CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describe the research methodology. It begins with a discourse on research worldview or paradigm and its associated philosophical dimensions. Then, it justifies the selected research approach and details the sample, data collection methods, and data analysis procedures. The pilot study will then be discussed, followed with the chapter conclusion.

3.2 Research Paradigm

Paradigm or worldview (Creswell, 2014) is a basic set of beliefs that guides action. Research is based on the researcher’s beliefs about the world around him (ontology); about what he can possibly discover and the nature of knowledge (epistemology); and about how he acquires knowledge (methodology). It means that researchers start a project with certain assumptions about how they will learn and what they will learn during their inquiry. Paradigm is the general philosophical orientation about the world that a researcher brings to a study (Creswell, 2014).

3.2.1 Ontology

Ontology is concerned with the nature of reality (Creswell, 2014). It is the philosophical study of what can be said to exist (Sekaran & Bougie, 2016) or the beliefs about the nature of reality (Merriam & Tisdell, 2016). Research is based on beliefs about the world around the researcher and what he can possibly discover by research.

Different researchers have different ideas about these issues. The ontological position of this study is based on the Islamic worldview.

3.2.2 Epistemology

Sekaran and Bougie (2016) described epistemology as the nature of knowledge or how we come to know, or the subjective and objective ways of knowing. Epistemology reflects the researcher's assumption about the type of knowledge acquired, and how the researcher differentiates between what is known as or constitutes accurate knowledge and false knowledge. It explores the ideas about the nature of knowledge and its construction (Merriam & Tisdell, 2016). Therefore, epistemology is the relationship between the reality and the researcher.

In this study, the researcher followed Islamic epistemology in answering how knowledge can be acquired. There are four major sources of revealed knowledge, namely the Qur'an, the Sunnah of Prophet Mohammad, consensus of Islamic scholars, and *qiyas* (analogy). These sources of knowledge are apposite for Islamic development institutions and management methods. Their conventional counterparts, whose epistemology is inadequate and superficial, cannot holistically and comprehensively solve management problems, especially those related to Shariah (F. A. Ahmad, 2012).

Table 3-1: Epistemological Perspectives

	Positivist/Postpositivist	Interpretive/Constructivist	Critical	Postmodern/Post Structural
Purpose	Predict, Control, Generalize	Describe, understand, interpret	Change, emancipate, empower	Deconstruct, problematize, question, interrupt
Types	Experiment, survey, quasi-experimental	Phenomenology, ethnography, hermeneutic, grounded theory, naturalistic/qualitative	Neo-Marxist, feminist, participatory action research (PAR), critical race theory, critical ethnography	Post-colonial, post structural, queer theory
Reality	Objective, external, out there	Multiple realities, context bound	Multiple realities, situated in, political, social, cultural context (one reality is privileged)	Questions assumption that there is a place where reality is resides, 'is there a there?

Source: (Merriam & Tisdell, 2016)

3.2.3 Contemporary Perspective in Business Research

To determine the most appropriate research paradigm and approach for this study, relevant previous research paradigms and research methodologies were examined. The purpose is to determine which research activities or operations are included in this research (Merriam & Tisdell, 2016).

Sekaran and Bougie (2016) discussed the most important contemporary perspectives in business research (positivism, constructionism, critical realism, and pragmatism) and concluded that experts on these matters may sometimes criticise what they say.

Philosophical ideas remain largely hidden in research (Slife and Williams, 1995, as cited in Creswell, 2014). They are the basis of research, and so they need to be plainly justified. Researchers preparing a research proposal must make explicit the philosophical ideas that they espouse. This information will help explain why they chose qualitative, quantitative, or mixed methods approaches in their research. A proposal should include a section that addresses the subject (Creswell, 2014).

Table 3-2: Four Philosophical Worldviews

Worldview	Characteristics
Post positivism	-Determination -Reductionism -Empirical observation and measurement -Theory verification
Constructivism	-Understanding -Multiple participant meanings -Social and historical construction -Theory generation
Transformative	-Political -Power and justice oriented -Collaborative -Change Oriented
Pragmatism	-Consequences of actions -Problem cantered -Pluralistic -Real world practice oriented

Source: Creswell (2014)

In Table 3.2, Creswell (2014) described the peculiarities of each philosophical worldview. Based on the table, this study's approach would aptly be categorized as constructivism, as it seeks to understand the current practices of construction financing from the individuals involved in the subject.

3.2.4 Methodology

Methodology is defined as the procedures of collecting data and describing, explaining and predicting phenomena using the chosen methods or techniques. In other words, methodology is the processes of studying a phenomenon (Creswell, 2014).

One of the research objectives focuses on how Islamic banks address the financial needs of infrastructure contractors. The constructive approach is appropriate to accomplish this, considering that this study attempts to understand the financing methods of Islamic banks to infrastructure contractors through the meanings and understandings of the people involved (Merriam & Tisdell, 2016). Constructivism or social constructivism (often combined with interpretivism) is generally seen as a qualitative research method (Creswell, 2014). Social constructivists try to learn a phenomenon happening in the world. People create their own meanings of their experiences. These meanings are directed towards certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into some categories or ideas. The goal of the research is to rely as much as possible on the participants' views of the situation being studied (Merriam & Tisdell, 2016).

Constructivists are particularly interested in how people view the world as a result of their interactions with others and the context in which they exist in. Constructivism paradigm tries to understand the knowledge of reality and assert that all knowledge is constructed by the social surrounding and can be interpreted subjectively. In contrast, positivism views knowledge objectively. The approach is more suitable to study existing and established relationships and to test a particular theory (Sekaran & Bougie, 2016).

3.3 Qualitative Methodology

Two of the most common research methods are qualitative and quantitative. Moderating this continuum is the mixed methods approach, which combines elements of both methods. All these approaches have distinct methods, aims, and strategies.

According to Creswell (2014), a research approach is selected based on the nature of the research problem or issue being addressed. The primary objectives of this study are to identify the reasons for the lack of construction financing on the part of

Indonesian Islamic banks and to develop an appropriate strategy to remedy the issue. It is therefore crucial to select the most appropriate research methodology as this will determine where the research will begin and how it will proceed.

