CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This section describes the research design and methodology adopted to empirically examine the proposed framework and hypotheses. Section 4.1 is the introduction of the chapter. Section 4.2 discusses the research paradigm in terms of epistemology and the chosen epistemologies. Section 4.3 describes the research approach and design with their justification. Subsequently, Section 4.4 clarifies the location setting of the study, and Section 4.5 which elaborates the sampling frame, size, technique, and procedure. Section 4.6 dives into the question design and preparation, including questionnaire development and procedure, questionnaire structure, construct and scales, and questionnaire translation. The researcher next details in section 4.7 how the pre-test (content and face validity, as well as the pilot study) was conducted, followed by an explanation of the data collection and distribution at section 4.8. The next section 4.9 describes the data analysis procedure used in this study which includes data cleaning and the SEM-PLS stages. Another analysis for mediating has been explained in the section 4.10. The final, which is section 4.1, summarized the entire chapter.

4.2 Research Paradigm

The research paradigm refers to the theoretical or philosophical foundation of the research and is regarded as a research approach (Khatri, 2020). The author stated that in

1962, American philosopher Thomas Kuhn introduced the term paradigm to refer to a philosophical way of thinking in the field of research. Meanwhile, philosophy as the fundamental belief on knowing from a worldview has spawned a paradigm of study linked to ontology, which is the study of existence (Creswell, 2013; Crotty, 1998; Scotland, 2012).

Ontology aims to comprehend the philosophy of reality or what knowledge is, whilst epistemology elaborates on how we come to know about knowledge. Both ontology and epistemology will relate to and guide the study in terms of the proper technique and approaches for the respective body of knowledge.

Epistemology is part of the research paradigm component besides ontology, methodology and methods for exploring the nature of knowledge and figuring the truth within the philosophy of knowledge (D. L. Morgan, 2007; Scotland, 2012). According to Tennis (2008), epistemology involves a series of questions: *"What is the relationship between the knower and what is known? How do we know what we know? What counts as knowledge?"* In ancient Greek where the term originates, epistemology was known as the theory of knowledge. In fact, the word epistemology was derived from the Greek terms *episteme* and *logos* which denote knowledge and reason, respectively (Krauss, 2005; Trochim, 2000). Hence, epistemology entails knowing what and how the knowledge was created and understanding the relationships of the knowledge.

In addition, the significance of epistemology entails the ability to grasp the knowledge under study in a correct, rational, and logical manner, thus justifying the subject matter of the study and establishing the validity of the knowledge through a systematic methodology and appropriate approach. A coherent philosophy or paradigm must lead and direct the research objectives, research questions, and study framework (Hallebone &

Priest, 2009). Therefore, the examined knowledge is valid and can be recognized due to its credibility, reliability, and validity, as evidenced by the correct measurement and precise interpretation of the research findings' analyses. Nonetheless, the researcher must analyse the potential, nature, sources, and constraints of knowledge as they pertain to the study.

The important aspects of the epistemologies of the main research philosophies related to business research are described in Table 4.1 and 4.2. Depending on the research question, pragmatism suggests either observable phenomena or subjective meanings that can provide acceptable knowledge. It focuses on research that can be used right away and uses different points of view to help understand the data. On the other hand, realism is based on things that can be seen and are supported by evidence. If there is insufficient information, feelings can be off (direct realism). On the other hand, phenomena create feelings that can be misunderstood (critical realism). It entails explaining based on the context of the situation. Next, interpretism is the subjective meaning of social phenomena. It scrutinizes the details of the situation, the truth behind these details, and the personal meanings that drive actions. Lastly, positivism asserts that only things that can be seen can be trusted as data or facts. It investigates causes and generalizations that are like laws and reduces the phenomena to their simplest components.

Table 4.1: Epistemologies of the Main Research Philosophies

Research Philosophy	Epistemology: The researcher's view regarding what constitutes acceptable knowledge
Pragmatism	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus is on practical applied research, integrating different perspectives to help interpret the data.

Source: Adapted from Saunders, M., Lewis, P. & Thornhill, A. (2012) "Research Methods for Business Students" 6th edition, Pearson Education Limited.

Table 4.2: Epistemologies of the Main Research Philosophies (continue)

Research Philosophy	Epistemology: The researcher's view regarding what constitutes acceptable knowledge
Pragmatism	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus is on practical applied research, integrating different perspectives to help interpret the data.
Positivism	Only observable phenomena can provide credible data, facts. Focus is on causality and law-like generalisations, reducing phenomena to simplest elements.
Realism	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism). Focus is on explaining within a context or contexts.
Interpretivism	Subjective meanings and social phenomena. Focus is upon the details of the situation, the reality behind these details, and the subjective meanings motivating actions.

Source: Adapted from Saunders, M., Lewis, P. & Thornhill, A. (2012) "Research Methods for Business Students" 6th edition, Pearson Education Limited.

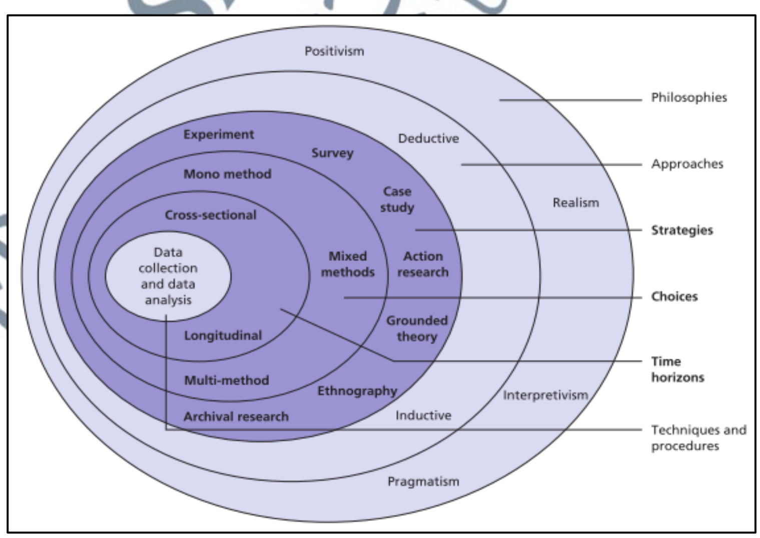
The positivist approach to research entails conducting a value-free investigation as much as feasible. Bahari (2010) claimed that researchers must be independent, and the properties should be measured through objective methods. For the purpose of this study, positivism is chosen as the most appropriate paradigm because the information gathered from this type of research enables the researcher to answer the purpose of the study, which is to determine the factors influencing the loyalty of waqifs in contributing cash waqf. Additionally, this study investigates the role of trust and commitment in mediating cash waqf loyalty.

W. L. Bennett (1993) argued that positivism views social science as an organized strategy for integrating deductive reasoning with precise empirical observations of individual behaviours to identify and establish causal principles that may be used to anticipate broad patterns of human activity. Chirkov and Anderson (2018) claimed that the positivist approach is widely applied in consumer research. However, W. L. Bennett (1993) argued that the positivist approach does not provide the means for investigating human beings and the behaviours that they engage in.

Quantitative studies have been conducted in numerous fields of business research in an effort to understand how particular variables influence business performance, a phenomenon amenable to quantitative investigation (Bloomfield, J., & Fisher M.J., 2019). This study therefore utilizes the quantitative and non-experimental research approach to examine the relationship between the variables.

4.3 Research Approach and Design

To establish the philosophical stance and research approach, the selection of the research approach and design is an important matter in line with the research problem, research questions and objectives (Saunders et al., 2012). Based on the comparisons of the perspectives above, the discussion of literature, and its application to the context of cash waqf, the positivist paradigm is selected for the current study.



Source: Adopted from Saunders et al. (2012)

Figure 4.1: Research Onion

4.3.1 Justification of Research Approach and Design Chosen

The approach and design chosen for this study can be comprehended by referring to Table 4.3 and 4.4 which is explained based on the research plan provided in Figure 4.1. The table outlines the various philosophies, approaches, strategies, choices, time horizons, techniques, and instruments utilized in the study.

