CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research methodology used to empirically examine a proposed working framework. In particular, it aims to describe the data collection methods of the research, and other related issues that is encountered during the data collection process. Five main sections contribute to the description of the research methodology. After the introduction, the following represents the the research philosophy (3.2), the research procedures (3.3) where this section is divided into three phases of exploration, research design, and research execution. While the first phase is exploring and selecting research questions for further investigation plus examining the published literature in the area of inquiry, the second phase of research design will include the conceptual framework, research method of data collection, research setting, population and types of sampling and the research instruments of interview and identifying the respondents. The following section is the types of methods of analysis explained in Section (3.4), with limitations in (3.5) and the conclusion of the chapter in Section (3.6).

3.2 Research Philosophy and Approach

The purpose of the research, types of investigation adopted, research setting, level of researcher interference and unit of analysis are fundamental to research design (Sekaran & Bougie, 2009). Thus, in designing a research, the researcher must clearly address these five basic aspects first. The design of research methods is a 'blueprint' aimed at answering to research questions and their problems (Bhattacherjee, 2012).

With respect to the research purpose of a social research, a research can be classified as either exploratory, descriptive or explanatory (Neuman, 2014; Saunders et al., 2008). The aim of this research is to study and develop a corporate *waqf* framework for Malaysian hospital through historical and contemporary comparative practices, particularly to propose a working framework whereby contributions from the *waqf* organizations can be accommodated and collaborated in a conducive partnership with a public hospital. Therefore, the purpose of this research is considered as exploratory (Bhattacherjee et al, 2017; Neuman, 2014) in nature.

An exploratory is preferred for this research to identify the factors or variables required to understand the experiences of the past, particularly in the *waqf*-based healthcare services and to investigate the conditions/criteria for their success in that era. Hence, an exploratory (Glaser & Strauss, 1967; Walliman, 2006) was chosen. Though the subject of this study is not new but new visions and situations are available and therefore the demand to identify the salient factors or variables that might be found can be of relevance to the research. Exploratory research (Bhattacherjee, 2012) is often conducted in new areas of inquiry, where the goals of the research are: (1) to scope out the magnitude or extent of a particular phenomenon, problem, or behavior, (2) to generate some initial ideas (or "hunches") about that phenomenon, or (3) to test the feasibility of undertaking a more extensive study regarding that phenomenon.

Understanding and choosing a research philosophy is an important step in planning and carrying out a research. The research philosophy adopted contains important assumptions which will underpin the research strategy and the methods chosen as part of that strategy.

Prior to determining the appropriate techniques for collecting and analysing the data, each of the important issues pertaining to the research design need to be sequentially

clarified through the research 'onion' (Figure 3.1). The issues are the research philosophy, approach, strategy, choice and time horizons.

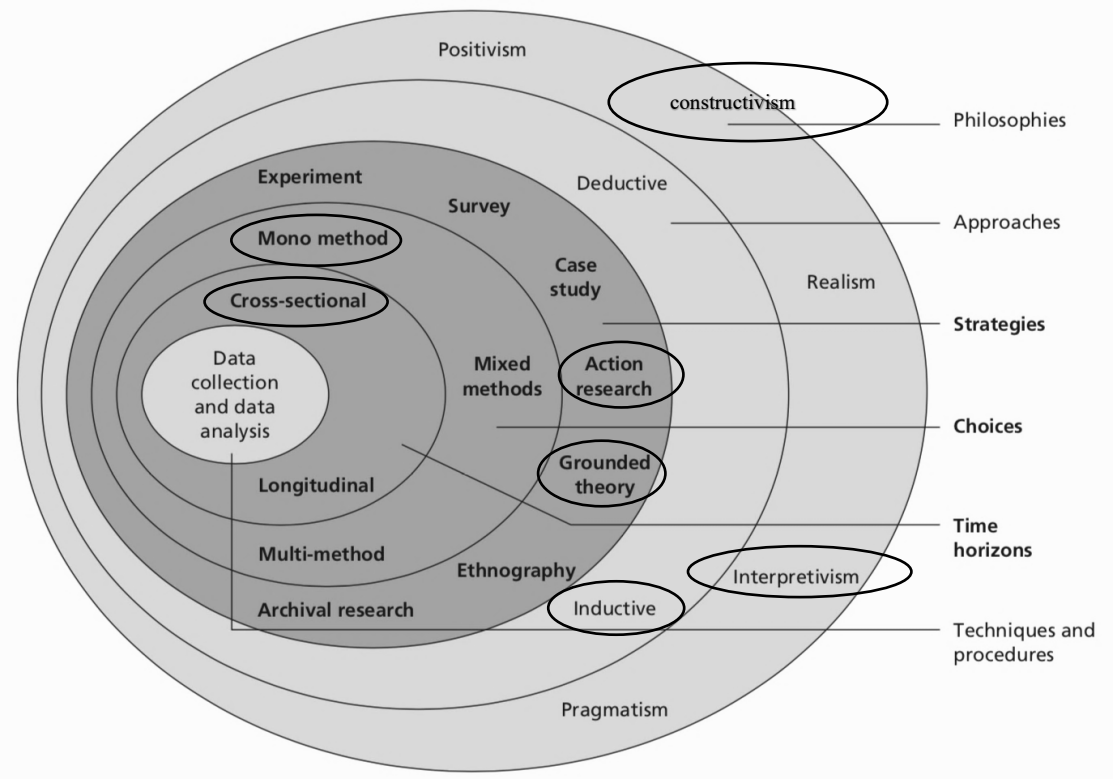

Figure 3.1: The Research Onion (Saunders et al., 2009)

This Research Onion was first designed by Saunders et al. (2007) and it illustrates the stages that must be included when developing a research. It provides an effective progression through which the research methodology can be created and written. With the 'onion', it is a useful tool to guide this research on making the right decisions in determining the research design. Hence, the research stages for this research which have been determined are as follows, in Fig 3.2 below.

Figure 3.2: The Research Stages (Saunders et al., 2009)

The research 'onion' are important aspects when deciding an appropriate methodology before data collection and analysis (Saunders et al., 2009).

3.2.1 Philosophies: Constructivism and Interpretivism

This research chose the social constructivism (interpretive) position wherein the social phenomena investigated are actually constructed by social actors (Moon & Blackman, 2014). This research in particular concerns societies incorporating and integrating *waqf* with the providence of free healthcare in a *waqf* hospital. The new law or organization the product of the behaviour of the group of people it has had an impact on. Consequently, the social constructivism (interpretative) can justify the criteria investigated for the *waqf*-based hospitals.

In constructivism, it investigates how humans create systems for a meaningful understanding of their worlds they live in and their personal experiences. (Schwandt, 1994) and in probing for deeper understanding constructivism may facilitate in achieving that aim (Crotty, 1998). The constructivist or interpretivist according to Schwandt (1994), believes that to understand the world one must interpret it; clarify the how and what that is embodied in the language and action of the people involved. Therefore, both these paradigms share a general framework for human enquiry. This was executed directly or indirectly, unfolding life histories and creating theories from books, article journals, newspapers or anything that may provide information (Corbin & Strauss, 1990) and even include responsible data from official websites on internet.

3.2.2 Approach: Inductive

An inductive approach is considered to be the most appropriate approach for this research since the data collected from literature reviews and instruments will be

used to form a list of criteria from the past *waqf*-based hospitals, present and future ones.

An inductive approach (Bryman & Bell, 2003; Saunders et al., 2009) was chosen as it is a research approach that starts with the observations and theories are proposed towards the end of the research process as a result of observations and its analysis involves 'discovering patterns, themes, and categories in one's data. Induction emphasizes gaining an understanding of humans attached to events and research content, a collection of qualitative data, a flexible structure to allow changes of research emphasis, a researcher's perspectives and unnecessary generalizations (Grunert, Khalifa, & Gmelin, 2004) and it starts by collecting data, analyses data and generates a theory (Neuman, 2014). This approach aims to gain meaning of human actions by gathering qualitative data in order to provide an understanding of a phenomenon that is time and context specific (Saunders et al. 2009).

3.2.3 The Strategies

In this research, two strategies will be employed: grounded theory and action research. The grounded theory is used in inductive approaches to anticipate and explain behaviour to develop theory, such as in data collection for theory creation. Action research is known for its method of addressing problems/issues and putting solutions in place.

3.2.3.1 The Grounded Theory

Grounded theory examines personal experiences as well as as many different data sources as feasible in order to have a more objective knowledge of the research topic. The aim and goal is to create a new framework or explanation for the research's meaning. Phenomenology was not chosen as it is concerned primarily with the participants' subjective interpretations of their own experiences only. The grounded

theory approach, however, is ideal for this study as it focuses on the exploration of integral social relationships and behavior of groups where there seem lacking studies about them. In this research, the grounded theory approach is also used to derive new ideas on how the partnership of *waqf* institutions can contribute to a public service goods services to produce a corporate *waqf* healthcare services. It involves a multi-stage process: coding of key words from content analysing qualitative data; developing themes from related key observations and developing theoretical frameworks (Mitchell, 2014). Nvivo 12 will be applied for the coding and these codes or nodes will develop into patterns or themes to finally present the final criteria of the proposed framework.