The questions of this study, according to Sekaran and Bougie (2016), are exploratory, considering that not much is known about the phenomenon of Islamic financing for infrastructure contractors. The issue is also complex because it relates to profitability, product availability, and customer awareness. Sekaran and Bougie (2016) stated that exploratory research often relies on the qualitative approach.

Qualitative research is an approach to explore and understand the meanings ascribed by individuals or groups to a social or individual problem. The research process involves emerging questions and procedures. The data are typically collected in the participant's context. They are analysed inductively, building from particulars to general themes, and the researcher interprets the meaning of the data. The final report has a flexible structure. Those who engage in this form of inquiry support a way of looking at research that honours an inductive style, a focus on personal meaning, and the importance of illustrating the complexity of a condition (Creswell, 2014).

Quantitative research, on the contrary, is an approach to test objective theories by examining the relationship between some variables. These variables can be measured, typically using instruments, returning numerical data that can be analysed using statistical procedures. The final report has a set structure, usually consisting of an introduction, literature review and theory, methods, results, and discussion. Unlike qualitative researchers, those who engage in this form of inquiry already have assumptions when testing the theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings (Creswell, 2014).

Meanwhile, mixed method is an approach to inquiry that involves collecting both quantitative and qualitative data, integrating both, and using distinct designs that may entail different philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches enables a more thorough understanding of a research problem than either approach alone (Creswell, 2014). These three methods are compared in Table 3.3.

Table 3-3: Comparison of Research Methods

Quantitative Methods	Mixed Methods	Qualitative Methods
Pre-determined	Both predetermined and emerging methods	Emerging methods
Instrument based questions	Both open and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data and drawing on all possibilities	Interview data, observation data, document data and audio-visual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Source: Creswell (2014)

Most contractors in the infrastructure sector in Indonesia obtain financing from conventional banks (OJK, 2020b). Since research on this subject is limited (Gundes et al., 2019), it is necessary to thoroughly gather the perception and understanding of infrastructure contractors. A qualitative research approach enables the researcher to gain deeper insight and understanding of how infrastructure contractors in Indonesia in general, or the industry in particular, obtain financing for their projects.

A qualitative research approach is also considered to be appropriate for an area that has received little attention from past research. It is also deemed appropriate because the variables are not yet established and the explanatory theory is still lacking (Creswell, 2014).

Table 3-4: Detailed Comparison between the Three Approaches

Tend to or typically	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
- Use these philosophical assumptions - Employ these strategies of inquiry	- Constructivist/ transformative knowledge claims - Phenomenology, grounded theory, ethnography, case study, and narrative	- Postpositivist knowledge claims - Surveys and experiment	- Pragmatic knowledge claims - Sequential, concurrent, and transformative
- Employ these methods	- Open ended questions, emerging approaches, text or image data	- Closed-ended questions, predetermined approaches, numeric data	- Both open and closed ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
- Use these practices of research as the researcher	- Position him or herself - Collects participant meanings - Focuses on a single concept of phenomenon - Brings personal values into the study - Studies the context or setting of participants - Validates the accuracy of findings - Makes interpretations of the data - Creates an agenda for change or reform - Collaborates with the participants	- Test or verifies theories or explanations - Identifies variables to study - Relates variables in questions or hypotheses - Uses standards of validity and reliability - Observers and measures information numerically - Used unbiased approaches - Employs statistical procedures	- Collects both quantitative and qualitative data - Develops a rationale for mixing - Integrates the data at different stages of inquiry - Presents visual pictures of the procedures in the study - Employs the practices of both qualitative and quantitative research

Source:(Creswell, 2014)

There are some points to consider to help the researcher to decide whether to adopt the qualitative or quantitative approach and to choose which methods to implement. These include the philosophical assumptions, methods of inquiry, and purpose of investigation (Tables 3.4 and 3.5).

Table 3-5: Characteristics of Quantitative and Qualitative Research

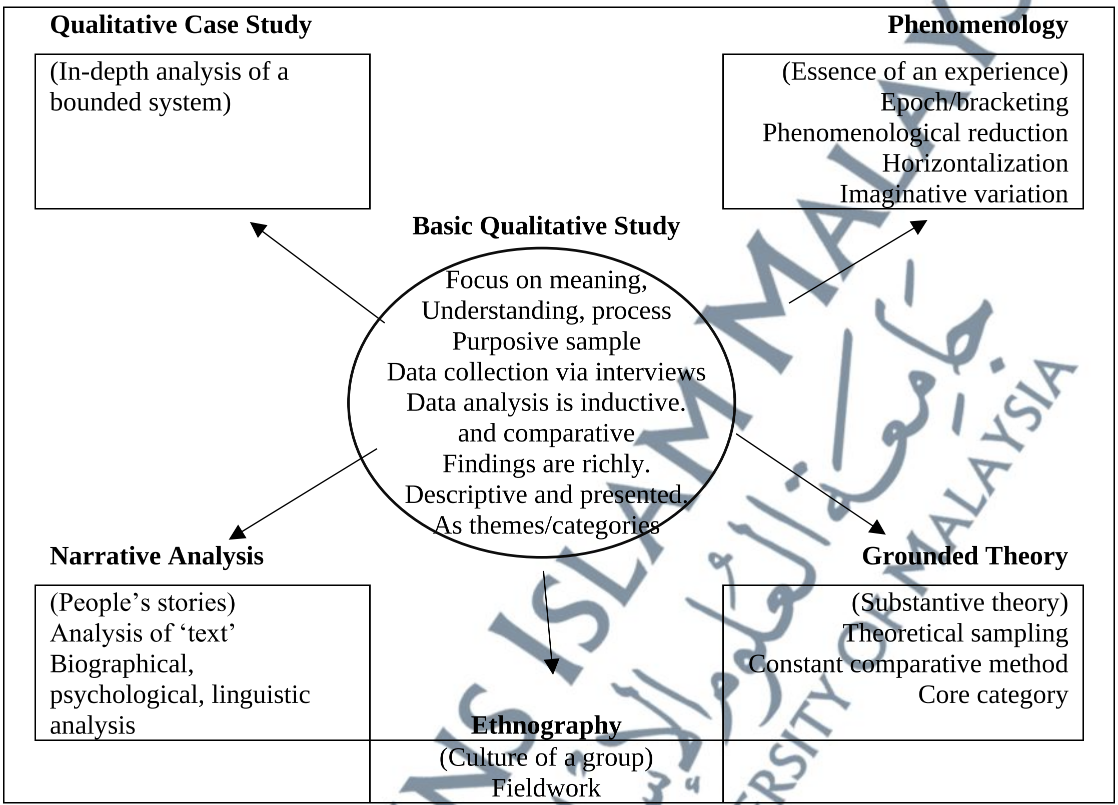
Point of Comparison	Qualitative Research	Quantitative Research
Focus of Search	Quality (nature, essence)	Quantity (how much, how many)
Philosophical roots	Phenomenology, symbolic, interactionism, constructivism	Positivism, logical empiricism, statistical
Associated phrases	Fieldwork, ethnographic, naturalistic, grounded, constructivist	Experimental, empirical, statistical
Goal of Investigation	Understanding description, discovery, meaning, hypothesis generating	Prediction, control, description, confirmation, hypothesis testing
Design characteristics	Flexible, evolving, emergent	Predetermine, structured
Sample	Small, non-random, purposeful, theoretical	Large, random, representative
Data collection	Researcher as primary instrument, interviews, observations, documents	Innominate instruments (scales, test, surveys, questionnaires, computers)
Primary mode of analysis	Inductive, constant, comparative method	Deductive, statistical
Findings	Comprehensive, holistic, expansive, richly descriptive	Precise, numerical