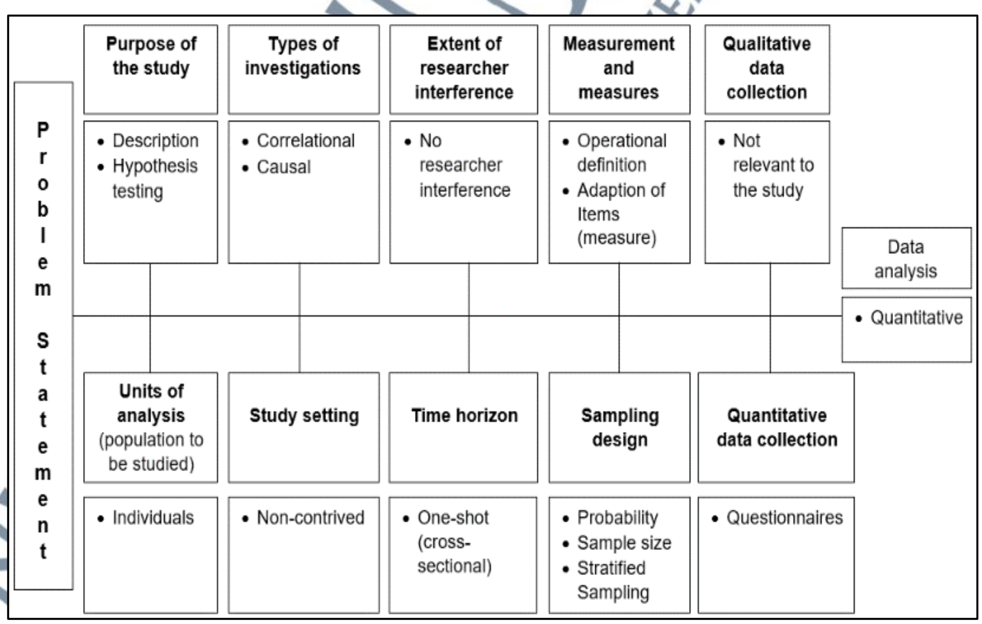
Table 4.3: Justification of Research Approach and Design

Research Onion	Researcher Choices	Justifications of Choices (based on this study)
Philosophy	Positivism	Very precise and objective to answer **five research questions by measuring the outcomes in predicting behavioural factors** (attitude, knomledge, experience, perception, trust and commitment to loyalty of waqifs in cash *waqf*). The study has no influence from researcher.
Approaches	Deductive	Appropriate theories (one grand theory and two supporting theories) and a marketing concept (loyalty) have been selected to **explain the relationship between the constructs** involved (attitude, knowledge, experience, perception, trust, commitment and loyalty) in the research framework. Develop and test the **hypothesized relationships** (H1 until H8) among the underlying constructs derived from the existing theories and concepts.
Strategies	Survey	Since this is a quantitative research that focuses on hypotheses testing with empirical evidence, the **survey** method is the most efficient tool for collecting data from a sample in order to produce generalized results.
Choices	Mono method	There are many qualitative studies on *waqf* conducted from management perspectives. Hence, the researcher focuses on a **quantitative method study** from **the *waqifs'* behavioral perspective.**
Time Horizons	Cross-sectional study	Due to the short data collection period (2 months) and collection at one point in time, the **cross-sectional research** provides a more representative sample and valid information as opposed to a longitudinal study.
Techniques and Instruments	Unit of Analysis	**Individuals - *waqifs*** who had contributed to cash *waqf* endowment through **salary deduction.**
	Type of Sampling Design	**Probability sampling** was selected due to the adequate and reliable sampling frame which allows for the generalization of findings to the population. **Stratified adaptive cluster sampling -** sampling frame drawn from the State of Selangor to represent Malaysia as a whole.

Table 4.4: Justification of Research Approach and Design (continue)

Research Onion	Researcher Choices	Justifications of Choices (based on this study)
Techniques and Instruments	Primary and Secondary data	**Primary data sources** have been collected firsthand by the researcher specifically for this study using the survey method in the form of questionnaires. **Secondary data** was utilized to design and create the theoretical research framework and instrument based on previous literature pertinent to the topic of this study.
	Questionnaires	A set of **quantitative questionnaires** was used as the research instrument to provide accurate insights in answering the research questions and objectives. This entails a self-administered questionnaire to measure each construct under investigation.

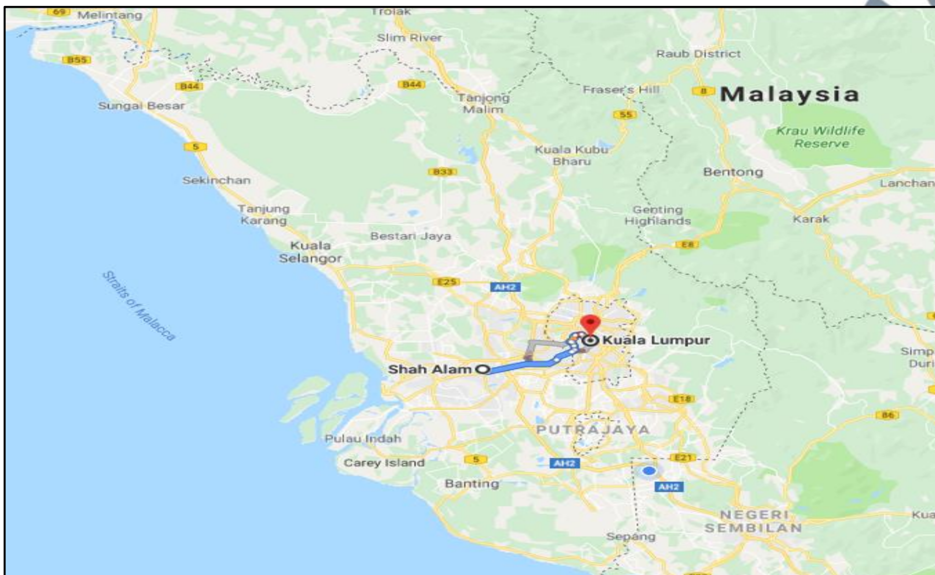
Initially, a theoretical study was performed to produce the conceptual framework. Later, an empirical study was carried out as a pretest to ensure that the items' settings and survey design are functioning as they should. This aids the researcher in ensuring that necessary data has been obtained for drawing conclusions. Figure 4.2 is adapted from Cavana Brian and Sekaran (2001) to show the research design of this study.



Source: Adopted from Cavana & Sekaran,(2001) "Applied Business Research: Qualitative and Quantitative Method"

Figure 4.2 The Research Design

4.4 Location Setting of the Study



Source: Geological Map of Peninsular Malaysia (https://www.jmg.gov.my)

Figure 4.3: The Map Location of Selangor

According to the Department of Statistics Malaysia Report, in the year 2020, Selangor is the most populous state in Malaysia, accounting for 21.6 percent of the country’s total population (32.4 million) with its 6.9 million residents. In 2021, Selangor's economy grew by 5 percent, reversing a decline of -5.2 percent in the previous year. Selangor remains as Malaysia's largest economy, with a gross value added of RM343.5 billion in 2021 compared to RM327.1 billion in year 2020. Klang Valley is a part of Selangor, which is the nation's largest urban area with rapid expansions in transportation, business, and industrial hubs, thus creating employment opportunities for locals and migrants. In the same year, it was reported that there were 20.6 million Muslims, 2.9 million Christians, 6.1 million Buddhists, 2 million Hindus, and 860,000 others. Selangor has the greatest population of Muslims (DOSM, 2022).

Pusat Wakaf Selangor (PWS), which is one of the most familiar states for cash waqf endowment, had revealed that the cash waqf funds collected from Selangor are the highest in comparison to other states in Malaysia and that until 2017, the collection had reached a total of RM6.12 million as derived from several channels including online banking, district collection, salary deduction, agents and cooperatives. Based on unofficial report 2017, the most prominent waqf payment channel used was through salary deduction with a collection of almost RM2.83 million made by 12,068 waqifs from government bodies, private sectors, cooperative and others (PWS, 2017). As a result, Selangor was selected to fulfill the research objectives and generalize the population of the study.

4.5 Sampling Frame, Size, Technique and Procedure

The purpose of this study is to examine the relationship between the waqifs' internal attributes, trust, and commitment in influencing their loyalty to contribute cash waqf. To achieve the objectives, the population or sampling frame, sampling technique, and size must be defined.

