet al., 2003). According to Yin (2009), the choice of research strategy is influenced by three conditions. These are the types of research questions posed; the extent of control an investigator has over actual behavioural events; and the degree of focus on contemporary events. Research strategy also depends on the philosophical stance, the extent of existing knowledge, and the amount of time and other resources available (Saunders et al., 2007). In business and management research, common research strategies are experiments, action research, ethnography, survey and case studies (Saunders et al., 2009; Remenyiet al., 2003; Easterby-Smith et al., 2003). The following section justifies the choice of case study as the best strategy for this study.

The overall philosophical stance of the study, as explained before, is social constructivism. The experiment and survey position is closer to the positivist end of the philosophical continuum. Experiments are widely used in natural sciences, in which hypotheses are tested in a controlled environment (laboratory). In an experiment the researcher can control the environment. Although surveys are not conducted in a strictly controlled environment, their results can be influenced by a pre-determined analysis plan which expects patterns. In contrast, this research was not conducted in a controlled environment and a pre-determined analysis plan was not used. As the study also considers stakeholders' views and perceptions on the subject, more in-depth analysis is needed, hence experiments and survey methods are not suitable.

In action research, the researcher acts as part of the problem environment and tries to change the status quo of the situation by changing the attitudes or the behaviour of the participants. Moreover, it is conducted in a partially-controlled environment, hence making it unsuitable for this study. Ethnography is holistic in which the researcher becomes a participant observer of the problem environment. Ethnography study is carried out for a prolonged period, with interaction with the social groups in order to understand the phenomenon better. Since this study was not conducted for a long period and the researcher did not act as a participant observer, ethnography was not suitable.

Due to the constraints stated, the case study method was the most appropriate method for this study. According to Yin (2009), a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between the phenomenon and its context are not clearly evident. Further, this study answers the “what” type of exploratory questions (i.e. what are the co-production outcomes?); and does not control the behavioural events (i.e. the researcher does not control the behaviour of trainers, counsellors and owner managers); and focuses on a contemporary event (i.e. business development services in Sri Lanka). Hence, according to Yin (2009), case study qualifies as the most appropriate strategy. Accordingly, the following section explains the case study design.

The Case Study Design

Some authors view case study as a methodology, others as a method (Creswell, 2003; Yin, 2009). In this research, the case study is used as a methodology or type of design. Moreover, case studies are generalisable to theoretical propositions and not populations or universes. They do not represent a sample and hence the objective of carrying them out is to expand and generalize theories (analytical generalisation) and not to enumerate frequencies (statistical generalisation) (Yin, 2003).

Choosing a Grounding Theory for Case Study

Case study uses a theory or conceptual categories that guide the study and data analysis. This approach is different to that of other qualitative designs such as grounded theory and ethnography, which do not use a theory to guide the study (Gioia and Chittipeddi, 1991; Strauss and Corbin, 1990; Glaser and Strauss, 1967). Yin (2008) recommends that the case study method needs a theoretical perspective at the beginning of the investigation as it affects the research questions, analysis and interpretation of findings.

Thus this study uses the concept of co-production as the grounding theory for guidance. According to Parks et al. (1981), co-production involves joint efforts between two parties who jointly determine the output of their collaboration.

Case Study Protocol

Case study protocol is a procedure with steps that enhance the reliability of case study research and it is intended to guide researchers in carrying out the data collection from cases (Yin, 2003).

- A case study protocol should have the following sections:
- An overview of the case study project (project objectives and auspices, case study issues and relevant reading about the topic being investigated).
- Field procedures (presentation of credentials, access to case study “sites”, language pertaining to the protection of human subjects, sources of data and procedural reminders).
- Case study questions (the specific questions that the case study investigator must keep in mind in collecting the data).
- A guide for the case study report (outline, format of the data, use and presentation of other documentation and bibliographical information).

A quick glance at the case study protocol indicates why it is so important. First, it keeps the researcher targeted on the topic being researched. It also helps him identify the anticipated problems that may be encountered in the areas of data collection and case study reporting. In this study, the case study protocol was followed.

Selecting a Multiple Case Study Approach

Case study can be single case design or a multiple case one. According to Yin (2003), the multiple case design composed of two or more cases is less vulnerable and gives stronger analytical conclusions than a single case design. Multiple case design also provides a strong base for theory building (Yin, 2009; Eisenhardt and Graebner, 2007). Since the researcher intends to have strong analytical conclusions and a strong base for theory building, the multiple case study approach has been chosen for the study (i.e. six MFIs will be selected).