Source: (Merriam & Tisdell, 2016)

3.3.1 Research Design

A research design is a blueprint, plan, or a template for the collection, measurement, processing, and analysis of data to create the answer to the research questions. A research strategy will help the researcher to meet the objectives of the research and to formulate answers to the research questions. The choice for a particular research strategy will therefore depend on the research objectives and the type of research questions of the study. Additionally, it will also depend on the researcher’s viewpoint on what makes good research and on practical aspects such as access to data sources and time constraints.

Meriam and Tisdell (2016) listed six common research designs: basic qualitative research, phenomenology, case study, ethnography, grounded theory, and narrative analysis (Figure 3.1). Creswell (2014), however, viewed those last five items as approaches. Patton (2015) (as cited in Creswell, 2014), discussed 16 "theoretical traditions" and included some less common strategies, such as semiotics and chaos.



Source: (Merriam & Tisdell, 2016)

Figure 3.1: Common Qualitative Research Designs

3.3.2 Basic Qualitative Study

Basic qualitative study focuses on collecting information about a specific object, event, or activity, such as a particular business unit or organization. It focuses on an individual, a group, an organization, an event, or a situation that the researcher is interested in. The unit of analysis can be an individual, company, institution, cluster, program, responsibility, or population. It should be noted that some studies may provide both qualitative and quantitative data to be analysed and interpreted (Sekaran & Bougie, 2016).

3.3.3 Observations and Documents

Creswell (2014) explained that there are some common arguments and agreements about the core characteristics that define qualitative research. First is researcher as key instrument. Qualitative researchers collect data themselves by examining document, observing behaviour, or interviewing participants. They may use a protocol — an instrument for collecting data — but the researchers are the ones who actually gather the information. They do not tend to use or rely on questionnaires or instruments developed by other researchers (Creswell, 2014).

The second is multiple sources of data. Qualitative researchers typically gather multiple forms of data, such as interviews, observations, documents, and audio-visual information rather than relying on a single data source. Then, the researchers review all of the data, make sense of it, and organize it into categories or themes that cut across all of the data sources (Creswell, 2014).

Creswell (2014) explained that a qualitative observation is when the researcher takes field notes on the behaviours and activities of individuals at the research site. During the research process, the investigator may collect qualitative documents. These may be public documents (e.g., newspapers, minutes of meetings, official reports, annual reports, company's website) or private documents (e.g., personal journals and diaries, letters, e-mails).

Documents in this study were annual reports of the sample Islamic banks. Annual reports are publications that are issued annually with the primary objective of sharing information with shareholders and investors of the company, apart from reasons related to regulatory compliance. Annual reports share vital information on the company's operations and financial conditions. While the front part of the report consists of an interesting combination of graphics, photos, and attractive content, all of which chronicle the previous year's activities, the back part of the report presents detailed financial and operational information. Annual report contents are a primary source of information to stakeholders. The document provides detailed information about the company, management views, and an authentic financial record to help investors to make informed decisions for their future investments. Generally, annual reports cover the topics of vision and mission statements of the company, corporate information, products overview, directors' report, management discussion and analysis (MD&A), information on shares of the company, auditor's report, and financial statements and notes to accounts (Tang, 2015).

All the sample Islamic banks provide publicly available annual reports on their respective websites. However, contractors, including infrastructure contractors, do not have any obligation to publish their annual reports. In fact, almost all of the infrastructure contractors do not have a website.

3.3.4 Semi-structured Interview

There are several methods of collecting data in qualitative research, including observation, questionnaires, and unobtrusive research (Table 3.6). A widely used method of collecting data in business research is to interview respondents to obtain information on an issue of interest. There are different types of interviews. Individual or group interviews may be unstructured or structured and conducted face to face, via telephone, or online (Sekaran & Bougie, 2016).

In most forms of qualitative research, some and occasionally all of the data are collected through interviews (Merriam & Tisdell, 2016). A widely used method of collecting data in business research is to interview respondents to obtain information on an issue of interest (Sekaran & Bougie, 2016). An interview is a guided, purposeful conversation between two or more people.