4.5.1 Sampling Frame

To provide a valid and reliable evaluation of the waqifs, it would be more appropriate for this study to consider only waqifs who had contributed to cash waqf endowment consistently. Due to the fact that waqifs contribute to the various cash waqf funds at numerous institutions and organizations, the population of waqifs is too huge and dispersed to be measured precisely. Furthermore, there is no reliable data on existing waqifs who had consistently contributed to cash waqf. Nevertheless, PWS maintains an extensive database of registered waqifs who had contributed cash waqf via salary deduction with PWS. This is considered as the study's sampling frame, which is enough to generate sufficient respondents to accomplish the research objectives and generalize the population (refer to Appendix 2: List of Sampling Frame provided by PWS).

A sampling frame is a complete list of all the items in the population to be studied (Digaetano, 2013). The difference between a population and a sampling frame is that the population is general, whilst the sampling frame is specific. Based on the most recent PWS data, the number of waqifs involved in salary deduction for cash waqf endowment in Selangor is 5285. These employees come from various government agencies, including the Selangor state government (1664), statutory bodies (563), state government subsidiaries (473), local authorities (2505), and Majlis Agama Islam Selangor (MAIS) subsidiaries (80). As a result, the availability list of 5285 employees were used as the sampling frame (refer to Table 4.5).

Table 4.5: Number of Waqifs using Salary Deduction to Contribute Cash Waqf in Selangor in 2018

Agency	No. of Waqif	Total of Staff	Percentage (%)
Selangor State Government	1664	25646	31
Statutory Bodies	563	25885	11
State Government Subsidiaries	473	51849	9
Local Authorities	2505	103619	47
Subsidiaries of MAIS	80	206999	2

Source: Pejabat Wakaf Selangor (PWS)

4.5.2 Sample Size

The most critical aspect to consider when selecting a sufficient sample size is to ensure that it accurately reflects the whole population. It must not be too small to the point that precision and reliability would be questionable, or too vast to the extent that time and resources would be wasted; it must be balanced so that inferences or generalizations to the larger population can be drawn by the researcher (Chuan, 2006). The author mentioned that the sample size is determined by four factors: toleration of sampling error, size of the population, the difference between the population in terms of characteristics of interest, and estimation of the smallest subgroup within the sample. If the sample size is small, it will be subjected to type error I; if the sample is too large, type error II will likely occur (Sekaran, 2013).

Determination of sample size is commonly associated with Hair et. al (2010), Krejcie and Morgan (1970), Cochran (1977), Cohen (1988), or G*Power software. Sampling is required to obtain a sample value from which to estimate the population value. As the sample has a lower degree of variability than the population (population variability is normally diffused to generate a normal distribution graph), the sample size determination should focus on inference. Below are the elements that must be taken into account in sample size determination:

1. Sampling error - Sampling error occurs when the value that is supposed to be obtained from the population differs from the value obtained from the sample taken.
2. Confidence level - Krejic and Morgan’s (1970) table uses confidence level for sample size calculation. A normal population is scattered with a confidence level of 95% or $\alpha = .05$.
3. Degree of homogeneity – Also known as degree of variability, this refers to the distribution of population variance. Variance is a basic concept in statistics. In simple terms, variance means the individual difference of the score around

minimum or the change of score around minimum. For a heterogeneous (non-uniform) population, larger sample sizes are required, which is the opposite.

4. Krejcie and Morgan’s (1970) table is used if the population is known (target or accessible). The calculations in this table do not consider statistical power and effect size (refer to Table 4.4).

5. Cochran's (1977) table is based on the margin of error formula to enable the researcher to receive error items of 5% for category data and 3% margin error for continuous data. This is a deliberate mistake made by the researcher because every measurement must have an error. This includes receiving errors with $\alpha = .05$ (type 1 error). Therefore, Cochran provided two formulas for continuous data and categorical data. The size of the population is required when using the Cochran formula.

Cohen’s (1988) table or G*Power is based on statistical power and effect size (ES). If more samples are required, the simpler ES needs to be estimated which is called the prior to sampling method. Statistical power analysis is used to determine the sample size; the objective of the analysis is to calculate an adequate sampling size to optimize as opposed to maximizing sampling effort within the constraints of time and money. Taking that into consideration, the sample size can be estimated for any given statistical test by specifying values for the other four factors: (1) significance level, (2) effect size, (3) desired power, and (4) estimated variance (Cohen, 1992; Franz et al., 2007).

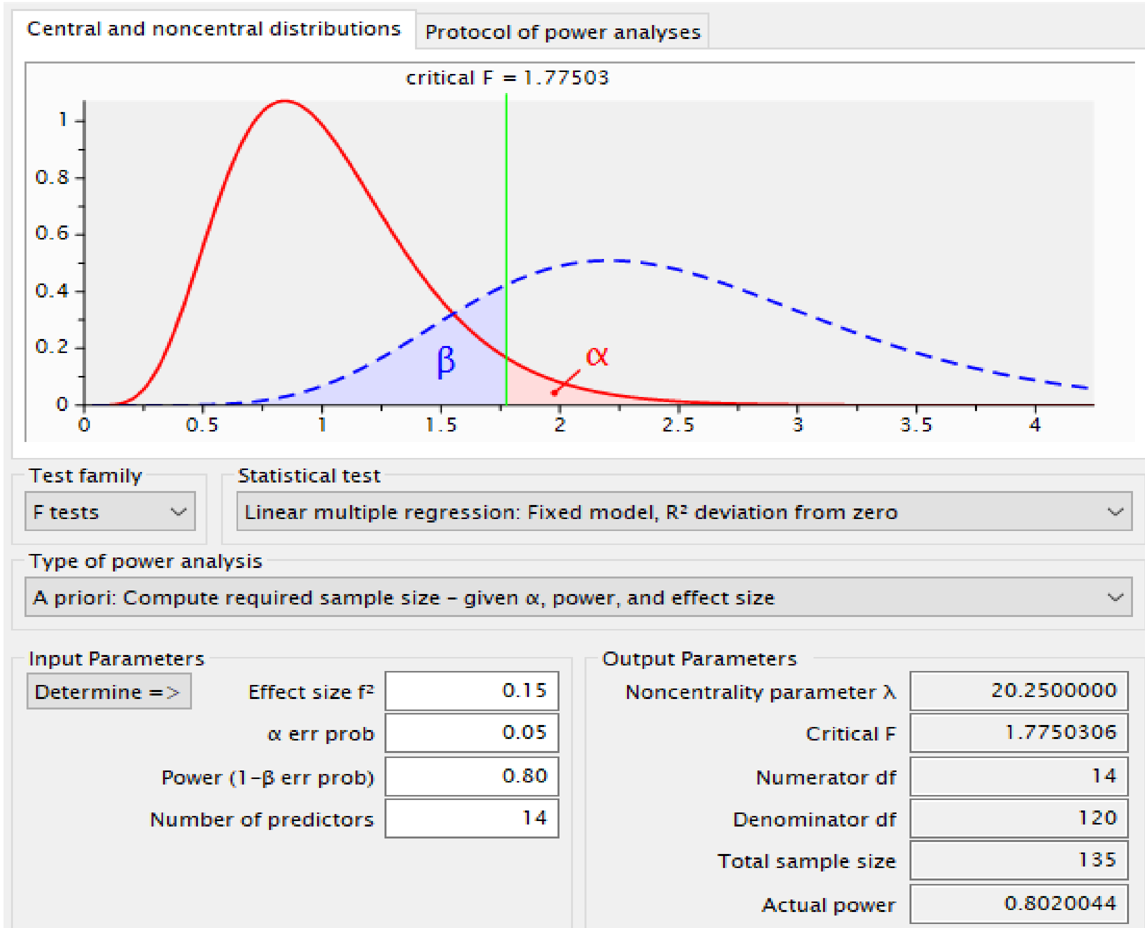


Figure 4.4: The Chosen Sample Size by G*Power for this Research

G*Power assists in estimating the sample size of waqifs for the minimum threshold in selecting a total sample for the investigation. Using G*Power, with the assumption of a medium effect size at a 5% level, minimum power of 0.80, and 14 predictors, a sample size of 135 was obtained. According to the resolution, 80% is the minimum allowable power for social sciences (Gefen, Rigdon, & Straub, 2011). Figure 4.4 depicts the sample size recommended by G*Power for this study whereby 135 samples are deemed adequate and reliable based on the minimum requirements.