A grounded theory strategy is suitable for studying individual processes, interpersonal relations and the reciprocal effects between the individuals and larger social processes. The grounded theory approach, therefore, will be a generalization of similarities from different micro-level phenomenon for a macro-level explanation. Working up from the theories of the past and configuring the possible working framework for the future. The key to qualitative research and, in particular, grounded theory is to generate enough data so that the illuminate patterns, concepts, categories, properties, and dimensions of the given phenomena can emerge. Grounded theory is a systematic methodology that seeks to construct theory about issues of importance in peoples' lives (Glaser & Strauss, 1967; Glaser, 1978; Strauss & Corbin, 1998).

Similar studies (Teo & Tan, 2013) had used grounded theory approach to identify the key features of social entrepreneurship, while another study (Rosenbaum et al., 2016) applied the grounded theory in search of elements in management models and the symbolic interactionism from the development of grounded theory, which is crucial to understanding and interpreting patterns of human behaviour. This study also deals with people and the important matters surrounding them and this research hopes to

uncover and unravel how their *waqf*-based hospitals were a success in their era so as to emulate and transform for the present and future endeavors. The grounded theory requires the empirical data to include summarization of historical data, apply comparisons between them and impose some triangulation techniques to develop results and reveal the outcomes based on the objectives written earlier in the past chapters. Using the grounded theory methods can therefore help to coordinate, structure and organize rich qualitative data for analysis.

The grounded theory (Glaser & Strauss, 1967) approach provides useful tools in obtaining information about individuals' perceptions and feelings regarding a particular subject. It advocates creating a new theory consisting interrelated concepts rather than testing existing theories. It aims to explain and sometimes predicts phenomena based of empirical data. It typically encompasses in-depth interviews, research literature and other qualitative data. The grounded theory also provides guidelines for data collection and analysis consisting of coding, comparisons between data, memo writing and theoretical sampling.

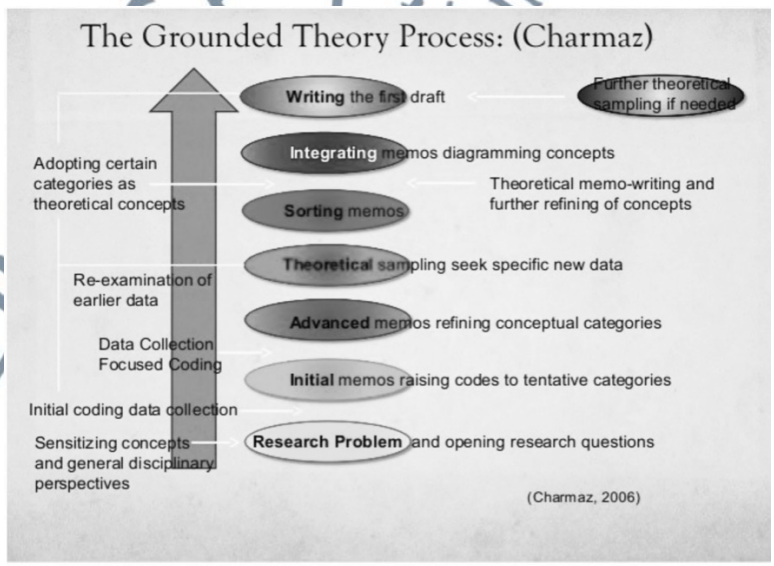

Fig. 3.3: A Grounded Theory Process (Charmaz, 2006)

Further, the grounded theory, according to Creswell (2007) is 'a qualitative strategy of inquiry in which the researcher derives a general, abstract theory of process, action, or interaction grounded in the views of participants in a study'. This process involves using multiple stages of data collection and the refinement and interrelationships of categories of information (Charmaz, 2006; Corbin & Strauss, 1990) as can be seen from the Figure (3.3) above.

3.2.3.2 The Action Research

Action research is a project that is continually developing, with interactions between issue, solution, impacts or consequences, and new solution. Action research requires a reasonable and realistic problem definition, as well as innovative data gathering methodologies. (Sekaran & Bougie, 2009). Action research provides a way to solve practical problems or improving social practices (Ku & Ho, 2020) and can therefore assist this research in its goals.. The primary characteristics of action research are its collaborative nature, its equable approach to power and education in the research process, and its emphasis on taking action on an issue. (Lingard, Albert, & Levinson, 2008). This collaboration between a researcher and a client or respondent can help in the diagnosis of a problem to develop a solution based on a problem/diagnosis. In this research method, the respondents from the *waqf* and healthcare organizations cooperate with the researcher to give ideas to develop a framework for a corporate waqf framework with a public hospital.

Similar studies such as in the study of 'Implementation of Telemedicine System To Improve and Expand Covid-19 Screening and Evaluation: a Reflection on Action Research Approach and the Management of the Possible Spread of the Pandemic' (Mohammed Aslam Khan, 2020), it had employed action research to allow users or participants to participate who recognised issues and build to validate technologies. The

action research methodology helped to implement and diagnose the goals of their study. Another study documents the participatory action research in a study of which social worker and architects collaborate with elderly villagers to promote sustainable community development (Qi & Gu, 2020). Hence, the collaborative element in the action research can be adopted whereby the interview respondents can contribute and collaborate in providing some answers for the proposed framework.

Therefore, these methods of grounded theory and action research can together offer multidimensional insights and provide ideas and perceptions about the proposed framework.

3.2.4 Choices: Mono-Method

This research chose a mono-method of qualitative method as the instruments as a mono-method is sufficient in achieving a satisfactory result (Berman, 2017; Saunders et al., 2009). This research intent to do a qualitative data collection technique, such as an in-depth interviews, with qualitative data analysis procedures (Saunders et al., 2009). It aims to identify the criteria from the qualitative in the exploration of the similarities and differences between both the past and present *waqf*-based hospitals from literature reviews and identify pertinent elements from the in-depth interview of current *waqf*-based hospitals. The results from these will assist in the identification of exclusive elements and hope to obtain some emergent findings.

This research will involve collecting qualitative data (documents and interviews) and the analysis will include a qualitative analysis (text, coding and themes).

3.2.5 Time Horizon: Cross-sectional

Based upon the research questions and the objectives of the research, a cross-sectional study was considered more appropriate and applied for this research.

'Snapshots' of human inquiry with regards to the present and past *waqf*-based hospitals that can be obtained from literature reviews. With the one-time in-depth interviews, a more detailed information regarding the management will be sought and some exclusive elements may be uncovered.

Neuman (2014) observes that cross-sectional gathers data at one time point and creates a kind of "snapshot" of social life. It is quick, able to collect results of variables at one go, multiple outcomes can be researched at once, good for descriptive analysis and can be used for further studies. Since this research is unable to do a progression of development of the past *waqf* hospitals over time, as it would be too time-consuming, a cross-sectional is preferred. While the longitudinal though powerful when seeking change takes a long time (Vinet & Zhedanov, 2010).

3.3 The Research Procedures

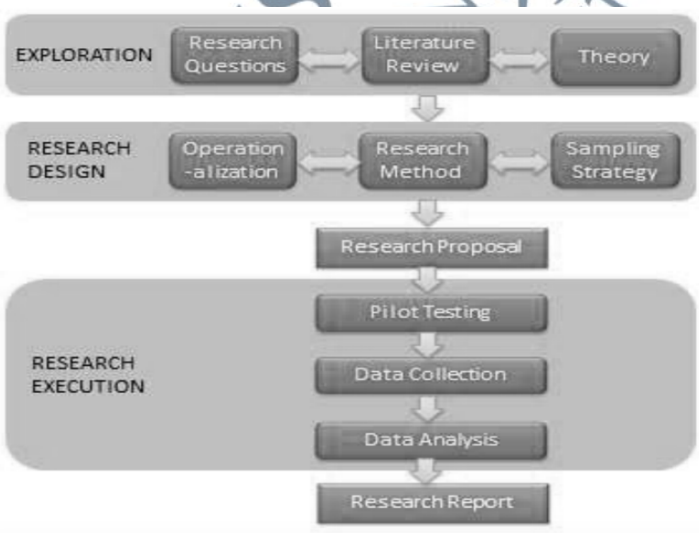

Figure 3.4: The Research Process (Bhattacherjee, 2012)

The figure above (Fig. 3.4) is a plan for this research which depicts a series of activities to be performed in this research which is categorized into three phases: exploration, research design, and research execution (Bhattacherjee, 2012).

3.3.1 The First Phase: Exploratory

This phase includes exploring and selecting research questions for further investigation, examining the published literature in the area of inquiry to understand the current state of knowledge in that area, and identifying theories that may help answer the research questions of interest.

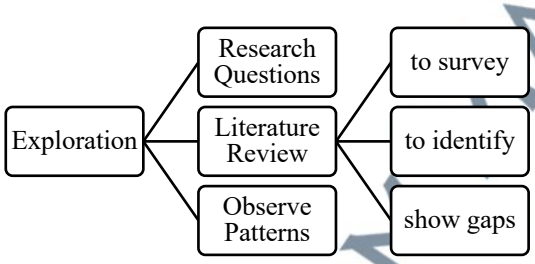

Figure 3.5 The Exploratory Phase (Bhattacherjee, 2012)

1. Step 1

The first step in this phase is in the identifying the research questions concerning around the topic of this research. It delves into the who, what, why and so on to address the real problems of *waqf*-based hospitals from the research. While a narrowly focused questions with a binary of a yes/no answer is usually less useful and interesting, a semi-structured questions are interesting and result in non-obvious answers (Bhattacherjee, 2012).