Determining Case Boundary and Unit of Analysis

It is important to identify the case boundary and the unit of analysis in order to conduct the study. The concept of business networks can be used in this respect.

Based on the nature of the study, which involves dyadic relationships between the MFI (counsellors, trainers) and the owner manager/microenterprise necessary for co-production in business development services (BDS), the dyad network perspective is best suited to determine the case boundary. Thus, the unit of analysis for the study is the dyadic relationship between the MFI (counsellors, trainers) and the owner manager/microenterprise.

Selection of Cases and Respondents

According to Eisenhardt and Graebner (2007), for research focusing on developing a theory rather than testing one, theoretical, rather than random, sampling is found to be ideal. Since the proposed study is about developing a theory (the model in this study), theoretical sampling is used to select cases. Thus six (6) MFIs, counsellors, trainers, managers and owner managers were selected for the study. When selecting the MFIs, MFI category (i.e. government, bank, non-bank, NGO, cooperative) and lending methods (i.e. individual, group) were considered.

Research Techniques: Data Collection and Analysis

Research techniques can be discussed in relation to two major phases: 1. Data collection and 2. Data analysis.

Data Collection

According to Yin (2009), the data for a case study should come from six sources: documents, archival records, interviews, direct observation, participant observation and physical artefacts. The logic behind using multiple sources of evidence is that it enhances data triangulation. Moreover, the benefit of having multiple sources of evidence in the case study approach can be maximized by maintaining a case study database, on which all the evidence (data) is stored in a systematic way (Yin, 2009). Thus the database gives the critical reader an opportunity to go back to the raw data as and when required, resulting in higher reliability in the case study approach (Yin, 2009).

Data collection in the study took place in two stages. In the first stage, data from the chosen MFIs was collected by conducting in-depth interviews with key officers. The data collected from the first stage was used to refine the conceptual framework and research questions. In the second stage, data was collected from both the MFI officers and owner managers of the microenterprises.

Since the study is exploratory in nature and aims to yield insights into the co-production concept in the microfinance context in Sri Lanka, in-depth interviews using a semi-structured questionnaire was the appropriate method for data collection. Thus, in-depth interviews were used as the main data collection tool. According to Martin et al. (2009), the goal of the in-depth interview method is to yield insights into less researched concepts that can guide theory development and/or future research and hence can be empirically verified in subsequent research. Moreover, Patton (2001) states that the semi-structured questionnaire (interview) allows researcher to gather data in more detail and enable a conversational situational interview. Semi-structured interviews also allow the researcher to collect a wide variety of information while covering the topic of interest (Valk, 2007).

For the study, primary and secondary data were collected. According to Patton (2001), the collection of primary data is often costly and time consuming. This data is tailored to a specific interest purpose and is originated by a researcher, whereas secondary data is often quick and less expensive and is already collected for purposes other than that of the researcher. The primary data was collected through in-depth interviews and

observations. The secondary data for this study was gathered through company records, websites (i.e. archival records), product brochures, and government institutions/reports. For example, the websites of six cases were visited in order to collect information pertaining to the organizational structures (i.e. linkages) of cases (MFIs) which have a bearing on co-production. Moreover, some MFIs provided their annual reports, from which BDS performance figures (e.g. Portfolio at Risk (PAR) figures, and number of employments generated) were obtained. These performance figures are useful to examine BDS co-production outcomes. According to Yin (2003, 2009), data from different sources enhances data triangulation.

Five different semi-structured questionnaires were used to collect data from the MFI officials (i.e. microfinance manager, BDS manager, counsellor, and trainer) and owner managers. 1-2 hours was spent with each respondent to collect the data. The questions included were based on the research aim, questions and objectives. Before the final face-to-face interviews took place, the researcher visited potential MFIs and interviewed key personnel, read company reports and visited websites in order to gain insights. A similar process was also followed by other studies (e.g. Johnsen and Ford, 2006).

A brief of the research study was sent to the chosen MFI officers and owner managers, and appointments were made prior to the interview dates. Officers were visited at their respective MFI offices and owner managers at their business premises for the interviews. This method was appropriate, as the researcher was able to make additional observations as well as collect verbal information. It was therefore possible to establish whether there was a discrepancy between what the respondents said and what really happened. The in-depth interviews were audio-taped, transcribed verbatim and then analyzed.

Research Ethics

All researchers should consider ethical issues when conducting a study. According to Denscombe (2004), a researcher needs to consider the following three ethical principles when carrying out a study:

- 1.Participants' interest should be protected.
- 2.Researchers should avoid deception and misinterpretation.
- 3.Participants should provide their informed consent.