The researcher decided to select the study sample using the sample size table developed by Krejcie and Morgan (1970) since the sampling frame is known and the potential respondents are accessible under the assumption of a population proportion of 0.5, 95% confidence, and 5% error (Krejcie & Morgan, 1970). According to the data in Table 4.4, the researcher should collect a sample of over 357 respondents with the population, N = 5285. Nonetheless, the researcher also needs to establish a minimum sample size of 135 based on Cohen’s (1988) Schedule or G*Power, as shown in Figure 4.6 below.

Table 4.6: The Sample Size of Known Population

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Source: Krejcie R.V. & Morgan D.W. (1970), “Determining Sample Size for Research Activities”, Educational and Psychological Measurement, Vol. 30: 607-610

4.5.3 Sampling Technique

Probability sampling is the most feasible sampling technique for this study compared to non-probability sampling. This is due to the size and means for identifying individuals of the population or sampling frame to be determined (Creswell J.W., 2014).

Probability sampling allows for the generalization of findings to the population as defined by the sampling frame (Acharya et al., 2013). Probability sampling implies that every individual in the population has an equal chance of being selected. It has been extensively applied in quantitative research and is the most reliable technique for generating results that are representative of the entire population. Probability sampling is classified into four types namely simple random, systematic, stratified, and cluster (refer to Figure 4.5). For this study, stratified sampling was employed. Probability sampling is deemed to be more effective due to its ability to generate data that can be representative of the entire population and this method employs probabilistic techniques to mitigate bias during the sampling process, as supported by evidence provided by official statistical institutions or credible institutions that provide the statistical data (Reynolds et al., 2003). Conversely, non-probability techniques rely on purposive sampling, which introduces assumptions and associated risks. Relying on assumptions can lead to the formulation of inaccurate generalizations about a given population.

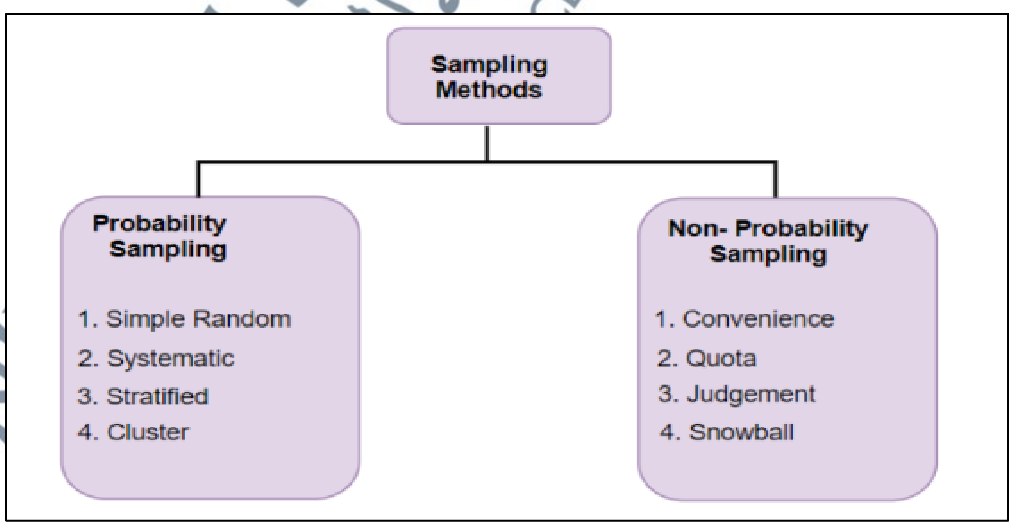


Figure 4.5:Types of Sampling Techniques

In this study, the chosen sampling type is a cluster sampling. It is a method of sampling in which the entire population been devided into distinct groups, or clusters. A random sample of these clusters is then chosen. The sample includes all observations within the selected clusters. When the population is large, dispersed, and inaccessible, this method is typically used. The clusters should ideally reflect the characteristics of the entire population. Cluster sampling enables researchers to divide the population into smaller, more manageable subgroups that exhibit similar characteristics (Etikan & Bala, 2017).

Cluster sampling is a valuable technique employed in situations where geographical sampling is necessary, especially when the populations under study are geographically dispersed. Cluster sampling involves the formation of clusters by researchers, wherein individuals residing within a community, neighborhood, or local area are grouped together within a single cluster based on geographical proximity. Cluster sampling is a technique employed in market research when it is not feasible for researchers to gather data from the entire population .

In this study, the selection of Selangor as the sample region was made for numerous solid reasons. This region represents a significant state within the Malaysian context that is characterized by a high population density and notable advancements in development. Moreover, the Klang Valley region is situated within the state of Selangor, recognized as the country's largest urban area. It is noteworthy that Selangor's economy is the most robust among all the states in Malaysia. Additionally, the cash waqf funds collected from Selangor exhibit the highest amount among the various states in Malaysia, as reported by PWS. Furthermore, a systematic database has facilitated the development of a sampling frame comprising individuals in the state of Selangor who contribute to cash waqfs through salary deductions. Therefore, Selangor is deemed to be the most appropriate sample within the Malaysian context for investigation in relation to this particular study endeavor. The appendix 2 provides the lists of sampling frame which in total of 5285 waqifs (employed salary deduction chanel) from various categories of goverment agencies that comprises of Selangor state government departments, statutory bodies, state government subsidiaries, local authorities and subsidiaries of the Selangot Islamic Religious Council (MAIS).

Next was to identified, the type of cluster should be employed to the sampling frame. This reseasch employed the stratified adaptive cluster sampling where a stratified sample is initially chosen from a population, and if a specific condition is met for the variable of interest for any unit, additional units from the vicinity of that unit are included in the sample (Thompson S.K., 1991). According to Thompson (1991) adaptive cluster sampling offers a method to exploit clustering patterns within a population, particularly in cases where the characteristics and configurations of the clusters cannot be anticipated prior to conducting the survey.

4.5.4 Sampling Procedure

The sampling procedure defines how samples are derived from the stratified adaptive cluster sampling technique in order to obtain an initial sample of units which selected from a population using stratified random sampling; that is, within stratum size, a simple random sample of χ units is selected without replacement, with selections for separate strata made independently. When a selected unit meets the condition, all units in its vicinity that are not already in the sample are added to the sample. More units may be added to the sample whenever any of the newly added units meets the condition, so that the final sample contains every unit in the vicinity of any sample unit that meets the condition. Figure 4.6 shows the steps involved to obtain the sample based on stratified adative cluster sampling.

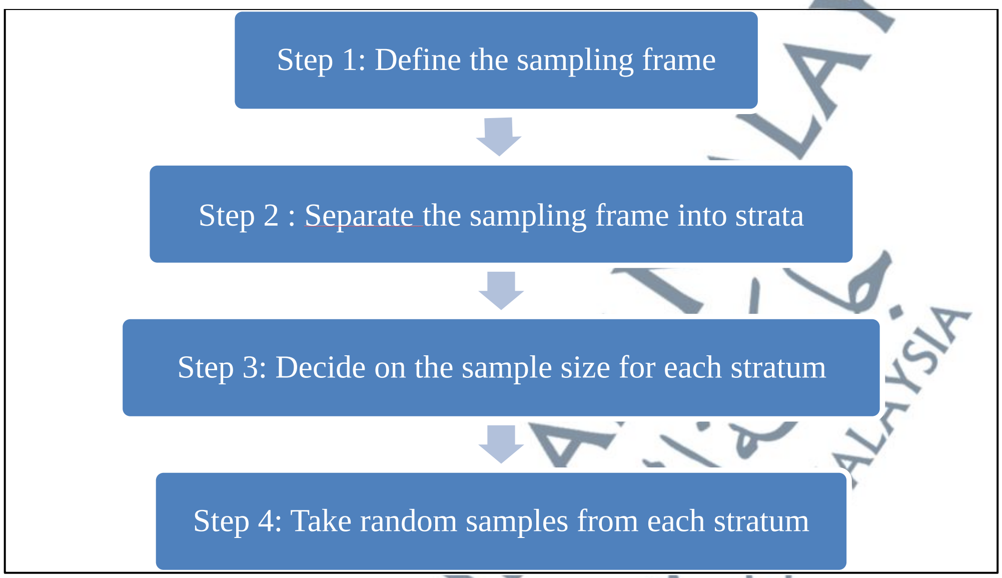


Figure 4.6: Procedures in initial Stratified Adaptive Cluster Sampling Technique

4.5.1.1 Step 1: Define the Sampling Frame

The researcher clearly defines the sampling frame (population) from which the sample is taken by deciding the criteria of sampling. Firstly, the sample must consist of waqifs who have consistently contributed to cash waqf via salary deduction to PWS. Secondly, they must be registered waqifs who had given their consent to their HR department. Thirdly, their workplace must be in the list of the PWS database.