2. Step 2

The next step is to conduct a literature review about the *waqf*-based healthcare services in the past, in the Islamic Golden Era of 8th-14th century. The purpose of a literature review consists of 3 parts: (1) to survey the state of knowledge in the area of inquiry (in this case, the *waqf*-based healthcare in the past), (2) to identify key authors, articles, theories, and findings in that area, and (3) to identify gaps in knowledge in that research area. Hence, the following Figure (3.6) is drawn.

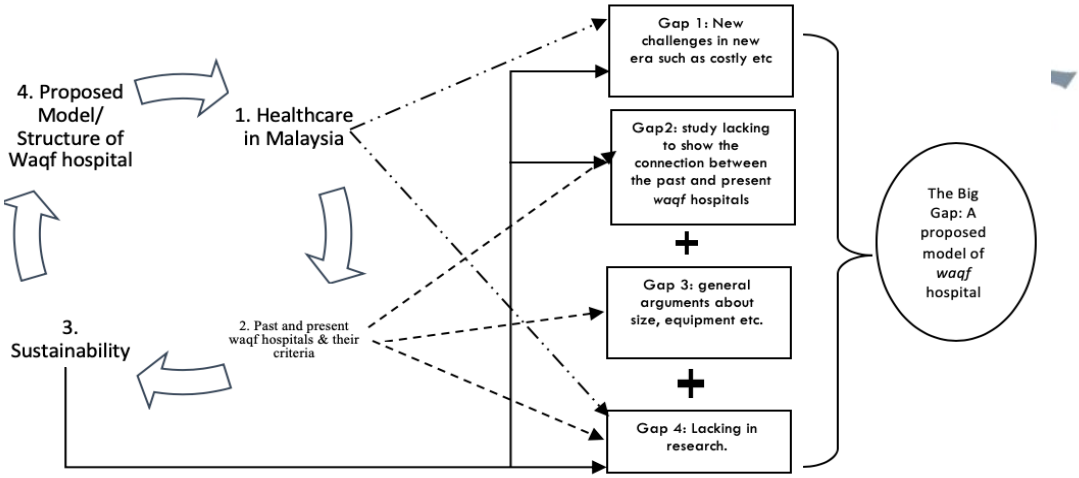

Figure 3.6: This Research Process

3. Step 3

This research start by collecting data, analyse data and generate a theory (Neuman, 2014) and also when coding identifies categories, patterns and themes (Bhattacherjee, 2012; Patton, 2015).

The Table (3.1) below, is a summary of step 3.

Research strategy	Principal orientation to the role of theory in relation to research	Epistemological orientation	Ontological orientation
Qualitative	Induction: generation of theory	Interpretive	Constructionism/ Constructivism

Table 3.1: Qualitative Research Strategy
Adapted from (Tobergte & Curtis, 2012)

From the above, this approach of the research is called an inductive research and will aim to gain meaning of human actions by gathering qualitative data in order to provide an understanding of a phenomenon that is time and context specific (Saunders et al. 2009). An inductive approach is considered to be the most appropriate approach since the data collected from literature reviews and in-depth interviews (Bhattacherjee, 2012; Corbin & Strauss, 1990; Glaser & Strauss, 1967) and the grounded theory is a type of

inductive technique where the interpretation of qualitative data is interpreted to build theories (Bhattacherjee, 2012; Neuman, 2014).

3.3.2 The Second Phase: The Research Design

There are three main types of the research design: data collection, measurement, and analysis. This is concerned with creating an outline of the activities so as to be able to answer the research questions identified in the above phase. Hence, this phase includes a conceptual framework, selecting the research method for the data collection and selecting an appropriate instrument (Fig. 3.7). Justifications of the research design are explained in each section below.

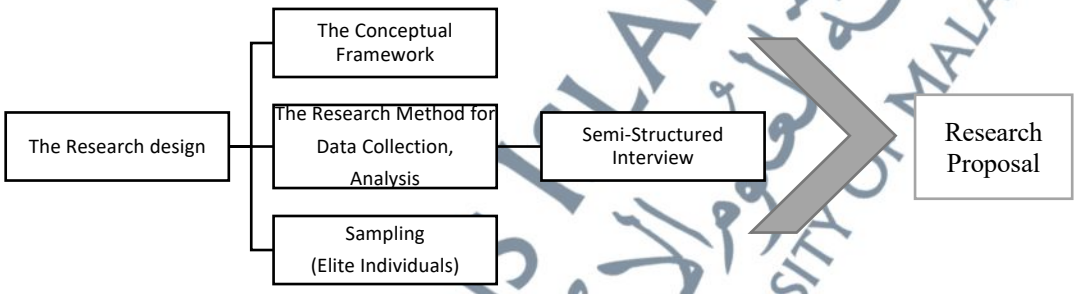

Figure 3.7: The Research Design (Adopted from Bhattacherjee (2012))

3.3.2.1 The Conceptual Framework

To further reflect the proposed framework of a *waqf*-based public hospital in Malaysia, a conceptual framework was drawn below in Figure (3.8).

The conceptual framework reflects the operational definitions towards an operational framework of a *waqf*-based hospital. In considering alternative solutions to costly healthcare in Malaysia, exploring other structures in the *waqf*-based healthcare services is the logical response. Investigating and identifying exclusive elements from past *waqf*-based hospitals and social-based hospitals in the present will eventually suggest and identify the fundamental exclusive elements in a preliminary theoretical

framework. With in-depth interviews of selected chosen respondents in the healthcare industry, a final framework of a working corporate *waqf* in collaboration with a Malaysian public hospital is proposed. The methodological aspects of this research will be explained further in this chapter.

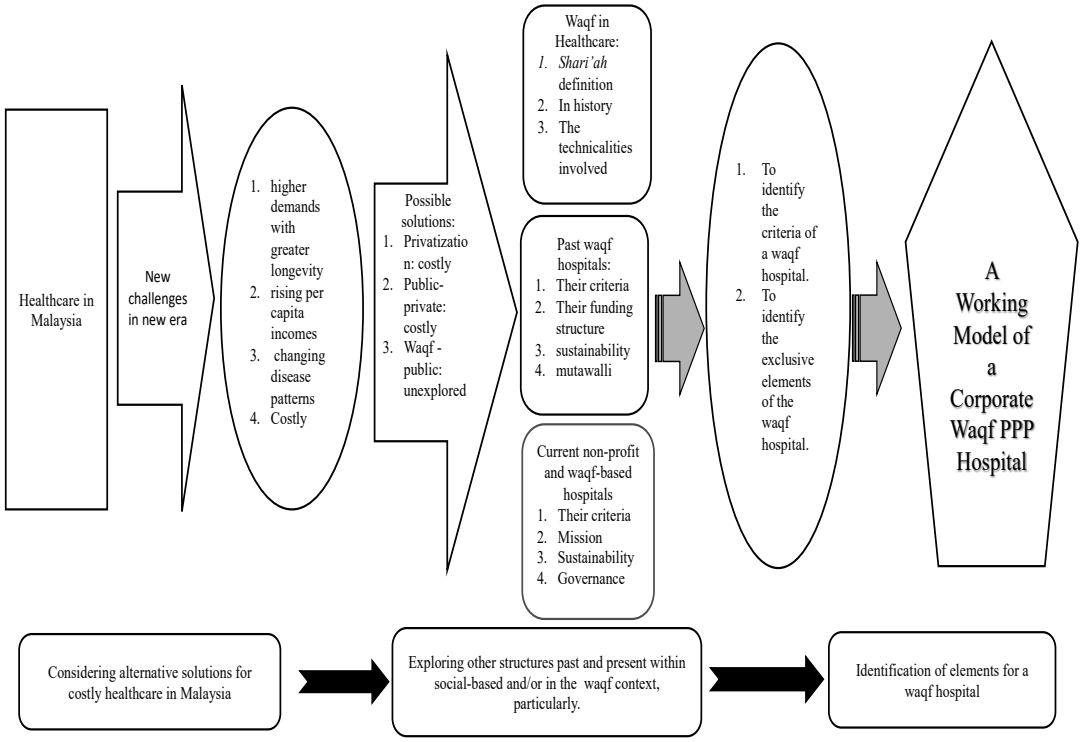

Figure 3.8: The Conceptual Framework

3.3.2.2 Research Method for Data Collection

This research will conduct a grounded theory strategy and use a mono-method of the qualitative approach for collecting the data. In accordance with grounded-theory strategy, data is collected with interviews of focus groups; conducting constant comparison analysis of data and letting the data generate the themes, categories and hence, coding with the expectations of emergent findings (Neuman, 2014).

Qualitative research typically rely on four primary methods for gathering data which includes participating in the setting; observing directly; in-depth interviews and

analysing documents and material culture (Catherine Marshall; Gretchen B Rossman, 2016).