Following Principle 1, the researcher sent a letter to all the participants before the data collection, informing them about the objective of the study, their role in the data collection and ensuring how their interests would be protected. When setting up the interviews the researcher made sure they were held at a convenient location and at times convenient to the participants. Thus all the interviews were held at participants' offices and business premises. The participants were informed that the data collected would only be used for the study and that their identities would not be disclosed.

Principle 2 expects the researcher to be open and honest in the interviewing process and its aftermath. For example, before the data collection began every participant was briefed about the objective of the study and their role in it. Transcriptions were also

sent to the participants to verify accuracy. Moreover, the participants were allowed to ask questions and to obtain a copy of the results. The researcher updated the progress of the study to participants so that they felt respected and were willing to provide feedback.

Principle 3 is general agreement from participants that they are participating in the study willingly. The researcher obtained this informed consent from all of them. The participants were assured of their right to anonymity. Thus code numbers were used in the study to represent participants. They were also informed that they were participating in the study voluntarily and could withdraw at any time. Further they could refuse to answer any uncomfortable questions.

In addition, as a postgraduate research student of Bournemouth University, the researcher had to pass an examination on research ethics and needed to obtain ethical clearance for the study from the university.

Transcription and Translation

The majority of the interviews were conducted in the Sinhala language, except for a few which were conducted in English. All the interviews were audio-recorded and the Sinhalese dialogues were translated into English. This was a time consuming exercise, but nevertheless the researcher transcribed all the interview data in order to remain closer to it. After the data had been transcribed, the transcriptions had been translated into English appropriately. Once the data had been transcribed into text the analysis was made. The following sections outline the data analysis procedures.

Data Analysis

Thematic analysis was used to analyze the data. When analyzing data techniques and strategies such as pattern matching and cross case synthesis were used. Yin (2009) proposes four general strategies and five techniques to analyze case studies. These general strategies and techniques are not mutually exclusive and hence researchers can use any number of them in any combination.

Four General Strategies

1) Relying on theoretical propositions

The most preferred strategy to use in analysis is based on the theoretical propositions that led the case study. The original objectives of the case are based on such propositions, which in turn reflect a set of research questions, the literature review, and new hypotheses or propositions. This study employs this strategy in the analysis by using the research objectives, questions and a conceptual framework (which reflects the propositions).

2) Developing a case description

This strategy is used when data has been collected without having initial research questions or propositions. Since this study had research questions and collected data accordingly, this strategy was not used.

3) Using both qualitative and quantitative data

Certain case studies may have a substantial amount of quantitative data, although the qualitative data remains central to the study. Researchers need to use a strong analytical tool to analyze this. This study did not use this strategy, as it primarily collected qualitative data. However, it did use quasi-statistics to explain certain concepts.

4) Examining rival explanations

This strategy attempts to define and test rival explanations. For example, it is possible to have rival propositions, and rival contrasting perspectives of participants and stakeholders. This study does not have rival propositions; however, rival perspectives could emerge, hence this strategy was used. For example, the literature shows that the level of formal education of owner managers can help them to absorb training better, but the findings of the MFI-6 case study show that formal education does not matter and that even with a low level of formal education owner managers can be trained.

Five Techniques

Yin (2009) proposes five techniques to analyze data: pattern matching, explanation building, time series analysis, logic models and cross case synthesis.

1) Pattern matching

Pattern matching is the most desirable technique to analyze a case study. According to Trochim (1989), it compares an empirically-based pattern with a predicted one (or with several alternative predictions). If the patterns coincide, the results can help a case study to strengthen its internal validity. In pattern matching, Yin (2009) distinguishes between theoretical replication and literal replication. Theoretical replication is when cases are designed to cover different theoretical conditions (i.e. selection of cases to predict contrasting results), whereas literal replication is when cases are designed to corroborate each other (i.e. selection of similar cases).

This study used pattern matching as a technique to analyze the cases studies and hence involved theoretical replication and literal replication. An example of theoretical replication was that cases were selected based on the lending strategy of the MFI, and on the basis of this lending strategy the degree of co-production changed. MFI-1 uses group lending and showed higher co-production compared to MFI-3, which uses individual lending. An example of literal replication was that MFIs which uses group lending (e.g. MFI-1 and MFI-2) showed somewhat similar co-production results.