4.5.1.2 Step 2: Separate the sampling frame into strata

Based on the lists provided by PWS, the strata or group is identified for the waqifs. This strata is based on the types of agencies that have been classified according to certain characteristics. There are five agencies involved including the Selangor state government, statutory bodies, state government subsidiaries, local authorities, and subsidiaries of MAIS.

4.5.1.3 Step 3: Decide on the sample size for each stratum

Firstly, the researcher decides whether the sample is proportional or disproportionate. The sample size is decided to be proportional since the sample size of each stratum is equal to the proportion of the sub-group in the sampling frame. Next, the total sample size is decided. It must large enough so that statistical conclusions can be drawn about each sub-group. The sample size calculation is as follows:

$$\boxed{\text{Sample size } / \text{ sampling frame (population) } \times \text{ stratum size}}$$

Thus, the calculation of the sample size is shown below:

Table 4.7: Sample Size for Each Agency Category

Agency	Sample Size / Population Size	Agency Sizes	Required Sample
Selangor State Government	357/5285	1664	112
Statutory Bodies	357/5285	563	38
State Government Subsidiaries	357/5285	473	32
Local Authorities	357/5285	2505	169
Subsidiaries of MAIS	357/5285	80	5

4.5.1.4 Step 4: Take a random sample from each stratum

Finally, another probabilistic sampling method is chosen such as simple random sampling or systematic sampling, in order to take a sample within each stratum. Simple random sampling is adopted at this final stage.

4.6 Questionaire Development and Design

Questionnaire is the most popular method for collecting data as it enables researchers to obtain information fairly easily, and the questionnaire responses can be easily coded (Sekaran & Roger, 2013). The questionnaire is employed to collect data and information pertinent to the objectives of the study. The unit of analysis for this questionnaire is employees (individuals) who contribute cash waqf consistently via salary deduction.

The formation and construction of the questionnaire begins with a literature review to identify the relevant constructs from past research. The questionnaire for this study was designed in both English and Bahasa Melayu, and has three sections. Below is a discussion regarding the questionnaire development, design of constructs, and translation procedure.

4.6.1 Questionnaire Development

The development of the questionnaire involved fifty-two questions in total, divided into three sections. Section I consists of fourty-one questions, divided into parts A, B and C. Part A investigates each dimension representing the independent variables, i.e., the waqifs' internal attributes (attitude, knowledge, experience, and perception). Part B investigates the mediating variables (trust and commitment), whilst Part C investigates the dependent variable (loyalty). In this section, the respondents are asked to rate each of the dimensions on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The five-point Likert scale is employed based on the standard psychological test, whereby it produces an acceptable level of discrimination (Chomeya, 2010). According to Croasmun and Ostrom (2011), the optimal reliability should not be more than seven-point because the increases in reliability would be so small that it would not be worth the effort to analyze the differences or develop the instrument.

Next, Section II contains six multiple choice questions (MCQ) on the demographic profile of the respondents. The demographic variables includes gender, age, education level, marital status, category of employment, and gross income per month. Section III comprises the cash waqf participation pattern of the waqifs including duration of contribution, average contribution per month, encouragement of others to contribute to cash waqf, other channels of contribution apart from salary deduction, and reason for contributing cash waqf. Table 4.8 and 4.9 list the finalised number of questions according to each section and part.

Table 4.8: Structure of the Questionnaire

Section	Content	Number of Questions
I	Internal Attributes of Waqifs (Independent Variables)	
	• Attitude of Waqifs	6
	• Knowledge of Waqifs	6
	• Experience of Waqifs	6
	• Perception of Waqifs	6
	Relationship to Mediate (Mediators)	
	• Trust of Waqifs	6
	• Commitment of Waqifs	5
	Response of Waqifs (Dependent Variables)	
	Loyalty of Waqifs to Cash Waqf	6

Table 4.9: Structure of the Questionnaire (continue)

Section	Content	Number of Questions
II	Demographic Profile of Waqifs • Gender • Age • Level of Education • Marital Status • Type of Occupation • Monthly Gross Income	6
III	Participation of Waqifs in Cash Waqf • Duration of contribution • Average contribution per month • Encouragement of others to Contribute to Cash Waqf • Other Channels of Contribution apart from Salary Deduction Reason for Contributing Cash Waqf	5
	Total Questions	**52**

The front cover of the questionnaire was meticulously constructed in terms of choice of language and sequence of questions. This is crucial to capture the attention of the participants and motivate them to complete the survey. The design of the form includes an introduction to the survey and its objectives, as well as a confidentiality guarantee and instructions for the respondents. The respondents were assured that all information provided will be kept confidential and used strictly for research purposes. The respondents were also provided with explicit instructions on how to answer each survey question and scale at each section. A short, simple conversational language that is easily understandable by all the respondents is used (Saunders et al., 2009). The questionnaire was designed in both English and *Bahasa Melayu*, with back-to-back translation prior to the data collection (refer to Appendix 3: Sample of questionnaire).

4.6.2 Question Design of Constructs

i. Construct: Internal Attributes of Endower (Independent Variables)

Table 4.10, 4.11 and 4.12 explain how the original items for the independent variables were adopted and adapted for this study. Attitude, knowledge, experience, and perception make up the four independent variables. The items for the attitude variable were adapted from Rodriguez-Ricardo et al. (2018) and Webb et al. (2000). Meanwhile, the items for the knowledge variable were modified from Supphellen and Nelson (2001). Items for the experience variable were adapted from Garg et al. (2014), whilst the items for the perception variable was adapted from Sargeant et al. (2006).

Table 4.10: Constructs and Scale for Internal Attributes of Waqifs (Independent Variables)

Variables	Original Items	Modified Items	Sources
Attitude	People should be willing to help others who are less fortunate.	I believe my cash waqf contribution will help others who are in need.	(Webb et al., 2000)
	Helping troubled people with their problems is very important to me.	I am confident that my cash contribution will facilitate the growth of Muslims in Selangor.	
	People should be more charitable toward others in society.	I should be more generous to contribute in cash *waqf* for the benefit of the *ummah*.	
	People in need should receive support from others.	I promise myself to give full support to cash waqf endowment.	(Rodriguez -Ricardo et al., 2018)
	The money given to charities goes for good causes.	I am confident that my cash waqf contribution is meant for good purposes.	
	My image of charitable organizations is positive.	I am certain that the waqf institution in Selangor has a positive image.	

Table 4.11: Constructs and Scale for Internal Attributes of Waqifs (Independent Variables) (continue)

Variables	Original Items	Modified Items	Sources
Knowledge	I am well acquainted with this organization.	I am familiar with cash waqf endowment.	(Supphellen & Nelson, 2001)
	I keep myself well informed about the work of this organization.	I am aware of the activities involved in cash waqf endowment.	
	I have read/heard a great deal about this organization.	I am taking the effort to get more information about cash waqf endowment.	
	I probably know more than the average person about this organization.	I keep myself updated with the latest information on cash waqf endowment.	
	I have read/heard a great deal about ideal work.	I understand the functions of waqf institutions in Selangor.	
	I have relatively good knowledge about ideal organizations in Norway.	I have good knowledge about cash waqf endowment in Selangor.	
Experience	The bank provides you proper information.	I have heard good stories about cash waqf.	(Garg et al., 2014)
	The transactions of the accounts are proper and confidential.	I have never encountered any confidential issue when performing cash *waqf* endowment.	
	The bank promotes its products/services effectively.	I have seen cash *waqf* endowment being promoted effectively to the society.	
	You feel secure while transacting through the bank's website.	I feel secure to endow my money to the cash *waqf*.	
	You communicate with other customers of the bank freely.	I communicate willingly to other people about cash *waqf* endowment.	
	The transactions of the accounts are proper and confidential.	I have never encountered any confidential issue when performing cash *waqf* endowment.	
Perception	I give to this non-profit to gain local prestige.	I understand that the purpose of cash waqf is not for self-reputation.	(Sargeant et al., 2006)
	I donate money to this non-profit to receive their publications.	I feel guilty if I do not help others through cash waqf.	
	Contributing to this non-profit enables me to obtain recognition.	I believe that contributing to cash waqf is part of my duty as a Muslim.	