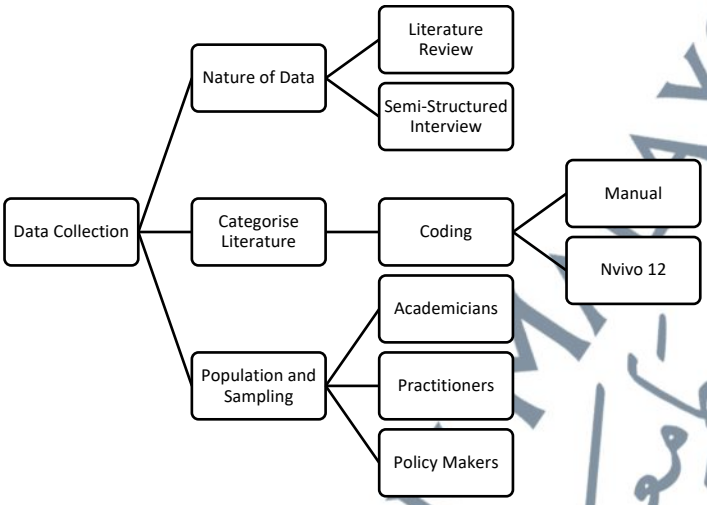

Figure 3.9: Data Collection Techniques

3.3.3.3.1 Grounded theory

With grounded theory, data collection techniques in Figure (3.9) above, include semi-structured and in-depth interviewing of semi-structured questions, participant observation and focus groups which can generate data for grounded theory. Besides that, existing texts and documents can also be subjected to grounded theory analysis and to simplify the research, such data is divided into two major categories (Neuman, 2014): historical-comparative research for the first two research objectives and field research (including ethnography, participant observation, in-depth interviewing) for the other two research objectives (see Table 3.2).

3.3.2.2.2 Historical Comparative Research (H-C)

This research focused on the 8th to 14th Century even though the Golden Age of Islam was between 8th to 13th CE (Houchang D. Modanlou, 2015). The research purposely extended into the 14th CE, as that particular year had many active *waqf*

developments (Shatzmiller 1991; Christie 2004) and during the 14th CE, Islamic Hospitals were dynamically more advance than their Christian counterparts (Cilliers & Retief, 2002). With a H-C research, data collection stage 1 (Table 3.2) commenced.

	Data Collection	
Stages	Stage 1	Stage 2
Research Objectives	**1.** To explore the criteria and their exclusive elements in *waqf*-based hospitals in the Islamic Golden era of 8th to the 14th CE from the Arab/Islamic World. **2.** To investigate and compare the criteria between the past and contemporary *waqf*-based hospitals identified to justify their practices.	**3.** To identify issues and challenges identified of private/public hospitals in this era, *waqf*-based hospitals in particular and to find solutions. **4.** To identify the final elements to develop a working corporate *waqf* framework for Malaysian public hospitals in Malaysia.
Data Collection	Literature Review	Semi-Structured In-Depth Interviews
Data Sources	Journal Articles, Books, Websites and other media	8 Respondents
Strategies	Grounded Theory	Grounded Theory & Action Research

Table 3.2: Data Collection with ROs and Strategies

The research explores into the history Islamic era of 8th to 14th centuries and literature review scoured through approximately 70 article journals, books and media, coding manually and using the application Nvivo 12, finding themes and patterns to understand the culture and societal change in that era. This in return can give insights into the larger dynamics of the societies involved. Later, comparisons from triangulations of the *waqf*-based hospitals with regards to the management and funding structure within the chosen historical area are conducted for validity and reliability of data which is stage 1 of the data collection in Table (3.2).

The historical comparative research (Walliman, 2006), is a collection of techniques and approaches which is a distinct type of research that puts historical time and/or cross-cultural variation at the center of research- another research method

appropriate in the examination of societal factors that produce a specific outcome such as a system of taxation or a new religion. Thus the historical-comparative research is recommended when the focus is to compare cultures of societies to learn of macro patterns or long-term trends across decades, (Neuman, 2014). It then allows the discovery of patterns in societies or over time and brings clarity in methodological methods found in other research techniques.

3.3.2.2.3 Field Research

Stage 2 is the interviewing of 8 respondents including those from the pilot study. The research aims to investigate the present *waqf*-based hospital and it would have been impossible by just observing. As such, open in-depth interviews of the top-level management are conducted. This interview which is also known as the elite interviewing was chosen to obtain consistency of data (Dworkin, 2012; P. I. Fusch & Ness, 2015) where it involved senior academicians, founders of hospitals, specialists and senior management in their organizations and hence, 8 respondents were considered enough (Adler & Ziglio, 1996; Dworkin, 2012).

Qualitative interviews are what Neuman (2014) called, intensive or in-depth interviews where they are semi-structured; the researcher has a particular topic about which he or she would like to hear from the respondent, but questions are open ended and may not be asked in exactly the same way or in exactly the same order to each and every respondent. In in-depth interviews, the primary aim is to listen to the respondents tell their stories in their own words. These field research interviews go by many names: unstructured, depth, ethnographic, open ended, informal, and long.

3.3.2.3 Research Setting and Scope

This research selected Selangor, Malaysia as the geographical location and setting for the proposed theoretical working framework. Selangor is one of the four states in Malaysia which has a special enactment for *waqf* while in the other states, the authority of officials that manage the *waqf* property is limited because it is placed under *Baitulmal*. After the existence of the *Waqf* enactment, all *waqf* business in Selangor was governed and managed by the *waqf* management committee which was established by the State Religious Council or Majlis Agama Islam Negeri (MAIN) (Mat Rani & Abdul Aziz, 2010). As such, this research has chosen Majlis Agama Islam Selangor (MAIS) because of its reputation as one of the religious institutions in this country that play a significant role in developing and managing Muslims' *waqf* in Selangor (Mohd Puad et al., 2014).

Hence, in meeting with the objective of this paper, Perbadanan Wakaf Selangor (PWS) was selected to represent *waqf* public institution. Perbadanan Wakaf Selangor was chosen for its good reputation and advancement in the collection of cash *waqf* and PWS had also collaborated with other corporations such as Bank Muamalat (M) Berhad to establish the Waqf Selangor Muamalat, launched in 2012 (A. M. Ramli & Jalil, 2014).

The proposed *waqf*-based hospital will include a local *waqf* institution and the governance of *waqf* properties under the supervision of each state's State Islamic Religious Council (SIRCs) inevitably creates differences in Malaysian *waqf* governance (Noor, Ali, Abdullah, & Tahir, 2014).

This research will not only focus on present and past *waqf*-based hospitals, but also worldwide. Investigations includes the criteria of the *waqf*-based hospitals in the past and present and subsequently, a comparison and correlation of criteria between the

past (El-Baba, 2009; Nour, 2015; Sayili, 2006; Tschanz, 2014), present *waqf*-based hospitals locally (Mahmood & M Shafiai, 2013; Mir Ahmad Talaat et al., 2016) and those abroad (N. Hayat & Naeem, 2014; Vehbi Koç Vakfi, 2013; Zencirci, 2015).

The research indicated gaps (Section 3.2.1, Figure 3.6) and these gaps in knowledge are the parameters of this research. It will only focus on the management and governance whereby *waqf* institution can be used to collaborate with a public hospital to form *a waqf*-based hospital. This research, however, will not include topics concerning operations, funding, efficiency, and legal structures of the *waqf*-based healthcare services or in other public services and however, it can be extended by others as topics of research.

The research setting and scope hopes to cover the management criteria in a more comprehensive perspective and based in Malaysia according to the laws of the country and under the jurisdictions of the Islamic Wakaf Enactment Selangor (Jabatan Kehakiman Syariah Malaysia (JKSM), 1999).

3.3.2.4 Population and Sampling

The interview involved purposive sampling and snowballing. Initially, purposive sampling was employed as a certain criterion had to be met and the research commenced from those who were familiar and known to the researcher and the field encountered. Later, others were recommended from earlier respondents identified and these were the respondents of snowball technique. The review of data and analysis are also done in sync with the process of interview as purposive sampling is most successful when both data review and analysis are done in conjunction with data collection (Hossea Rwegoshora, 2014).

Hence, the samplings chosen are:

a. Purposive sampling

It is also known as judgmental sampling and is a valuable sampling type for special situations. It is used in exploratory research or in field research (Neuman, 2014). The sample is selected on the basis that members conform to certain criteria; choose to select cases to answer certain research questions; population is small and able to select informative cases and useful in exploration study (Sundram et al., 2013). While purposive sampling (Blackstone, 2015) is often used when one's goal is to include participants who represent a broad range of perspectives, purposive sampling may also be used when a researcher wishes to include only people who meet very narrow or specific criteria.

Purposive sampling is appropriate to select unique cases that are especially informative such as using content analysis to find a cultural (Neuman, 2014) or the pattern of management as in this research.

b. Snowballing

The research began interviewing a respondent who was an academician and recommended another academician. While another practitioner recommends other practitioners, founders and owners of private and *waqf*-based hospitals. This was helpful as the interview consists of elites which consists of top management and recommendations from another was crucial in securing an interview.

The snowballing begins with a 'seed' or 'entry points' into which it will produce samples with characteristics representative of the target population (Christopoulos, 2009). However, many seeds with different characteristics can obtain the final roundup of a good selection of respondents.

c. Saturation

These respondents are also acknowledged as elite respondents and the the in-depth interview (Mears, 2009) chose 8 respondents. The number of 8 was chosen as the nature of in-depth interview and respondents who are elite, gives it the 'rich and thick' (P. Fusch, Fusch, & Ness, 2018) information required. The factor that determines sample size is also based on the concept of theoretical saturation and since the point of saturation is affected by the scope of the research question, the nature or sensitivity of the phenomena, and the ability, experience or knowledge of the researcher (Thomson, 2011), this research has chosen the number of interviewees of 8 persons. The number of 8 is explained in the elite interviewing (Mears, 2009), who suggested that to achieve depth rather than breadth, six to nine interviewees are enough.