The various forms of interview can be categorized into a set of type and also into a set of structure (Merriam & Tisdell, 2016). The participants can be an individual, a group, or an expert panel. The interview could be unstructured, structured, or semi-structured. It could also be conducted directly (face-to-face), via telephone, or online.

Table 3-6: Methods of Data Collection

Method	Description
Observation	-Gather field notes by conducting an observation as a participant. -Gather field notes by conducting an observation as an observer. -Gather field notes by spending more time as a participant than as an observer. -Gather field notes by spending more time as an observer than as a participant. -Gather field notes by observing as a 'participant-outsider' and then moving into the setting and observing as a 'participant-insider'
Interview	-Conduct an unstructured, open-ended interview and take interview notes. -Conduct an unstructured, open-ended interview, audiotape the interview, and transcribe it. -Conduct a semi structured interview, audiotape the interview, and transcribe the interview. -Conduct a focus group interview, audiotape the interview, and transcribe it. -Conduct different type of interviews: e-mail or internet, face-to-face, focus group, online focus group, and telephone interviews.
Document	-Keep a journal during the research study. -Have a participant keep a journal or diary during the research study. -Collect personal letters from participants. -Analyse public documents (e.g., official memos, minutes, records, archival material). -Examine autobiographies and biographies. -Conduct chart audits. -Review medical records.
Audio-visual material	-Examine photographs or videotapes. -Have participants take photographs or videotapes (i.e., photo elicitation), and then interview them about the materials. -Examine physical trace evidence (e.g., footprint in the snow) -Videotape or film a social situation or an industrial or group. -Examine website main gapes. -Collect sounds (e.g., musical sounds, a child's laughter, car horns honking). -Collect email messages, discussions, board messages (e.g., Facebook), or other forms of social media messages. -Collect cell phones text messages (e.g., twitter) -Examine possessions or ritual objects. -Collects sounds, smells, testes, or any stimuli of the senses.

Source: Creswell (2014)

Structured interviews are used when the necessary information is known at the outset. The main purpose of an unstructured interview is to explore and probe into several factors in a situation that might be central to the broad problem area (Sekaran & Bougie, 2016). Semi-structured interview is in the between both, and the questions are more flexibly worded, or the interview is a mix of more or less structured questions (Merriam & Tisdell, 2016). The differences between the three structures are shown in Table 3.7.

Table 3-7: Interview Structures

High Structured/Standardized	Semi structured	Unstructured/Informal
-Working of questions is predetermined -Order of questions is predetermined -Interview is oral form of a written survey -In qualitative studies, usually used to obtain demographic data (age, gender, ethnicity, education, and so on) -Examples: US Census Bureau survey, marketing surveys	-Interview guide includes a mix of more and less structured interview questions - All questions used flexibility -Usually, specific data required from all respondents -Largest part of interview guided by list of questions or issues to be explored -No predetermined wording order	-Open ended questions -Flexible, exploratory -More like a conversation -Used when researcher does not know enough about phenomenon to ask relevant questions -Goal is learning from this interview to formulate questions for later interviews -Used primarily in ethnography, participant observation, and case study

Source: (Merriam & Tisdell, 2016)

3.4 Sampling

According to Sekaran and Bougie (2016), sampling is the process of selecting a sufficient number of the right elements from the population. Understanding the properties or characteristics of a sample allows for the researcher to generalise such properties or characteristics to the population. Some major steps in sampling include:

1. Define the population.

   The target population must be defined in terms of elements, geographical boundaries, and time.

2. Determine the sample frame.

The sampling frame is a (physical) representation of all the elements in the population from which the sample is drawn.

3. Determine the sampling design.

   Probability and nonprobability sampling.

4. Determine the appropriate sample size.

   Factors affecting decisions on sample size are:

   a. The research objective.

   b. The extent of precision desired.

   c. The acceptable risk in predicting that level of precision.

   d. The amount of variability in the population itself.

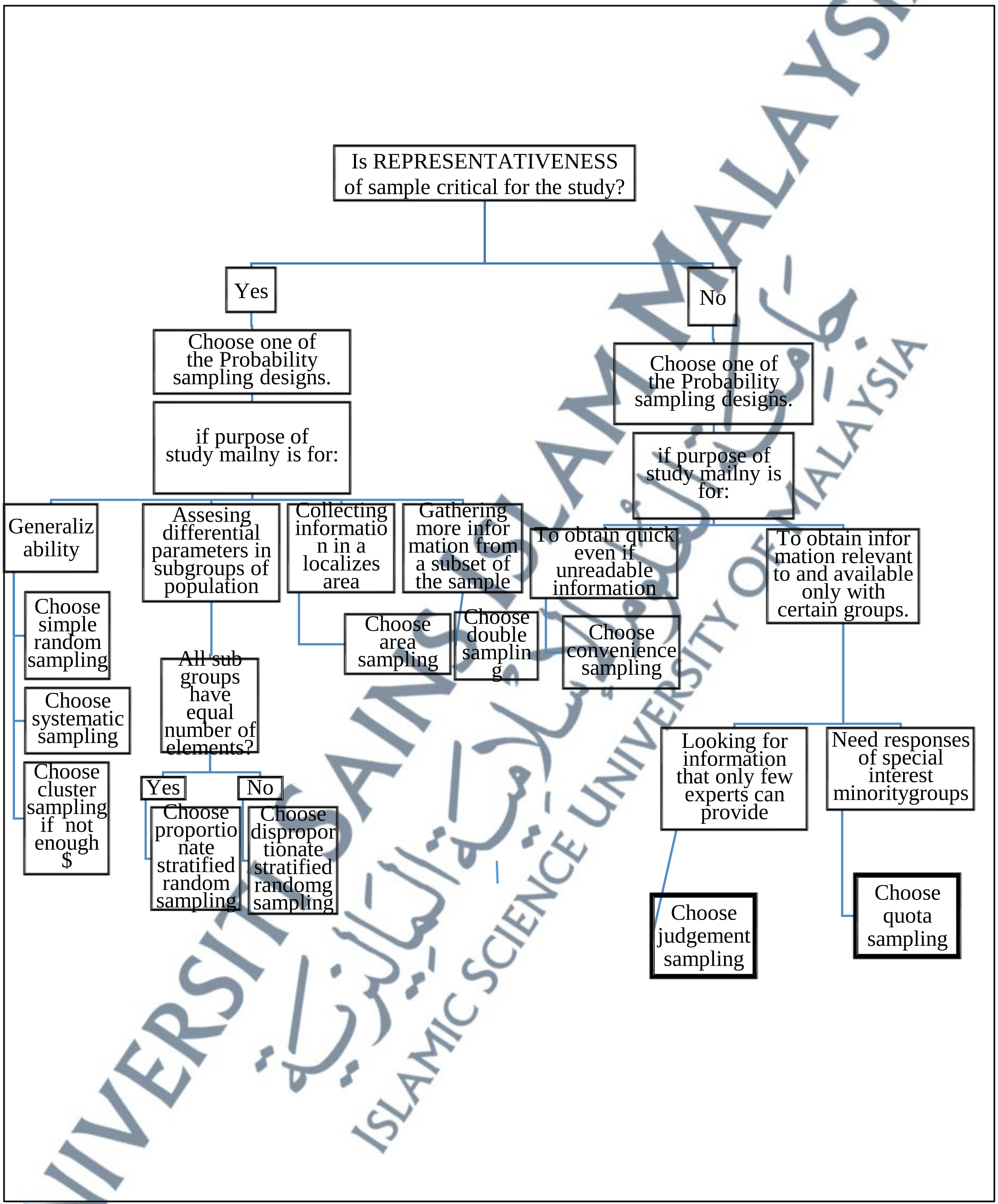
   e. The cost and time constraints.