Table 4.12: Constructs and Scale for Internal Attributes of Waqifs (Independent Variables) (continue)

Variables	Original Items	Modified Items	Sources
Perception	I may one day benefit from the work this organization undertakes.	I perform cash waqf because of Allah SWT.	(Sargeant et al., 2006)
	I give money to this non-profit in memory of a loved one.	I believe that my contribution to cash waqf will be rewarded by Allah SWT.	
	I felt that someone I know might benefit from my support.	I am confident that cash waqf can give a positive impact on the economy of the country as a whole.	

ii. Construct: Relationship to Mediate (Mediators)

Table 4.13 and 4.14 shows the original mediator items. The items for trust were modified from three sources (Azam, 2015b; Rahayu & Idris, 2014; Sargeant et al., 2006a). Meanwhile, the items for commitment were modified from Sargeant and Lee (2004) and Sargeant et al. (2006).

Table 4.13: Constructs and Scale for Relationship Marketing (Mediators)

Variables	Original Items	Modified Items	Sources
Trust	I do not believe what this Islamic social enterprise tells me.	I believe that the information provided by the waqf institution is accurate.	(Rahayu & Idris, 2014)
	I would trust this non-profit to always act in the best interest of the cause.	I am confident that the waqf institution will act in our best interest.	
	I would trust this non-profit to conduct their operations ethically.	I trust the waqf institution complies with ethical conduct.	
	I would trust this non-profit to use donated funds appropriately.	I believe that the waqf institution is transparent in utilizing the cash waqf funds.	(Sargeant et al., 2006)
	I would trust this non-profit not to exploit their donors.	I believe the cash *waqf* institution will not exploit the *waqif*s.	
	I think that e-retailers have sufficient experience in the marketing of the products and services that they offer.	I am confident that the waqf institution is capable of promoting cash waqf.	(Azam, 2015)

Table 4.14: Constructs and Scale for Relationship Marketing (Mediators) (continue)

Variables	Original Items	Modified Items	Sources
Commit-ment	The relationship I have with (this charity) is something I am very committed to.	I am committed to contribute to cash waqf.	(Sargeant & Lee, 2004)
	The relationship I have with (this charity) is something I intend to maintain indefinitely.	I believe my effort in contributing to cash waqf should be maintained.	
	I feel a sense of belonging to this organization.	I am looking forward to see more successful projects carried out using cash waqf funds.	(Sargeant et al., 2006)
	I would describe myself as a loyal supporter of this organization.	I care about the successful future of cash waqf endowment.	
	I will be giving more to this non-profit next year.	I am willing to give more in cash waqf.	

iii. Construct: Loyalty (Dependent Variable)

The final construct, loyalty, is the dependent variable in this study. Its items were modified from Alizadeh and Saghafi (2014), Hanzaee et al. (2018), and Sundermann (2017) as shown in Table 4.15 and 4.16 below.

Table 4.15: Constructs and Scale for Loyalty (Dependent Variable)

Variables	Original Items	Modified Items	Sources
Loyalty	I intend to donate again to the GRC-Blood Donor Service.	I intend to continually contribute to cash waqf endowment in the future.	(Sundermann, 2017)
	I intend to donate more to the GRC-Blood Donor Service.	I intend to increase my cash waqf contribution from time to time.	
	I would recommend going to the GRC-Blood Donor Service to my family and friends.	I will suggest others (example: family members, relatives and friends) to contribute to cash waqf.	
	I will talk positively about the hotel.	I will talk positively about cash waqf.	(Hanzaee et al., 2018)
	I will suggest anyone who asks me for advice to get this hotel's accommodation.	I will support all projects executed by the waqf institution.	

Table 4.16: Constructs and Scale for Loyalty (Dependent Variable) (continue)

Variables	Original Items	Modified Items	Sources
	I'm going to remain loyal to Malaysia as a tourist destination.	I am going to remain loyal as a waqif to cash waqf endowment.	(Alizadeh & Saghafi, 2014)

4.6.3 Translation

A good translation method for questionnaires helps prevent the collection of inaccurate data and development of irrelevant measuring concepts. It also helps in reducing sampling error, increasing questionnaire responses and generalizability of the findings, and determining respondents' subjective perceptions, particularly when the questions are complex and sensitive (Griffee, 2001; Kalfoss, 2019). Moreover, the translation approach may aid in reducing threats to data validity and improving instrument reliability (Squires et al., 2013).

For respondents whose native language is not English, the researcher prepared a Bahasa Melayu version of the questionnaire. The respondents are made up of waqifs from diverse demographic backgrounds and holding various levels of positions in Selangor-based agencies. Thus, it is crucial to establish coherence between the words used and their actual meaning in the translated questionnaire. As a result, back translation is required when both English and Bahasa Melayu are used in the questionnaire. Back translation involves translating an already translated questionnaire back into its original language and subsequently comparing the two versions to identify discrepancies due to translation errors (Behr, 2016). According to Behr (2016), back translation has been used as a quality control measure in many individual studies across a variety of research fields, including social sciences. As such, the back translation method is applied in this study to translate the survey questionnaire.

For this purpose, two experienced teachers from Kementerian Pendidikan Malaysia (KPM) who teach Bahasa Melayu and English at the secondary level were selected as the experts to conduct the back translation. Following the verification of accuracy, both the Malay and English versions of the questionnaire were prepared for pre-testing (see Appendix 4 for the official letter appointing the translation experts).

4.7 Pre-Test

4.7.1 Face Validity – Pre-Test with Respondents

The degree to which an assessment appears to measure the variable or construct that it is supposed to measure is referred to as face validity. It is a simple validity test in which the survey items are reviewed by untrained judges. For this study, the face validity test was carried out by giving several sets of the questionnaire to be reviewed by the public who have similar characteristics to the actual respondents. The goal is to acquire the respondents' comments, feedbacks and suggestions for all the questions involved, the questionnaire layout and format, their understanding of the questions and instruction in both languages, and other relevant comments.

Ten respondents were selected to answer the questionnaire in the pre-test. They were required to respond to all the questions and provide pertinent feedback in order to improve the questions and format. The estimated time to complete the questionnaire was fifteen minutes. The time taken was monitored during the face validity session to observe how long it will take the respondents to answer all of the questions. Zikmund (2015) suggested conducting content validity test along with the face validity test because the testing instrument activities are similar. Both processes examine the researcher's proposed measures for achieving the research goals.

4.7.2 Content Validity – Pre-Test with Experts

A content validity test needs to be carried out during instrument development in order to guarantee that the constructs developed are accurate and valid to their respective content (Akter et al., 2013; Allahyari et al., 2011; Saiful et al., 2021). Content validity is a measure of how relevant the items appear to a group of reviewers with specific subject knowledge (Syamil et al., 2019). Typically, this entails expert examination on the survey's components to ensure that it covers all the necessary grounds. For this purpose, academicians as well as area and industry experts were enlisted to validate the items and ensure that they correspond to the exact construct to be measured (refer to Appendix 5: Sample of validation rubric expert panel form - VREP).

For this study, four professional experts were chosen to validate the corresponding items. They were selected based on the following criteria: (1) they are in the field of marketing or management, (2) they have more than five years of experience in the field waqf or endownment, and (3) they are knowledgeable in theory, statistics or construct measurement. Consequently, the study appointed the services of two academic experts in the fields of marketing and management, one of whom is a professor of marketing at Universiti Sultan Zainal Abidin and the other a senior lecturer in the field of business management at Universiti Utara Malaysia. The third professional industry expert is a practitioner and manager of the marketing and management department at PWS, whilst the fourth expert is an assistant manager at Yayasan Multimedia University, Malaysia. Both practitioners have extensive experience in administering waqf. Table 4.17 presents the details of each expert. Each one of them received a letter of appointment along with a set of validity forms containing the construct items (refer to Appendix 6: Official letter for validation expertise).