3.3.2.5 Research Instruments

Research instruments are simply devices for obtaining information relevant and there many alternatives from which to choose such as: interviews, questionnaire, experiments, survey etc.

3.3.2.5.1 Interview

In this research, in-depth interviews are conducted with some government health policymakers and medical doctors from selected social-based hospitals, *waqf*-based hospitals included. The list of respondents of the interview of this research is listed in Section (3.3.2.5.4.5) below. The objective of these interviews is to explore into the management of healthcare services in government hospitals and also in social-based hospitals. Hence, this research will be of in-depth interviews consisting of semi-structured questions with elite respondents.

Patton (2002) categorizes interviews into three general types: the informal, conversational interview; the interview guide or topical approach and the standardized, open-ended interview. While the informal takes place on the spot casually, it is also spontaneous done with individuals or small groups. The interview guide is more structured, scheduled and prepared with a list of topics or questions, a typical qualitative interview study. Semi-structured and standardized interviews are more planned with specific sequence. It is useful when detailed information is needed with regards to exploring new issues in-depth. It provides more information in a relaxed environment but has some limitations such as bias, time-consuming, interviewer must has be appropriately trained and generalizations should not be made.

3.3.2.5.2 In-depth Interview

The research deployed the in-depth interview to acquire data to create categories or patterns and to be able to compare and analyse between categories while understanding the living experiences of respondents so as to be able to interpret them (interpretivism). The interview began as a casual conversation and proceeded to be more aligned to the focus of the research according to the questions prepared. Though there were times the interview deviated into other topics, but it almost always came back to the objectives of the interview.

Interviews is a non-standardized, more personalized form of data collection method (Fig 3.10) and the most typical form is the personal or face-to-face interview where the interviewer gets to ask the respondent questions and record the answers (Saunders et al., 2009; Bhattacherjee 2012).

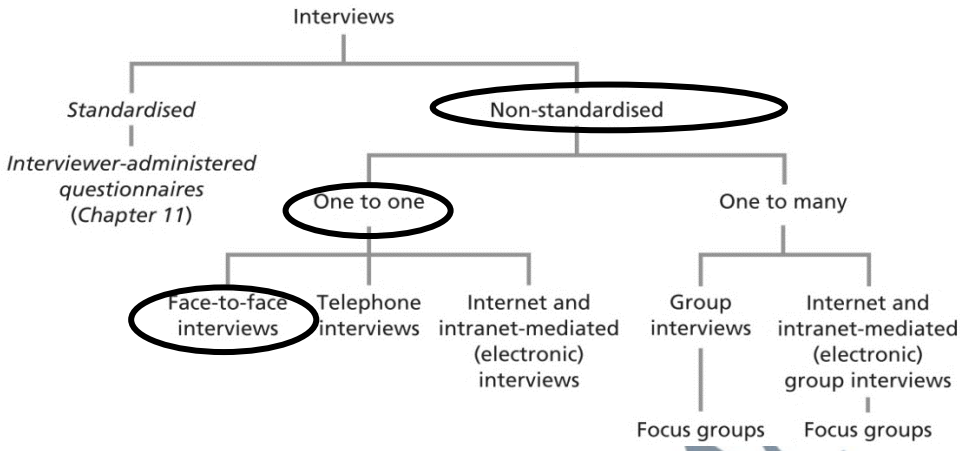

Fig 3.10 Types of Interviews. Sourced from Saunders et al., (2009)

In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Jacobvitz et al., 2002).

3.3.2.5.3 Semi-Structured Questions

The research used an in-depth interview as instrument to gather data. To serve as the effective data collection tool, the list of questions needs to be properly designed, particularly when the response rate as well as the reliability and validity of the data is affected by the design of questions (Saunders et al., 2009). Various aspects were considered in designing a list of questions including the choice of words, the sequence of the questions and the appearance. In order to encourage the respondents' cooperation and involvement throughout the interview, a short, simple conversational language that is easily understandable by all the respondents (Zikmund et al., 2010) was used.

In this research, questions are organised neatly to avoid the respondents' confusion and questions were neatly arranged. The list of questions sequence is recommended to begin with the most relevant questions pertaining to the purpose of the research and finishes with demographic and/or sensitive questions, and questions are asked in a logical order

(Saunders et al., 2009). The list will initially ask some personal experiences of the respondents and consequently move to some knowledge-based one and finally some in-depth sensitive focused questions.

3.3.2.5.4 The Research Interview

The research interview began with the selecting of respondents from academicians, high ranking officials from *waqf* institutions and healthcare services. The following is the steps procedures leading to the conducting of the research interview.

3.3.2.5.4.1 Background Information

Identifying the participants and interviewers. This part consists of 4 questions requiring the respondents to provide his/her background information, particularly on the name, their designation, organization and the number of years in service. Below is an example.

1. Name	Dr. XXXXXXX
2. Designation	Vice President, Head of Dakwah, Wakaf and Zakat Department
3. Company	Bank XXXX
4. Number of years in service.	20 years

Table 3.3: Demographics (An Example)

The personal information above (Table 3.3) of the interview involved background data which was collected to reveal general personal attributes of the respondents such as their names, their designation in the company/institutions, the names of the companies they are involved in and the how long they have been in their field.

3.3.2.5.4.2 The List of Questions

In an exploratory study, in-depth interviews can be very helpful and disclose beneficial insights in relation to the study (Grunert et al., 2004). Further, they may also be used to understand relationships between variables. Based on the theoretical framework (Fig 2.12), the questions will be based on the elements from the preliminary framework which are the architectural designs (Dāhir, 2015) of location, accessibility and basically good infrastructure, etc., the guiding principles (Nour, 2015) of comprehensiveness, pattern of management, etc., the decentralization management (Hamouche, 2007; Nour, 2012, 2015; Shefer-Mossensohn, 2014), the sustainability (Asharaf & Abdullaah, 2013; Ur Rahman et al., 2017), the mission (Saad et al., 2017; Omar et al., 2018; Sapuan et al., 2018) and finally governance (Jamali et al., 2010; Saad et al., 2013; Omar et al., 2018). Therefore, the list of questions for the interview will consist of some of the above elements, to justify these fundamental elements crucial for non-profit or charity hospitals and to further uncover other exclusive elements.

In an in-depth interview or face-to-face interview, the respondent is asked a list of questions which offers the opportunity for the respondent to state his/her personal views concerning the public healthcare, social-based healthcare services including elements of governance and sustainability. As such, answering these questions is vital and important for the research.

Details of the questions are as follows:

- Personal Experiences: 3 questions

  These questions are to show the reliability and validity (Neuman, 2014) of the findings from the interview. In particular, the credibility of the respondent.

- General Knowledge: *Waqf* and Social-based (Services in Healthcare): 9 questions

To find out how much *waqf* is being applied into the acclaimed *waqf*-based hospitals, the services rendered to patients and their problems rendering these services.

- Hospital- Management and Administration: 5 questions

  These may uncover possible future designs of working frameworks for *waqf*-based hospitals and investigating possibilities.

The questions listed below are configured according to the variables in the theoretical framework in Figure (2.12). The answers to those questions will complement the findings in achieving the objectives of this research. The questions are:

a. Personal Experience Questions

1 Tell me what you do in your organization.

2. What are your personal achievements in the *waqf* field. What is your most successful program and why?

3. Are you personally directly involved in any *waqf* initiatives or activities?

b. Knowledge: *Waqf* and Social-based (Services in Healthcare)

4. From your research and experiences, how can *waqf* play an active role in the public services?

5. With regards to governance in *waqf* institutions, how can it materialize?

6. There are other social-based hospitals besides *waqf* such as non-profit and social enterprises. How are *waqf*-based hospitals different from these social-based ones?

c. Hospital: Management and Administration

7. *Waqf* has played an important role in the past especially in the 8th to 14th CE. *Waqf* has been referred to as 'a vehicle of Islamic finance' especially in the

public services of healthcare. With public healthcare easily available presently, can *waqf* still play a role in the healthcare services? If yes, how? If no, why?

8. There are many models of *waqf* hospitals, such as those where they provide free healthcare for all (used to be Tung Shin Hospital), the 2nd model, discounted for the general charging normal rates for regular patients and free for the poor and underprivileged (Assunta Hospital). If given a chance for you to be involved in a *waqf*-based hospital, how do you think it should be managed and operated so as to achieve sustainability but yet providing quality healthcare services for the public?

9. There are a number of private *waqf*-based hospitals in Malaysia. What do you think of an idea of creating a partnership between *waqf* institutions and a government public hospital?

10. What other questions should I ask about *waqf*-based hospitals to achieve my objectives?

3.3.2.5.4.3 Referencing the Interview Questions

The Interview Questions	Reference to Research Questions
a. Personal Experience Questions	
1. Tell me what you do in your organization.	These questions were asked to prove credibility of the respondents in their views.
2. What are your personal achievements in the *waqf* field? What is your most successful program and why?	
3. Are you personally directly involved in any *waqf* initiatives or activities?	
b. Knowledge: *Waqf* and Social-based (Services in Healthcare)	
5. From your research and experiences, how can *waqf* play an active role in the public services?	To achieve research objective number 3 (RO3).
6. With regards to governance in *waqf* institutions, how can it materialize?	