   f. In some cases, the size of the population itself.

5. Execute the sampling process

There are two major types of sampling design: probability and nonprobability sampling. In probability sampling, the elements in the population have a known non-zero chance or probability of being selected as sample subjects. In nonprobability sampling, the elements do not have a known or predetermined chance of being selected as subjects (Sekaran & Bougie, 2016).

Probability sampling (of which simple random sampling is the most familiar example) allows the investigator to generalise results of the study from the sample to the population from which it was drawn. Since generalisation in the statistical sense is not the goal of qualitative research, probabilistic sampling is not necessary or even justifiable in qualitative research. Thus, nonprobability sampling is the method of choice for most qualitative research (Merriam & Tisdell, 2016). The flowchart in Figure 3.2 illustrates the choices of sampling design for a given study.



Source: Sekaran & Bougie (2016)

Figure 3.2: Sampling Design Flowchart

This study used judgment sampling, which involves the selection of individuals who are in the best position to provide the required information. Judgment sampling is appropriate when a limited number or category of people have the information that is sought. It calls for special efforts to locate and gain access to the persons who do have the requisite information (Sekaran & Bougie, 2016).

Quota sampling is a part of purposive sampling. It is defined as the second type of purposive sampling. It ensures that certain groups are adequately represented in the study through the assignment of a quota. Quota sampling can be considered as a form of proportionate stratified sampling, in which a predetermined proportion of individual are sampled from different groups, but on a convenience basis (Sekaran & Bougie, 2016).

3.5 Interview Participants and Interview Protocol

Creswell (2014) explained that it is more appropriate to use the term participant rather than informant in today's research. In this study, all 12 Islamic banks were interviewed to obtain relevant information required to answer the research questions (Figure 3.3). In terms of financial position, these 12 banks constitute more than 50 percent of Islamic banking asset in Indonesia.

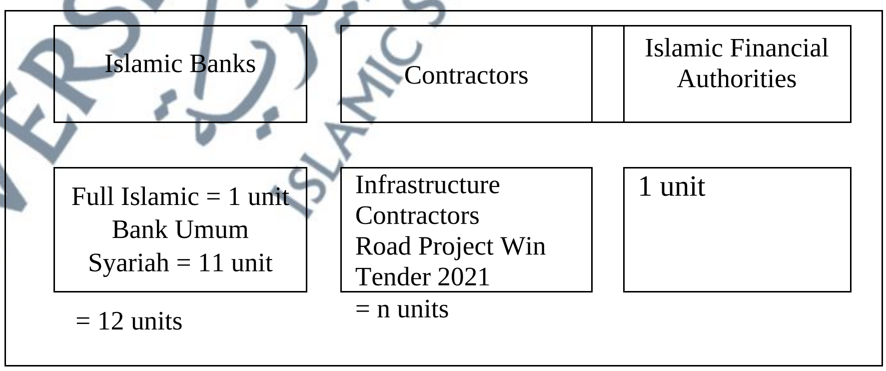


Figure 3.3: Research Population and Sample

The study also interviewed infrastructure contractors in Jakarta. The sample was selected from a population of contractors that have won a road project contract in 2021. The data were collected from the government's infrastructure project procurement website. The website is owned by the Ministry of Public Works Indonesia.

Finally, the study also collected data from three Islamic financial authorities in Indonesia. These three authorities have different functions. They are Financial Services Authority (OJK), National Sharia Board of Indonesian Council of Ulema (DSN-MUI), and the National Committee for Islamic Economics and Finance (KNEKS).

3.5.1 Islamic Banks

As described previously, the study is concerned with the financing activities of Islamic banks, and as such the sample was all Islamic banks in Indonesia (BUS). The corporate structure of Islamic banks is generally divided into a head office, branch offices, sub-branch offices, and cash offices. The head office is the centre of operations tasked with planning and controlling. One of its department, corporate financing division, leads the bank's business direction and informs the bank's operations in certain segments. Key persons from this department were therefore selected as interview participants. However, during the interview sessions, the attendants were not limited to employees from this department.