Table 4.17: Description of the Experts

No.	Expert ID	Role in organization	Expertise	University/Agency
1.	E1	Professor	Academic	Universiti Sultan Zainal Abidin
2.	E2	Senior Lecturer	Academic	Universiti Utara Malaysia
3.	E3	Manager of Marketing and Management	Practitioner	Pejabat Waqf Selangor (PWS)
4.	E4	Assistant Manager	Practitioner	Yayasan Multimedia University

Following their review, academic expert 1 suggested for the sentences to be simplified and extreme words avoided. Verb replacements were suggested for several questions to provide respondents with a clear understanding of how to respond and number of questions should be reduced due to similar meaning. Meanwhile, academic expert 2 suggested avoiding having two statements in a single paragraph and for modifications to be made on several item sentences without altering their meaning. The third industry expert commented more on the usage of words pertaining to cash waqf collection and Selangor. Due to similar and redundant questions, expert 4 suggested reducing the number of questions and only remain the specific questions on the variables involved.

The Content Validation Ratio (CVR) was utilized to assess validity at the item level. Panel feedback was statistically analyzed for this purpose using Microsoft Excel software. Referring to Lawshe (1975), CVR calculation was used to assess the level of agreement among the panel experts using the formula below:

$$\text{CVR value : } (2Ne / N) - 1$$

* Ne = Number of experts who gave relevant answers 3 = (Agreed) and
4 = (Strongly Agreed)
* N = Total number of experts

It has been determined that Answers 3 and 4 are pertinent, whereas Answers 1 and 2 are irrelevant. The number of expert panels determines the acceptance criteria for the CVR value. The minimum CVR value was set at 5% ($p = 0.05$) and compared to the number of experts who took part in the study. Given that there were four experts involved, the minimum value of CVR received was one. This means that each indicator must have a value of 1.00 or higher to be accepted, whilst values less than 1.00 or negative are rejected and removed from the final questionnaire. The outcome indicates the identification of rejected items within each variable, which were deemed redundant, incompatible with the respective constructs, and containing irrelevant inquiries. As a result, only 41 of the 60 items received a value of 1.00 and were thus accepted as the questionnaire's final questions, as shown in appendix 7 (Appendix 7: Calculating the Content Validity Ratio (CVR) Using Microsoft Excel).

4.7.3 Pilot Test

A number of researchers reported that the results of the pilot study are obtained after pre-testing (Memon et al., 2017). Meanwhile, Chapleo (2011) highlighted that it is not crucial to do a pilot study in a research. Similarly, Hu and Zhang (2016) suggested that respondents be asked to annotate the comments mentioned. Nevertheless, according to Hazzi and Maaldaon (2015), a pilot test is essential to ensure that the full-scale study is carried out correctly. A well-executed pilot test can assist researchers in developing a clear road map. A pilot study entails the identification of significant quantitative methodological issues such missing data, normality, and reliability which researchers must consider before initiating the main study using the actual sample.

The determination of an appropriate sample size depends on the researcher's discretion. The sample size for a pilot study can reach up to 30 respondents (Hunt, Sparkman, & Wilcox, 1982), between 10 and 40 respondents (Hertzog, 2008), or between 10 and 20 percent of the actual sample size (Baker, 1994). However, Cavana et. al. (2000) mentioned that a questionnaire should be piloted with a reasonable sample of respondents from the target population or individuals who closely resemble the target population. Hence, for this study, a total of forty (40) questionnaires were distributed to forty respondents through survey online via SurveyMonkey, however, only thirty one (31) were returned. Waqifs that share similar characteristics with teh actual respondents were taken as the sample for the pilot test. The most significant characteristics are those from goverment agencies and institutions who contribute to cash waqf via monthly salary deduction. The questionnaire's instructions were explicit and direct with the wording, sentence structure, and format unchanged from the actual questionnaire.

For this study, the pilot study sample consisted of thirty-one respondents, representing 77.5 percent of the total sample (n = 40). SPSS version 26 was employed for the data evaluation, which produced results for the reliability test, missing values, outliers test, and normality test. Cronbach's alpha is typically used to determine internal consistency reliability, which examines whether all the items in a construct have the same range and meaning. Cronbach's alpha provides a sufficient reliability test in all types of studies, and its veracity cannot be disputed as it is widely accepted (Sekaran & Bougie, 2009; Malhotra et al., 2012). The Cronbach's alpha cut-off value must be greater than or equal to 0.70 in order to demonstrate the internal consistency of the measurements (Hair, 2010). A higher alpha value indicates the reliability of the items (Urbach & Ahlemann, 2010).

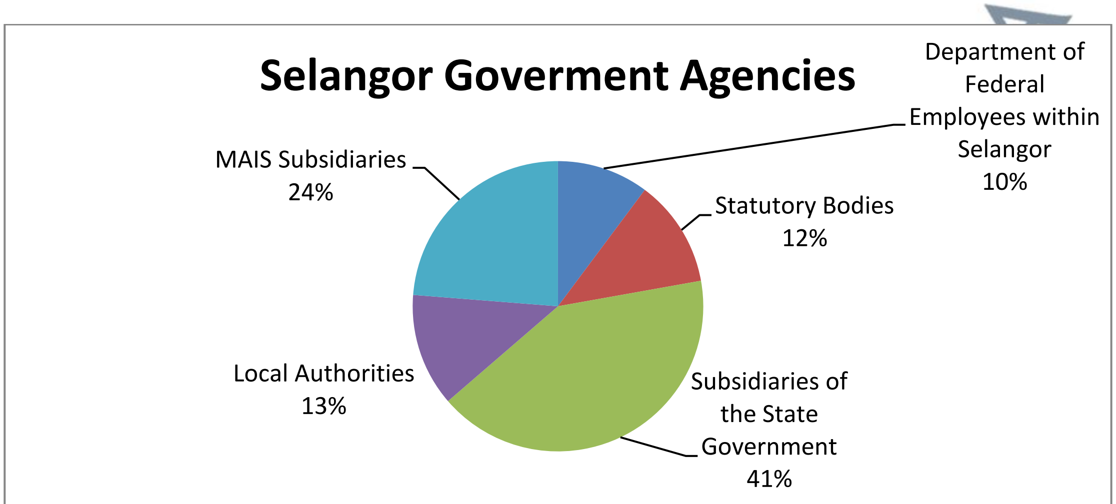
The results of the reliability test for this pilot study as shown in Table 4.18 reveals the Cronbach's alpha value for attitude (0.846), knowledge (0.840), experience (0.843), perception (0.851), trust (0.819), commitment (0.838) and loyalty (0.809), all of which are acceptable with strong levels of cohesiveness. The overall Cronbach's alpha value for the seven consructs was also proven to have good relational strength at 0.856.

Table 4.18: Cronbach's Alpha (α) Reliability Test Results for the 7 Constructs

Construct	Items	Cronbach Alpha (α)	
Attitude	6	0.846	
Knowledge	6	0.840	
Experience	6	0.843	
Perception	6	0.851	0.856 (41 items)
Trust	6	0.819	
Commitment	5	0.838	
Loyalty	6	0.809	

4.8 Data Collection and Distribution

The distribution of data involved five government agencies in Selangor which consistently participated in cash waqf contribution via monthly salary deduction. Figure 4.7 lists the five agencies involved in cash waqf collection with PWS via salary deduction.



Source: Record System of the Waqf Share of Perbadanan Wakaf Selangor in January 2018.

Figure 4.7: Total of Employees Contributing to Cash Waqf via Salary Deduction

For the purpose of this study, five strata from each category of agencies were selected as sample participants. They were Majlis Agama Islam Selangor (MAIS), Kolej Universiti Islam Selangor (KUIS), Perbadanan Kemajuan Negeri Selangor (PKNS), Majlis Perbandaran Ampang Jaya (MPAJ), and Majlis Perbandaran Subang Jaya (MPSJ). Survey was conducted by distributing the questionnaire directly to the target respondents.

In measuring each construct under investigation, the questionaire survey was self-administered. The questionnaire was directly distributed and delivered to the goverment agencies involved. The respondents were randomly selected from the provided lists. They were given adequate time, i.e, within two weeks to answer and return the questionnaire to the person in charge at each agency, before the researcher returned to collect them. Despite being costly and time-consuming, the printed format generates a good response rate in comparison to email or internet surveys. Those who completed the printed questionnaire forms also received a modest token of appreciation.