1. Hospital: Management and Administration	RO3. To identify issues and challenges identified of private/public hospitals in this era, *waqf*-based hospitals in particular and to find solutions.
7. There are other social-based hospitals besides *waqf* such as non-profit and social enterprises. How are *waqf*-based hospitals different from these social-based ones?	
8. There are many models of *waqf* hospitals, such as those where they provide free healthcare for all (used to be Tung Shin Hospital), discounted for the general charging normal rates for regular patients and free for the poor and underprivileged (Assunta Hospital). If given a chance for you to be involved in a *waqf*-based hospital, how do you think it should be managed and operated so as to achieve sustainability but yet providing quality healthcare services for the public?	These questions were asked to achieve research objective number four. RO4. To identify the final elements to develop a working corporate *waqf* framework for Malaysian public hospitals.
9. There are a number of private *waqf*-based hospitals in Malaysia. What do you think of an idea of creating a partnership between *waqf* institutions and a government public hospital?	
10. What other questions should I ask about *waqf*-based hospitals to achieve my objectives?	

Table 3.4: Analysis of Questions

3.3.2.5.4.4 The Respondents

The background data was collected through implementing Section (1) of the research instrument attached in Appendix A. The background data revealed general demographic characteristics of the Malaysian medical professionals in terms of their personal backgrounds such as their names, their designation in the company/institutions, the names of the companies they are involved in and the how long they have been in their field.

- Background of Policy Makers

The policy makers consisted of those who worked in the government *waqf* institutions healthcare services. These were chosen from previous research (A. M. Ramli & Jalil, 2012, Abu Talib et al., 2018; Omar et al., 2018) as the *waqf* institution mentioned in the researches were relevant to this study.

- Background data on Academicians

The respondents were selected using purposive samples (Neuman, 2014) from the population of academicians of universities of two men and an in-depth unstructured interview was conducted. These respondents were chosen based on their demographic and experience in the field of *waqf*.

- Background on Practitioners of *Waqf* and Healthcare

The respondents were elected using the purposive sampling and snow-balling techniques (Neuman, 2014). The snowball sampling began from a practitioner of *waqf* and based on their interrelationships which the participants identified the targeted groups. The former sampling was identified from other research and also from identifying the samples which have certain requirements. Once the questions were finalized, the actual field enquiry will be conducted on the dates predetermined at a later stage.

The respondent selection was identified from previous research, and those with executive experience (purposive sampling, chosen with a specific background and the snowball technique were recommendations by the former and former collogues). The respondents chosen were from the elite and high-ranking positioned professionals either working in organizations or in their own founded companies. Hence this elite interviewing proved to be invaluable as their information emanated from privileges and power (Natow, 2020).

- The Chosen Ones

The first four were chosen for the pilot study and the rest were respondents of the interview.

Respondents	Designation	Organization/Institution
1. Male/ Academician	1. Director of Centre for Islamic Economics, 2. Associate Professor of Kulliyyah Of Economics and Management Sciences	IIUM Gombak Campus
2. Male/ Practitioner Public Hospital	Deputy Director, Special Grade C (KUP), Planning Sector	Ministry of Health, Putrajaya
3. Male/ Academician	• Chief Executive Officer of ISRA Consultancy; Senior • Researcher at International Research Academy for Islamic Finance (ISRA) • Professor at International Centre of Education in Islamic Finance (INCEIF) • A member of Shariah Advisory Council, Central Bank of Malaysia, • Chairman of Bursa Malaysia's Shari'a Committee • Member of National Fatwa Council Malaysia. • Also serves as Shari'ah Advisor to some other financial institutions within and outside Malaysia, among others, • Chairman, Advisory Council of Expert, Noor Takaful Nigeria, • Member of Shariah Committee, Basil Property Trust Singapore and Sabana REIT Singapore.	ISRA INCIEF Securities Commission of Malaysia Fatwa Council Malaysia Noor Takaful Nigeria , Basil Property Trust Singapore and Sabana REIT Singapore.
4. Male / *Waqf* Practitioner	• VP, Head of Dakwah, Wakaf & Zakat Dept, Bank Muamalat. • Committee in The Shariah Advisory Council of Bank Negara Malaysia (SAC) and Islamic Banking, Trainer for Human Development Resources fund (PSMB) and Celestial Management International (CMI) Jakarta, Indonesia, • Islamic speaker for TV media	
5. Male/ Policy Maker	• Deputy Chairman	Perbadanan Wakaf Selangor
6. Male/ Policy Maker	• Deputy Chief Executive Officer	Perbadanan Wakaf Selangor
7. Male/ Practitioner (Health Services)	• Founder, President & Former Chief Executive Officer	Avisena Specialist Hospital
8. Male/ Practitioner (*Waqf*-based Health Services)	• Founder, Executive Director	Kasih Specialist Clinic

Table 3.5: The Respondents of Interview

3.3.2.5.4.5 Challenges of Interview

There were many challenges (Legard, Keegan, and Ward 2004) in the in-depth interviews conducted. They were mainly physical ones from the respondents such as rambling responses into tangential issues, interruptions from phone calls and other staff in the office but there was also the time constraint and the standard operating procedures (SOP) of the pandemic Covid-19.

The challenges also include the process of the interview and how well the researcher listens and retell the story in the collection of data and coding (May, 1991). It is also time-consuming when conducting interviews, transcribing them, and analysing its results.

3.3.2.5.4.6 Language of Instructions

The choice of the language used in the questions is primarily determined by respondents' language proficiencies (Tenzer et al., 2013). According to Taeku Lee (2001), the language-of- interview effects are pervasive, powerful, and persistent and can dramatically alter our substantive understanding of a predominantly immigrant ethnic group's political beliefs, racial attitudes, and their policy preferences.

Since the data collection for this research is in Malaysia and involve both the English and non-English speakers aged 15 and above, the original English list of questions is to be translated into Malay, a native language of some of the respondents and the national language Malaysians. By employing two versions of the list of questions, the Malay and the English, the respondents have a choice so that the true meaning of the questions are understood (Saunders et al., 2009) and consequently

generate a valid questionnaire (Cha et al., 2007). Hence, proper translation procedures is extremely important.

3.3.2.5.5 The Validity and Reliability

From the table below (Table 3.6), validity and reliability were applied throughout the research by triangulating, using elite respondents, analyzing data collecting and collecting data concurrently and making sure the results are significant, extensive, and consistent.

Elements of Validity & Reliability	Definitions	Applications in Research
1. Methodological Coherence	To ensure compatibility of questions to the methods and providing coherence by adopting a transparent approach to reporting.	Triangulation of data between the interviews of policy makers, practitioners, academicians and literature.
2. Sample Appropriateness	Choosing respondents who are best qualified/	The respondents are qualified and knowledgeable.
3. Data Collecting & Analysing	This process is done concurrently to attain reliability and validity	This is done concurrently so as to be able to bring forward the important points to the following interviews.
4. Thinking Theoretically	Ideas arising from data are confirmed in new data	Always checking with data already collected.
5. Theory Development	Working from a micro perspective and macro understanding to reach a well-developed and informed outcome.	The outcomes are far-reaching and consistent.

Table 3.6: The Elements of Validity and Reliability (J. M. Morse et al., 2002)

This research is also based on the verification strategies to ensure both reliability and validity of data which are activities upon ensuring methodological coherence, sampling sufficiency, developing a dynamic relationship between sampling, data collection and analysis, thinking theoretically, and theory development (J. M. Morse, Olson, & Spiers, 2002). In ensuring reliability and validity, not only credibility, transferability, dependability, and confirmability important but the characteristics of the researcher such as in communication skills and adapting to changing circumstances can result in

clarification and precise conclusion (Lincoln & Guba, 1985) . The elements of the above (Table 3.6) proves to contribute collectively in the validation of the validity and reliability, improving accuracy and precision.

3.3.3 The Third Phase: The Execution

This phase includes the pilot testing of the measurement instruments, data collection, and data analysis.

3.3.3.1 Pilot Testing

Interviewing is very demanding, and it is worth conducting some pilot interviews, not just to test how well the interview flows but in order to gain some experience (Bryman & Bell, 2003) and it helps detect potential problems in the research design (Bhattacherjee, 2012). The pilot test conducted assisted the research in improving reliability (Neuman, 2014) by determining if there are flaws, limitations, or other weaknesses within the interview design and will allow for necessary revisions prior to the implementation of the study (Kvale, 2007).

The pilot test recommended (Payne & Payne, 2014) is tested with a small sample of people to complete 'pilot interviews' by answering 'open-ended questions'. This may well show the selection of opinions, beliefs, and views held which can translate into some new statements and prepared for another sample. This kind of test run can also reveal unanticipated problems with question wording, instructions to skip questions, etc. It can help see if the interviewees understand your questions and giving useful answers.

a. Pilot with Local Experts

An expert evaluation can be dramatically improved by giving their feedback. These expert evaluations can help shape the content and form the survey and result in

better data quality and more valuable insights. As in the case of purposive sampling in exploratory or in field research, local experts are recruited for the study (Neuman, 2014). This will be in-depth interviews.

In this study, the English version of the questions was sent to 2 academicians. The experts were asked to review the questions based on the meanings of each of the constructs and seek their opinions, particularly on the relevancy and representativeness of the items as well as the clarity of the language. Once the necessary corrections were made, they were sent for pilot test with potential respondents.

b. Pilot testing with Potential Respondents

A pilot test should be conducted with respondents that have almost similar to those that will participate in the research (Turner, 2010). This will result in identifying the potential problem with the questions, particularly on the clarity and difficulties encountered in answering the list of questions. Since this pilot test involved a group of participants that have the exact qualities as the actual respondents, the data obtained from this pilot test was used to initially test the validity and reliability of the measurement items. The respondents comprise of policy makers, academicians and practitioners.