Table 3-8: Interview protocol – Islamic Banks

No.	Question	Aims
1	How does the bank view customer segmentation in the context of financing? Based on a general overview of OJK reports	To know the bank's general financing strategy
2	What is the present priority in financing the construction business, especially the infrastructure contractor segment?	To know if the bank's strategy aligns with the government's policy direction
3	What is the bank's view about the importance of contract type (*aqad*)? Which is more important, contract type or customers' need for financing?	Priority in financing decisions
4	How does the bank currently implement *istishna* financing, especially for construction?	
5	How is *musharakah* financing withdrawn to construction businesses?	
6	Open issues in contractor financing	

3.5.2 Contractors

Interviews were also conducted with the contractors, as they are the (potential) customers of the Islamic banks in the study. The sample was contractors who won a road project tender in 2021. National public road works are tendered in Jakarta, but the work site is spread across Indonesia. The tender value starts from the smallest to the highest. Small value projects are typically won by private contractors, whereas large projects are reserved for contractors of the highest grade (grade 7) and capacity.

Table 3-9: Interviews Protocol - Contractors

No.	Questions	Aims
1	Does the company have account in Islamic bank? Type of account, saving or financing?	To check if the contractor already has connection with Islamic bank. To check more about kind of connection, as customer.
2	How does the Islamic bank perform the service in financing? Is there any Islamic bank offering financing service?	To understand banks' service in providing the financing. To check if there is any financing offered by Islamic bank
3	Is financing from Islamic banking in a good term? How is the cost of financing? or other facility from Islamic bank	To find out the view of the customer or prospect customer about the existing service or the offered service. To find out in more detail about specific item, such cost of financing or other services from Islamic bank.
4	How is the financing offer from Islamic bank? *Murabahah*, *Mudharabah*, *Musharakah*	To find out in more detail about specific financing contract that is best service from Islamic bank
5	Is there any issue about Islamic bank that may be interested to be discussed?	To find out another issue that is not included in the interviews protocol that is related to financing from Islamic bank

3.5.3 Authorities

The study intends to propose a practical model of *musharakah* to finance infrastructure contractors. Input for this proposal was collected from the authorities that deal with *musharakah*. The interviewed authorities came from OJK and KNEKS.

Table 3-10: Interview Protocol - Authority

No.	Question	Aims
1	What is OJK's agenda for financing the contractors from Islamic banks?	To understand the present direction in prioritising the contractors financing from Islamic banks.
2	What is the restriction on proposing a new model on *musharakah* for contractor's financing from Islamic bank?	To understand the restriction on the use of the regulations.
3	Open discussion in *musharakah* financing for contractors	

3.6 Expert Validation of Interview

Interview is the best method to obtain easily coded information. The interview instrument must be validated so that the results can be replicated and can contribute to the underpinning theory (Sekaran & Bougie, 2016). One method of validation is respondent validation, where feedback on preliminary findings is solicited from the participants to rule out the possibility of misinterpreting the meaning of the participants' statements (Merriam & Tisdell, 2016). Validation in this study was performed by experts from Indonesia. The experts are below:

Table 3-11: Experts Validation of Interview

Qualification	Gender	Working Experience	Position	Remarks
Dr. in Islamic Economics	Male	More than 30 years	Director, Universitas Trisakti	Researcher's master graduate school
Dr. in Accounting Science	Male	More than 30 years	Head of Program, Universitas Mercu Buana	Researchers' campus of lecturing

3.7 Data Analysis

3.7.1 Procedures

3.7.1.1 Document Data

The annual reports of the Islamic banks were analysed by selecting keywords related to the research, e.g., construction, contractors, *musharakah*, that were ultimately included in the narrative of the final research report. The data are dense and rich, and not all information can be used. This process aggregated data into a smaller number of themes to facilitate analysis (Creswell, 2014).

3.7.1.2 Interview Data

Qualitative data analysis is not easy. There are relatively few well-established and commonly accepted rules and guidelines for analysing qualitative data. Over the years, however, some general qualitative data analysis techniques have been developed. The approach discussed here is largely based on Miles and Huberman (1994), as cited in Merriam and Tisdell (2016). They stated that there are generally three basic steps in qualitative data analysis: data reduction, data display, and drawing conclusions.

The first step in qualitative data analysis is data reduction. It is the process of selecting, coding, and categorising data. Data display refers to the method of presenting the data. A selection of quotes, a matrix, a graph, or a chart illustrating patterns in the data may help the researcher (and eventually the reader) to understand the data. Displaying data may help the researcher to draw conclusions based on patterns in the reduced dataset. Having identified these general stages, it should be noted that qualitative data analysis is not a step-by-step, linear process, but rather a continuous iterative process. For instance, data coding may help the researcher to simultaneously develop ideas on how the data may be displayed and to draw some preliminary conclusions. In turn, preliminary conclusions may feed back into the way the raw data are coded, categorized, and displayed.

Marshall and Rossman (1989), as cited in Creswell (2014) contended that data collection and data analysis need to be a simultaneous process in qualitative research. Schatzman and Strauss (1973), as cited in Merriam and Tisdell (2016) claimed that qualitative data analysis primarily requires classifying things, persons, and events and the properties which characterise them. Typically, throughout the data analysis process, researchers index or code their data using as many groups as possible (Jacob, 1987, as cited in Creswell, 2014). They seek to identify and describe patterns and themes from the perspective of the participants, then attempt to understand and explain these patterns and themes (Agar, 1980, as cited in Creswell, 2014). During data analysis, the data will be organised through categorisation and by timeline, reviewed several times, and coded continually. A list of major ideas that surface will be chronicled. Recorded interviews and the participant's taped diary will be transcribed verbatim. Field notes and diary entries will be regularly reviewed (Merriam & Tisdell, 2016).