2) Explanation building

The explanation building technique is used mainly in descriptive case studies. However, this technique is used in exploratory case studies as a part of the hypothesis-generating process (Glaser and Staruss, 1967), but its goal is not to conclude a study but to develop ideas for further study. This being an exploratory study, the explanation building technique was used. For example, new ideas emerged that can be researched in the future in light of the co-production theory. A spouse's support in the owner manager's business and office bearer training are such new ideas which emerged from the study.

3) Time-series analysis

The third analytical technique is to conduct time-series analysis. This technique is directly analogous to the time-series analysis conducted in experiments and quasi-experiments. This technique was not used in this case, as the study does not deal with time-series data.

4) Logic models

The logic model technique deliberately stipulates a complex chain of events over an extended period of time. This is used in case study analysis when case events are staged in repeated cause-and effect- cause and effect patterns. This technique was not used here, as the study is not involved with a complex chain of events.

5) Cross-case synthesis

This technique is unique in multiple case studies (i.e. more than one case); as previously explained, techniques can be used for either single or multiple case studies. Cross-case analysis is easier compared to a single case and the findings are robust. In cross-case analysis, word tables are created to display the data from the individual cases according to a uniform framework. Cross-case synthesis was used in the analysis and a word table was created according to the framework identified. When the number of cases is high in cross-case synthesis, quantitative techniques can also be used.

This study used cross-case analysis as there were six cases. In qualitative analysis, the key elements in the data are called 'themes'. Some themes might develop before the analysis and others during the study (Patton, 2002; Coffey and Atkinson, 1996; Sandelowski, 1993). Themes can be common to all the cases or may vary across groups of cases depending on the data and method (Ayres et al., 2003). In this study, the themes identified were common across the cases and hence cross-case analysis was conducted based on these common themes. Cross-case comparisons are useful for external validation of individual case study findings (Creswell, 2007). Table 3 summarizes the strategies and techniques used in the analysis.

Table 3: Strategies and techniques used in the case study analysis

Strategies used	Techniques used
Reliance on theoretical propositions	Pattern matching
Examination of rival explanations	Explanation building
	Cross-case synthesis

Data Analysis Using Nvivo 10

The NVivo 10 qualitative research software was developed by QSR International Australia. It helps researchers to manage, shape and make sense of unstructured data. NVivo 10 has a step-by-step approach. The steps adopted in this research are explained below.

First, six cases (six MFIs) were set up in NVivo. Second, the interview transcripts which form the data sources were imported to NVivo from the individual case studies. Coding data followed which then allowed the researcher to classify the interview data into meaningful themes. There are two types of coding in NVivo: 1. Auto coding, and 2. Manual

coding. Auto coding is recommended for research using structured questionnaires in order to obtain answers to the questions in a consistent way. In contrast, manual coding is used when there is relatively a small data set and the study requires close analysis. In manual coding, the researcher identifies the themes based on the sources and then creates nodes in NVivo. The researcher then drags and drops relevant references (i.e. quotations) to manually created nodes. In this study, manual coding was used because the researcher does not use a structured questionnaire which generates answers in a consistent way and there was also a manageable data set. Further concepts/themes emerged when data was being analyzed, which were different to the themes identified by the software based on common words/similarities on the interview transcripts. Thus manual coding was preferred to auto coding.

A coding structure can be established by arranging the emerging themes in ‘tree nodes’, with each node based on a hierarchical structure for each study. Finally, interdependent ideas were captured, relationships were identified and models created to visualize ideas and relationships. The analyzed data in NVivo was utilized in the thesis at the writing up stage. The case study method recommends maintaining a case study database in order to increase the reliability of the study (Yin, 2009). Thus storing the research data in a meaningful way in NVivo can improve the reliability of this study.

Validity and Reliability

Validity and reliability are important to test the logical statements of a research design. Hence four tests, namely construct validity, internal validity, external validity and reliability, are used in this connection (Yin, 2009).

Table 4: Types of validity used in the study

Type of Validity	Description	Techniques employed	Stage of the report
Construct validity	Identifying correct operational measures for the concepts being studied. In this study, the researcher uses multiple sources of evidence.	Data triangulation. Establishment of a chain of evidence. Key informants review the case study report.	Data collection. Data collection. Data composition.
Internal validity	Quest to establish a causal relationship. Inferences based on documentary evidence and interviews.	Patten matching. Explanation building.	Data analysis. Data analysis. Data analysis.
External validity	Defining the domain to which the study’s findings can be generalized.	Multiple case study –application of replication logic.	Research design.

Reliability	Demonstrating that the operations of a study, such as data collection procedures, can be repeated with the same results.	Case study protocol. Consistent interview guidelines. Case study database.	Data collection. Data collection. Data collection.
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Source: prepared by author, using Yin (2009).