3.3.3.2 Pilot Testing Results

This section includes the redesign of questions after receiving feedback from experts identified and also from the pilot testing. Upon redesign of questions, new formulated questions were prepared. The final list of questions were then tabled in Section (3.3.3.2.4), Table (3.8).

3.3.3.2.1 List of Questions Redesign Upon Experts' Feedback

In the quest for content validity, a panel of 2 experts, which consist of 2 academicians, one with a PhD in Islamic Management and another in Islamic Finance. They were asked to review the questions and provided their opinions, particularly on the relevancy and representativeness of the items as well as the language clarity. Based on the experts' feedback, several items (or statements) were reworded for a better understanding. It was also suggested that the instructions and language needed to be simplified. After the revision of the items was made, the revised list of questions was sent to experts again for re-evaluation. As a result of this procedure, it was suggested that few statements needed to be reworded with instructions for clarity.

3.3.3.2.2 List of Questions Redesign Upon Respondents' Feedback

In improving unclear questions (Neuman, 2014), table (3.7) was drawn and reviewed.

The Question	Problem	Revised Q
Personal experience questions		
1. What is your job specifications and what do you do on a daily basis?	As the respondents had different backgrounds, the questions had to be catered according to their background and practices. Hence questions were basically the same, but structure is different.	• What is your role in this organization? • What is the most important initiative you are undertaking presently?
Knowledge: *Waqf* and Social-based (Services in Healthcare)		
2. From your research and experiences, how can *waqf* play an active role in the public services? **3.** With regards to governance in *waqf* institutions, how can it materialize? 4. There are other social-based hospitals besides *waqf* such as non-profit and social enterprises. How is waqf-based hospitals different from these social- based ones?	Some of the questions were not purposeful. Hence, they were omitted and substituted with other more focused questions.	• What are the main challenges for the organization and what is your biggest concern? • As a *waqf*-based hospital, how do you achieve a sustainable development goal? • Aside from funding, what are the areas *waqf* institutions can play an active role?

Hospital: New Management and Administration		
5. What other questions should I ask about *waqf*-based hospitals to achieve my objectives?	Question seemed of good content and achieved good results but needed to be reconstructed	3. What do think are the crucial factors that make a *waqf*-based healthcare successful and achieve its goals?

Table 3.7: Revision of Questions

3.3.3.2.3 Conclusions of Pilot Study

Some of the questions needed to be reviewed and replaced with more accurate and precise questions. The above table (3.7) shows the questions which had to be replaced, the reasons and the new reviewed questions.

3.3.3.2.4 The Final List (Reviewed & Improved)

In Table 3.8 below, is the new set of questions after reviewed from pilot study. However, the questions needed to be improved and adapted to different respondents accordingly. The following are the amendments in Table (3.8) below.

The Interview Questions	Reference to Research Questions
a. Personal Experience Questions	
1. Tell me what you do in your organization.	These questions were asked to prove credibility of the respondents in their views.
2. What is the most important involvement you had undertaken or presently working on in the organisation?	
c. Knowledge: *Waqf* and Social-based (Services in Healthcare)	
3. What are the main challenges for the organization and what is your biggest concern?	To answer to research question number 3. RQ3. What are the issues and challenges faced by hospitals of private/public and *waqf*-based models, and how can they be solved?
4. As a *waqf*-based hospital, how do you achieve a sustainable development goal?	
5. Aside from funding, what are the areas *waqf* institutions can play an active role?	
2. Hospital: Management and Administration	
6. There are other social-based hospitals besides waqf such as non-profit and social enterprises.	

	How is *waqf*-based hospitals different from these social-based ones?	
7.	There are many models of *waqf* hospitals, such as those where they provide free healthcare for all (used to be Tung Shin Hospital), the 2nd model, discounted for the general charging normal rates for regular patients and free for the poor and underprivileged (Assunta Hospital). If given a chance for you to be involved in a *waqf*-based hospital, how do you think it should be managed and operated so as to achieve sustainability but yet providing quality healthcare services for the public?	These questions were asked to answer to research number four. RQ4. How to develop a corporate *waqf* framework in collaboration with a public hospital in Malaysia?
8.	There are a number of private *waqf*-based hospitals in Malaysia. What do you think of an idea of creating a partnership between waqf institutions and a government public hospital?	
9.	If so, what can these partners do differently to assist in realising in the success of this type of partnership hospital? If not, why?	
10.	What do think are the crucial factors that make a *waqf*-based healthcare successful and achieve its goals?	

Table 3.8: Reviewed Questions

3.4 Methods of Analysis

To analyse the data collected, qualitative analysis was adopted. The data analysis begins when the data collection starts. Each interview session provides information about the method so that subsequent interviews could be adapted to obtain deeper and more specific information (Fig. 3.11).

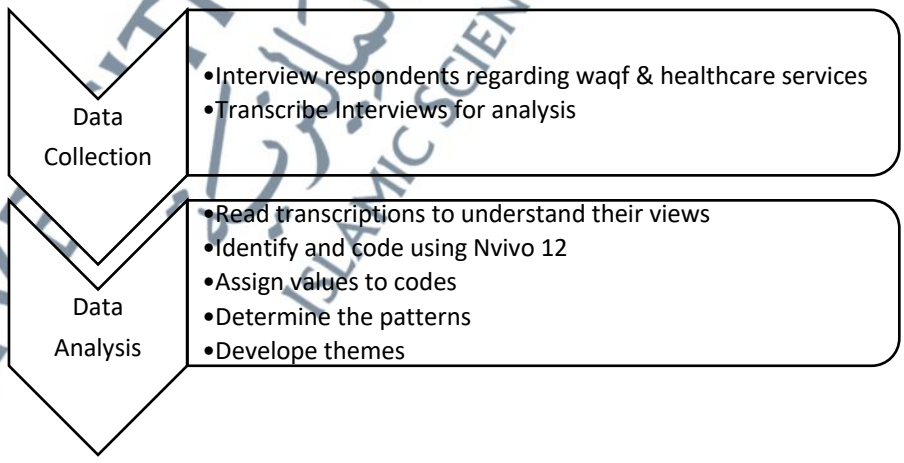

Figure 3.11: Methods of Analysis. Adopted from (Bhattacherjee, 2012) and adapted.

Data analysis from the qualitative will be analysed using open codes and themes and will be processed using NVivo software and manual axial coding (Saunders et al., 2009) to achieve textual data analysis and theory construction (Walsh 2003; Bazeley and Jackson 2013). The analyses chosen for this research is the content analysis, thematic and grounded theory analysis. The table below (Table 3.9) shows the types of analyses, the goals, types of data and relevance to the research questions. Based on the table below, are explanations to how these are adopted into the research.

Analysis	Goals	Type of Data	Research Question
Content Analysis	- Describe data as is - Quantify codes or categories - Compare frequency of categories between groups (residents v. fellows)	- Open-ended survey questions - Structured interviews or focus groups - Essays/narratives	RQ1. What is the criteria of past *waqf*-based hospitals in the 8th-14th CE from the Arab/Islamic World? RQ2. Which are the main elements of waqf-based hospitals that can be identified through comparative analysis from the past and current models from literature (preliminary working framework)?
Thematic Analysis	- Develop themes • Interpret 'big picture' meaning of data	-Structured or semi-structured interviews or focus groups - Essays/narratives	RQ3. What are the issues and challenges faced by hospitals of private/public and *waqf*-based models, and how can they be solved? RQ4. How to develop corporate *waqf* framework in collaboration with a public hospital in Malaysia?
Grounded Theory	- Generate a theory or conceptual model about a process/social phenomenon	- Semi-structured interviews or focus groups - Essays/narratives	RQ4. How to develop a corporate *waqf* framework in collaboration with a public hospital in Malaysia?

Table 3.9: The Analyses of Interviews

3.4.1 Content Analysis

This research adopts the summative content analysis as it involves counting and comparisons, usually of keywords or content, followed by the interpretation of the

underlying context. Content analysis show three distinct approaches: conventional, directed, or summative, where major the differences are the coding schemes, origins of codes, and threats to trustworthiness (Hsieh & Shannon, 2005). Below in Table 3.10, shows how the process produces the result of analysis.

	Purpose	***Process***	***Product***
Qualitative content analysis	Developing themes to capture the underlying meanings of data portions (latent meaning-based purpose)	• Identifying relevant data • Coding by examining the text including the context and background • Generate the themes to represent the underlying meanings in data • Use the themes to address the research question(s).	Credible and context-bound results.

Table 3.10: Qualitative Content Analysis (Hsieh & Shannon, 2005)

Content analysis is useful for examining trends and patterns in documents (Stemler, 2001). It begins by coding and then these codes form the categories which will result in its frequency (Fig. 3.12).

Figure 3.12 : The Flow of Content Analysis (Anaheim, 2017)

3.4.2 Thematic Analysis

Thematic coding builds categories from coding and from those categories, themes are formed.

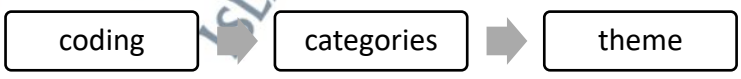

Figure 3.13: The Flow of Thematic Analysis (Anaheim, 2017)

3.4.3 Grounded Theory Analysis

The grounded theory analysis builds categories from coding and from those categories, themes are formed.