3.7.2 Internal Validity or Credibility

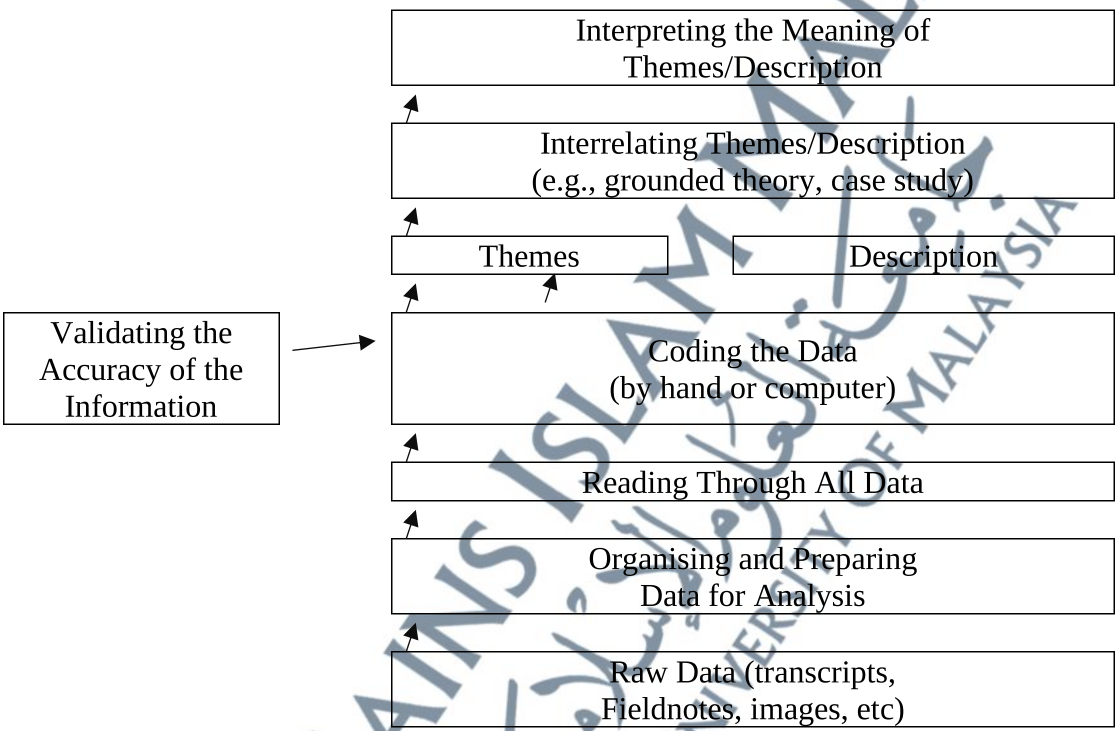
Internal validity deals with the question of how research findings match reality. One of the assumptions underlying qualitative research is that reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured as in quantitative research. What is being investigated are people's constructions of reality, that is, how they understand the world. Because human beings are the primary instrument of data collection and analysis in qualitative research, interpretations of reality are accessed directly through their observations and interviews. Probably the best-known strategy to ensure the internal validity of a study is triangulation. Triangulation using multiple sources of data means comparing and cross-checking data collected through observations at different times or in different places, or interview data collected from people with different perspectives or from follow-up interviews with the same people. Investigator triangulation occurs when there are multiple investigators collecting and analysing data (Merriam & Tisdell, 2016).

3.7.3 Narrative Inquiry and Thematic Data Analysis

Merriam and Tisdell (2016) stated that at the heart of narrative inquiry is the ways humans experience the world. Narrative inquiry is a research technique that studies experience through stories. Sekaran and Bougie (2016) defined narrative analysis as an approach that aims to elicit and study the stories narrated by people about themselves and their implication on their lives that are collected through interviews.

Data analysis in qualitative research will proceed together with data collection and reporting of findings. While interviews are going on, for example, researchers may be analysing some interview data collected earlier, writing memos that may eventually be included as a narrative in the final report, and organizing the structure of the final report. From a qualitative thematic analysis of the data, the researcher then performed an extensive review of the literature to locate standardized measures that matched the qualitative findings (Creswell, 2014). The complete qualitative data analysis procedures are summarized in Figure 3.4.

The final step in data analysis is interpreting the findings. Asking, “What were the lessons learned?” captures the essence of this idea. These lessons could be the researcher’s personal interpretation, which is influenced by his culture, history, and experiences. It could also be a meaning derived from a comparison of the findings with information gathered from the literature or theories. In this way, authors suggest that the findings confirm past information or diverge from it. It can also suggest new questions that need to be asked. These questions emerge from the data and analysis and had not been foreseen by the investigator earlier in the study (Creswell, 2014).



Source: (Creswell, 2014)

Figure 3.4: Data Analysis in Qualitative Research

3.7.4 Validity and Reliability

Qualitative validity means that the researcher checks for the accuracy of the findings by employing certain procedures. Qualitative reliability indicates that the researcher's approach is consistent across different researchers and different projects. Validity is one of the strengths of qualitative research and is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers. Terms abound in the qualitative literature that address validity, such as trustworthiness, authenticity, and credibility (Creswell, 2014).

According to Creswell (2014), there are some primary strategies to improve the validity and reliability of qualitative research. The first is triangulating different data sources by examining evidence from multiple sources and using them to build a coherent justification for themes. If themes are established based on converging several sources of data or perspectives of participants, then this process can add to the validity of the study. In this study, the researcher compared between the data gathered from the interviewees and data from OJK and the Islamic banks' annual reports. As for the data collected from contractors, the researcher compared the answers between the informants.

The second strategy is using rich, thick description to convey the findings. This description may transport readers to the setting and give the discussion an element of shared experiences. When qualitative researchers provide detailed descriptions of the setting or offer different perspectives about a theme, the results become more realistic and richer. This procedure can add to the validity of the findings. The researcher also continually discuss the work with his thesis supervisors.

3.7.5 Atlas.ti Application

According to Creswell (2014), it is necessary to specify whether the researcher will use a qualitative computer data analysis program to assist him in analysing the data or whether the data will be hand-coded. Hand coding is a laborious and time-consuming process, even for data from a few individuals. Thus, qualitative software programs have become quite popular, and they help researchers organise, sort, and search for information, text or image, stored in the database (Creswell, 2014).