Table 4 outlines how types of validity and reliability were used in the study. Further, the applicability of maintaining a chain of evidence, triangulation and replication logic used in this study is also discussed in detail below the table.

Maintaining a Chain of Evidence

Maintaining a chain of evidence methodically improves the reliability of the study (Yin, 2009). The researcher maintained a case study database in which all the information (e.g. interview data, observations, references) was stored in Nvivo. The case study report cites the relevant sections of the case study database by referencing them to specific documents, interviews or observations. The following steps were followed in maintaining the chain of evidence (figure 5).

By following the steps stated below it is easier to cross-refer the methodological procedures to the resulting evidence.

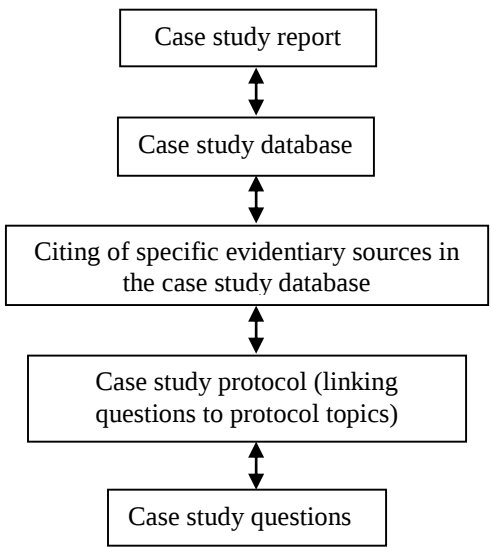


Figure 5: Chain of evidence. Source: Yin (2009).

Replication Logic

Six case studies of diverse natures were selected to allow replication logic. Replication leads to generalisability of the findings to similar contexts. Identical semi-

structured questionnaires were used to collect data across six diverse cases, and similar and dissimilar findings emerged (i.e. literal and theoretical replication).

Triangulation

Triangulation refers to the combination of multiple theories, methods, observers and empirical materials to produce a more accurate, comprehensive and objective representation of the object of the study (Silverman, 2006; Collis and Hussey, 2009). According to Denzin (2006), there are four types of triangulation: 1.data; 2.investigator; 3. method; and 4. theory.

1) Data triangulation

There are three categories in data triangulation: time, space and person (Denzin, 2006). Time triangulation occurs when data is collected at different points in time. In this study, the researcher first collected data in early 2015 and then in the last quarter of 2015. Furthermore, data had been collected through the literature survey since 2014, until the point of writing the thesis. Thus this study fulfils the time triangulation requirement.

Space triangulation occurs when the researcher collects data from different sites. In this study, data was collected from different locations in Sri Lanka. Thus this study meets the space triangulation requirement.

Person triangulation occurs when data is collected from different persons. For this study the researcher collected data from people in the six case studies and from an external trainer and a BDS consultant. Thus this study conforms to person triangulation.

2) Investigator triangulation

This occurs when data is collected by more than one investigator with different expertise, but which involves complementary work for the same study. In this study, data was collected by the researcher himself. Therefore investigator triangulation did not occur.

3) Method triangulation

Method triangulation can occur at the level of design or data collection. At design level it is called between-method triangulation and at data collection level as within-method triangulation. In this study, at the design level in-depth interviews were held to collect data, but at the data collection level data was collected through in-depth interviews and observations.

4) Theory triangulation

Theory triangulation occurs when more than one theoretical position is used to interpret data. In this study, the concept of co-production was used as the grounding theory to interpret the data. Additionally, an IMP framework, linkage models, counselling and training theories were used for interpretation.

Conclusion

Rationale of selecting the case study method as a strategy for a doctoral study aimed at exploring the Business Development Services offered by the Microfinance Institutions in Sri Lanka are presented and discussed in the preceding discussion. It was

revealed that the proper understanding of the philosophical stance and the research strategy are important to carry out a successful research.

Case study was chosen as the preferred research strategy for this doctoral study on business development services due to a number of reasons. These reasons are philosophical stance (i.e. social constructivism), type of research questions (i.e. How, why, what), the study's non-controlling behavior of the participants and its study of a contemporary event. It is important to consider the originality and research design in a doctoral study. It is believed that these results were achieved by carrying out this doctoral study by using the case study method. Thus case study strategy would contribute towards addressing the call for methodological pluralism in business development services research in microfinance sector and enhancing the understanding of the complex relationships relating to the sector and the phenomenon being investigated.

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