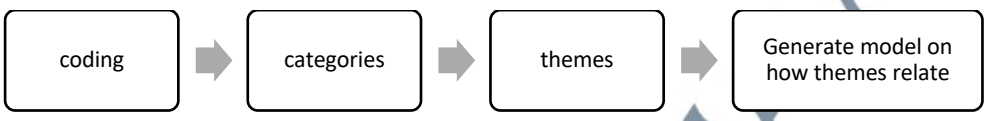

Figure 3.14 : The Flow of Grounded Theory (Anaheim, 2017)

In this research, the analysis was driven by grounded theory by transcribing the interviews and coding the texts and phrases into nodes. These are then categorized and later form themes which are then used to generate the framework.

3.4.4 Coding

Based on Strauss and Corbin (1990), the Straussian grounded theory introduces coding procedures and phases, namely open coding, axial coding and selective coding. They emphasized new basic techniques of coding procedures on how to code and build the data which were the fundamental in GT. These were basic techniques which included data collection and analysis, concepts and categories, etc. Coding is described as the deciphering or interpretation of data which includes the naming of concepts and also explaining and discussing them in more detail (Böhm, Glaser, & Strauss, 2004).

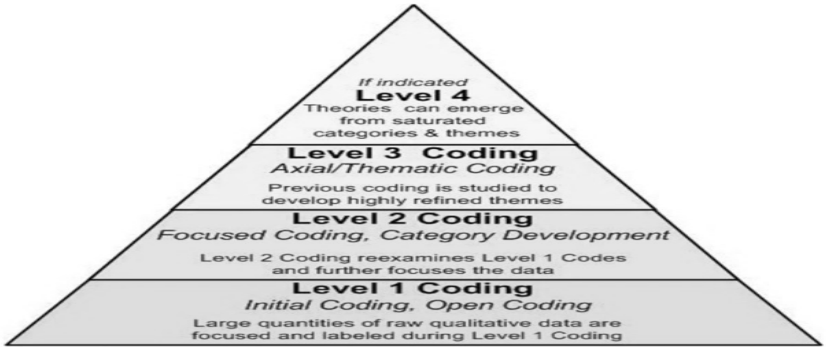

Figure 3.15: Different levels of Coding (Charmaz, 2006).

Grounded theory coding consists of at least two phases: initial and focused coding. Coding data is divided into four levels, as shown above in Figure 3.15. The first level coding is the initial coding where fragments of data include words, lines, segments and incidents. The 2nd level focused coding means using the most significant and/or frequent earlier codes to sift through large amounts of data to determine the adequacy of those codes. The third level is Axial coding, which relates from categories to subcategories and specifies the properties and dimensions of a category. The 4th level coding, is theories coding where at this stage it is possible to specify possible relationships between categories during focused coding to make the analysis coherent and comprehensible.

3.4.5 Triangulation

Triangulation is a critical authentication approach in a qualitative study (Roller, 2019) as it uses many sources to compare and compare study data to support or disprove information in the search for accurate knowledge from the data only. The triangulation is applied in this research through 1) within in-depth interviews, and 2) with literature.

Types of triangulations	Descriptions	Applied Research
Method triangulation	interviews, observation, and field notes.	Interview and field notes
Investigator Triangulation	the participation of two or more researchers in the same study to provide multiple observations and conclusions.	2 investigators (Dual moderators)
Theory Triangulation	Theory triangulation uses different theories to analyse and interpret data.	Literature (manual & NVivo 12 triangulation)
Data Source Triangulation	use of focus groups and in-depth individual interviews	In-Depth Interviews with individuals from different types of organizations but related to the focus of interest.

Table 3.11: Types of Triangulation (Carter, Bryant-Lukosius, Dicenso, Blythe, & Neville, 2014)

The triangulation applied uses multiple sources to contrast and compare study data to establish supporting and/or contradictory information to ultimately give the researcher and users of the research a more balanced and deeper understanding of the outcomes than relying on the study data alone. The table (3.11) above, are the many types of triangulation applied in the research.

The IDI (In-Depth Individual) interview is one of the most powerful tools for gaining an understanding of human beings and exploring topics in depth (Fontana & Frey, 2000). The triangulation is applied in this research by diversifying the respondents in their different backgrounds and organizations but still related to the focus of interest of this research. The interviews are later coded and triangulated amongst the different respondents and coded data from literatures which are later visualised using NVivo 12.

3.4.6 NVivo 12 in Coding, Triangulation & Analyses

- Coding

Besides manual coding, this research uses the NVivo 12 software to create coding and themes in search of the criteria of the past *waqf*-based hospitals and the present ones, to tabulate them and to make comparisons for similarities and differences. The NVivo 12 is used to identify the characteristics for the criteria to be investigated and also to justify the fundamentals of the working framework. This modus operandi will ease the coding and encoding procedure and show relevant associations between categories and show visualizations of results for easy understanding.

A computer-based tool NVivo is used to help in the analysing of the qualitative data by: managing data which includes documents, interviews etc.; managing ideas; query data; visualize data and reports form data (Bazeley & Jackson, 2013). NVivo is a computer program for qualitative data analysis that allows one to import and code

textual data, edit the text; retrieve, review and recode coded data; search for combinations of words in the text or patterns in the coding; and import from or export data to other quantitative analysis software. NVivo was developed by QSR International, the makers of NUD*IST. QSR's first product was created in 1981 (then called NUD*IST) to support social science research and contained tools for innovative 'Non-Numerical Unstructured Data Indexing Searching and Theorizing' (Bandara, 2006).

With NVivo 12, the coding system manages certain aspects of the data from documents by sorting the specific topics of information into distinctive categories. The coding uses words, phrases, and ideas directly from the text and captures information, emotions included and exploring them whenever ready. In this research particularly, it is used to identify the characteristics for the criteria to be investigated and also to justify the fundamentals of the working framework. This modus operandi will ease the coding and encoding procedure and show relevant associations between categories and show visualizations of results for easy understanding.

Interviews were transcribed verbatim and analysed using QRS NVivo (Bailey, 2020; P Sethuraman, 2020; Silver& & Bulloch, 2018; Zamawe, 2015) and then these were then analysed. Data analysis using QRS NVivo software included the following steps (QSR International, 2019).

Step 1: Transcribe interviews verbatim, and the data would be stored and organized using QRS NVivo by importing the data and exploring the interviews.

Step 2: Relevant phrases were identified and categorized into preliminary themes. Original transcripts were grouped and rearranged by the software for code patterns of words, phrases, and sentences to derive themes. In NVivo 12, categories are placed in

nodes, which are storage for coding themes in one place and viewing for emerging patterns.

Step 3: coded themes relating to the subject would be collected by running a text search and grouped in one place.

Step 4: The NVivo 12 program provided a visual display of the number of times relevant categories of themes emerged from participants' discussions.

For example, for the theme, Factors needed for the success of *waqf*-based healthcare services, the categories sustainability, commercialism and the need for fund raising emerged. At this stage, NVivo 12 refers to this process as developing cases for storage.

Step 5: The finding was recorded using the program's memo section.

Step 6: Results from the manual coding and the NVivo 12 analysis were checked for similarities.

- Triangulation

This research uses the NVivo 12 software to assist in the data analysis. The intentions are to create coding and themes in search of the criteria of the past *waqf*-based hospitals and the present ones, to tabulate them and to make comparisons for similarities and differences. .

Triangulation is deployed by comparing the results from two or more different methods of data collection, and respondent validation by verifying findings amongst participants to support data interpretation. Content of the verbatim can be visualized in a frequency table, diagram, charts, and supported by excerpts from literature review for triangulation and building chain of evidence (Ishak & Bakar, 2012).

The summary of the results from both data analysis methods with a description of categories and triangulations are recorded in Chapter 4 of this research.

- Analysis

For analysis for this research, it assists in finding key words in the journals articles in forming categories and themes, structuring the thesis, comparing ideas and notes, and visualising the comparisons.

NVivo also saves researchers from 'time consuming' transcription and boost the accuracy and speed of the analysis process. It is able to import and code textual data, edit the text; retrieve, review and recode coded data; search for combinations of words in the text or patterns in the coding; and import from or export data to other quantitative analysis software (QSR International, 2019; Zamawe, 2015).

3.5 Limitations

This research may not lead to an accurate understanding of the conditions and circumstances of the societies in the past, but it may be worthwhile in investigating the nature and experiences of the development of the *waqf*-based hospitals and could serve as a useful precursor to a more in-depth research which may result in a more positive outcome.

There are also limitations in the elite interview such as in the imbalances of power interviewer and elite interviewee, distractions and time consuming (Liu, 2018).

3.6 Summary

This research is a qualitative research conducting a grounded theory approach, adopting constructivism and interpretivism, inductive and qualitative analysis. Data were collected using cross-sectional, face-to-face interview with in-depth, semi-structured questions qualitative method. To revise the list of questions and validate the constructs, two pilot tests were conducted involving two groups of people i.e. the

experts and the potential respondents. For the in-depth interview, a total of 8 respondents (including pilot tests respondents) were selected using purposive and snowballing sampling. Finally, coding and the application NVivo 12 was used to analyse the data collected. In the next chapter, the empirical results of the data analysis are presented.