Atlas.ti is a qualitative data analysis (QDA) software package that enables users to import and organise data, as well as to analyse rich text and plain text documents, sound in audio files, spread sheets, databases, pictures in digital photos, documents, PDFs, bibliographical data, web pages, and social media data. Atlas.ti now has the capacity to interchange data with many other software applications for seamless collection of multiple sources of relevant data and information. It can accommodate information from data processing applications such as Microsoft Word and Excel, databases such as IBM SPSS Statistics, web browsers such as Internet Explorer and Google Chrome, as well as social media such as Facebook, Twitter, OneNote, and EverNote.

3.8 Pilot Study

Pilot interviews are crucial to test the prepared interview questions. Pilot interviews afford the researcher the opportunity to not only practice interviewing but also to quickly learn which questions are confusing and need rewording, which questions yield useless data, and which questions, as suggested by the respondents, should be included (Merriam & Tisdell, 2016).

The pilot interview was conducted with a single respondent, who understood the questions and answered them completely. The respondent works in a managerial position at a full-fledged Islamic bank in Jakarta. He works in the corporate financing unit and is also a part-time lecturer at the same campus where the researcher lectures. The researcher carried out the initial interview by phone as introduction before eventually meeting face-to-face with the respondent. The interview was conducted in Bahasa Indonesia. It was then transcribed and translated into English.

3.8.1 Pilot Interview Outcome

Answering the first question, the interviewee said that the bank considers the risk acceptance criteria (RAC) when issuing financing to customers. The bank also considers its experience in financing customers. The present issue is the low share of financing for infrastructure construction, indicating that the bank has little experience in financing the segment. This is corroborated by data in their annual reports. Answering question two, he said that the contractor segment is in the neutral category. He did not mention which segment is considered high or low priority. For the third question, the bank's priority is to provide a solution for the financing needs of customers. The type of contract will depend on the outlined terms and conditions of financing.

For question four on why *istishna* is the least used contract, the respondent answered that the contract used to finance contractors is not determined in the beginning of transactions. The interviewee explained that the Islamic bank has a limited experience with *istishna*. It has only used *istishna* to finance a few contractors while monitoring the contractor thoroughly and ensuring thorough mitigation of risks. Some of the financings are in the form of *mudharabah*. For some corporate clients, the contracts were tailor made.

For the fifth question, the respondent answered that using *musharakah* to finance infrastructure contractors will likely deprive the bank of any income, as it must wait for the client to generate revenue from its operations. Regarding the final question, he said that the challenge is construction risks. A stalled project could suspend the bank's income stream if the project is long-term or spans multiple years. Additionally, the collaterals are not easy to liquidate. The reputation of the main contractors is also a point of consideration.

From the interview notes above, the researcher saw that the answers do not reflect the discussions of the literature review, as the responses are based on the routine of the Islamic bank. The narrative of the interview concerned financed clients and their risks and financing needs, which the bank tries to solve.

3.8.2 Rarity of *Musharakah*

The purpose of the interview was to obtain the bank's view of infrastructure contractor financing using the *musharakah* contract. It was therefore assumed that the interviewee has good understanding of the subject. However, it is recommended to start an interview by describing the definition and scope so that both interviewer and interviewee share the same perspective. Otherwise, the definition of a contractor will default to the more familiar concept of a building contractor.

Musharakah is principally a partnership, which allows the bank to understand the problem that might cause repayment delays, such as late disbursements for the project. This cause may be revealed through interview with the partner. If the bank sees that the customer's problem is not part of its own problem, the financing contract would be *murabahah*, which differs from *musharakah*. In a *musharakah* contract, the bank as a partner has the authority to participate in the partnership and give proper solutions. In submitting project proposals, the bank must learn and propose several alternative solutions. The bank should also clearly understand the procedures to claim payments from the project owner so that it can see at which stage the problem arises.

3.8.3 Proposed *Musharakah* Joint Operation Model

Generally, Indonesian contractors establish a joint operation to transfer knowledge, enhance competitiveness, and increase economic capacity. According to the regulation of Ministry of Public Works, joint operation is a form of temporary business cooperation without establishing a new legal entity. The venture could be equity or non-equity, and the operation could be contractual, equity, cooperative, and restructuring. The parties typically do not possess the same knowledge, experience, or skills, which means that each party has the ability and expertise to carry out an activity or job specific to its field (Jayady et al., 2013).

Joint operations generally mean that the firms partner together in a project. For instance, a joint operation between construction firms A and B means that both will partner in the completion of a project while remaining as separate entities. The firms will not establish a new legal entity, for example forming PT AB Construction or AB Construction Sdn Bhd.

The project carried out with this joint operation model could be financed with *musharakah*. The authorities, rights, and responsibilities of each party can be determined prior to the agreement. The value of the contract is clear as it is public. The terms of payment, typically disbursed at the achievement of each milestone, are also clearly stipulated in the contract.

In the *musharakah* model, the bank will bring capital into the joint operation venture by either transferring funds into the venture or bringing required equipment to the project. The bank must be more involved in the works; it must employ personnel that are familiar with the equipment and methods in executing the works. This is in line with *musharakah* principles: partners contribute their fund, asset, and expertise to the partnership instead of merely applying common financing risk analyses (Moriguchi et al., 2016).

This model was discussed with the interviewee, who has good basic knowledge on the subject. Basic knowledge means that the interviewee is aware of the definition and procedures of a *musharakah* contract, but he was unfamiliar with the legal and commercial aspects of the financing product. Therefore, he could not say whether *musharakah* is feasible for contractor financing.

3.9 Conclusions

This chapter has discussed the philosophical underpinnings and methodology of this research. The study generally used three reference, namely Sekaran and Bougie (2016), Creswell (2014), and Merriam and Tisdell (2016). Other source were also used to inform the methodology. To accomplish the research objectives, the study adopted the constructivist paradigm and employed the qualitative methodology. After determining the sample using judgment sampling, data were collected using semi-structured interviews and then qualitatively analysed. A pilot study was performed and analysed using narrative analysis. The feasibility of the proposed *musharakah* model was also discussed.