Four hundred (400) sets of questionnaires were sent to the target samples between 31st January 2020 and 6th March 2020. However, only three hunderd eighty one (381) sets of questionnaires were returned and used in the data cleaning process, representing a response rate of 95.25 percent, which is within the acceptable sample size for conducting the SmartPLS analysis, as validated by Hair et al. (2006). In the meantime, out of the total number of questionnaires distributed (400), only 19 sets (4.75 percent) were discarded due to being unreturned, incomplete, and not answered at all.

4.9 Data Analysis Procedures

Prior to data analysis, data preparation and screening are essential despite being time-consuming processes. The goal of this data examination is to uncover any hidden effects that may have been overlooked in the actual data, such as reliability test, missing values, outliers, normality test and common method variance (CMV). These five issues are common in all survey data collection methods and must be addressed before proceeding with a SEM analysis. The data preparation and screening were conducted using the statistical package data (SPSS) 26.0 software which produced the results for the reliability test, missing values, outliers, normality test, and CMV. Later, the structural equation modeling (SEM) was performed by the researcher for the purpose of interpreting the data and testing the constructs in the study using partial least squares (PLS). Besides being used for identifying non-normally distributed data, PLS is also a path modelling that requires soft-modeling-technique with minimum demands concerning mensuration scales, sample sizes and residual distributions (Armin & Friedrich, 2012).

4.9.1 Data Cleaning Procedure

The data cleaning procedure started with the analysis of missing data using the SPSS package. It requires that the observation data set for the manifest variables or indicators to not contain any single piece of missing data. Next, outlier relates to the response patterns for each item and data entry as a source of outliers. Outlier was determined using the Z-Score analysis. The data normality test applied the p-value of Shapiro-Wilk in normal data distribution or the skewness and kurtosis values. Normality is one of the fundamental assumptions necessary for SmartPLS analysis. Finally, common method variance (CMV) is the amount of false correlation between the variables which occurs when each variable is measured using the same method, thus leading to wrong conclusions about the relationships between the variables. Once finished, the analysis continued with the partial least square structural equation modelling (PLS-SEM) using SmartPLS3.0.

4.9.2 Structural Equation Modeling (SEM)

The aim of this study is to determine the factors influencing the loyalty of waqifs in contributing cash waqf and the relationships among the constructs in the study framework.. Therefore, causal and correlational research methods were applied in this study. Bentler (1988) proposed the use of Structural Equation Modelling (SEM) for the theory validation of the "causal" manner of some multiple variables. In addition, Byrne (2010) stated that there are two important parts in the SEM process. The first part is concerned with the causal process under study as represented by a series of structural (regression) equations. The second part is concerned with how these structural relations can be modeled diagrammatically to enable a clearer conceptualization of the theory under study.

SEM is a second-generation multivariate statistical analysis technique frequently employed in marketing research since it can analyze linear and additive causal models that are supported by theory (Haenlein & Kaplan, 2004). By employing SEM, researchers are able to visually examine the relationships that occur between the variables of interest in order to better prioritise resources for serving customers. The capability of SEM in utilizing non-observable, complicated latent variables makes it perfectly suited for business studies (Wong, 2013). In addition, SEM is suitable for causal models because it providers a holistic framework for the assessment of a system of simultaneous equations with measurement errors.

According to Gefen et al. (2000) and Urbach and Ahlemann (2010), SEM is perceived as a flexible modelling instrument for carrying out numerous multivariate statistical analyses, together with regression analysis, growth curve modelling, factor analysis, canonical correlation analysis, and path analysis. Chin (1998) asserted that SEM offers better benefits over the first generation analysis techniques (principal component analysis, factor analysis, or multiple regression). The author highlighted that SEM allows researchers to model relationships among multiple predictors and criterion variables which are unobservable latent variables in nature, model errors in measurement for observed variables, and statistically test priori theoretical and measurement assumptions against empirical data.

In general, there are two major SEM techniques namely the component-based approach such as partial least square (PLS-SEM) and the covariance-based approach (CB-SEM). CB-SEM and PLS-SEM are generally similar, but differ in terms of the statistical techniques for estimating structural equation. Table 4.19 indicates the principles of selecting either CB-SEM or PLS-SEM as a method of analysis.

Table 4.19: Rules of Thumb for selecting PLS-SEM and CB-SEM

No	Criteria	PLS-SEM	CB-SEM
1	Research Goals	• If the goal is predicting key target construct or identifying key driver. • If the research is exploratory or an extension of an existing structural theory.	• If the goal is to test theory or to compare a theory with an alternative theory.
2	Measurement Model Specification	• If formative measured constructs are a part of the structural model.	• If error terms require additional specification, such as co-variation.
3	Structural Model	• If the structural model is complex (many constructs and many indicators).	• If the model is non-recursive.
4	Data Characteristics and Algorithm	• If CB-SEM cannot be met (i.e., model specification, non-convergence, data distributional assumptions) • If sample size is relatively low. • If data to some extent is non-normal. • With larger data sets, CB-SEM and PLS-SEM results are similar. PLS-SEM results are a good approximation of CB-SEM results.	• If data precisely meets the CB-SEM assumption.
5	Model Evaluation	• If latent variable scores are required in subsequent analysis.	• If a global goodness-of-fit criterion is required. • If a test for measurement model invariance is required.

Source: Ramayah et al. (2018)

4.9.3 Partial Least Squares Structural Equation Modeling (PLS-SEM)

The purpose of PLS-SEM is to maximize the variance explained for endogenous latent constructs (dependent variables). Primarily, it is used to establish hypotheses in exploratory research and to predict the purpose of a study. It is divided into two sub-models:

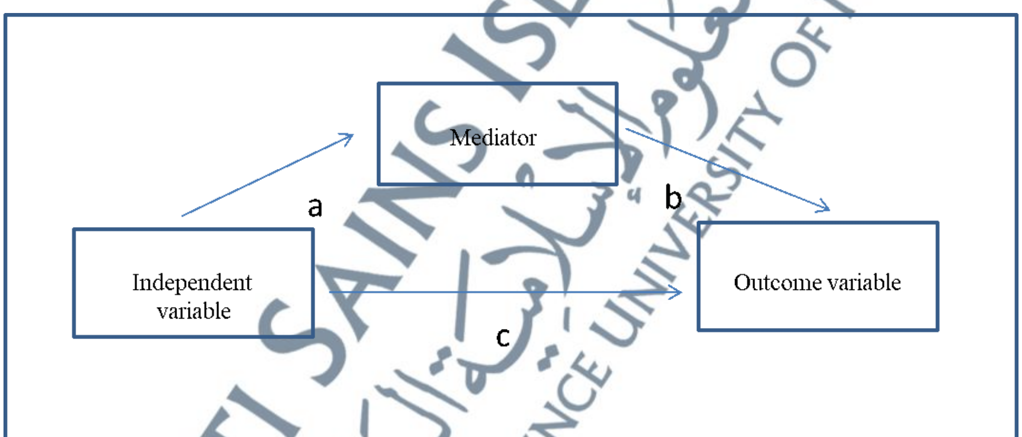
(1) the measurement (outer) model, which specifies the interactions between the constructs and their indicators, and (2) the structural model, which includes the links between the constructs.

PLS-SEM generalizes and combines features from the principal component and multiple regression analysis. For this research, this method is adopted for four reasons: (1) the objective of the study which is to predict the key target constructs, (2) the outer measurement operationalisation which describes the relationships between the latent variables and their indicators, (3) the distributional assumptions which are not normally distributed, and (4) the minimum sample size estimation. Since PLS-SEM is a non-parametric statistical method, it does not require the data to be normally distributed (Hair et al., 2017). However, it is crucial to check for data that is not too far from being normal by performing two measures of distributions namely skewness and kurtosis (Hair et al., 2022). The indication of distribution symmetry is called skewness while the indication of the peakedness of distribution is known as kurtosis (Pallant, 2013). In PLS-SEM, the number of observations required for reliable model estimates is lower compared to CB-SEM (Henseler et al., 2009).

Considering all the reasons stated below, it was decided that PLS-SEM should be adopted as the method of analysis for this study. Reliable path model estimations were studied and the SmartPLS 3.0 software was utilized to verify the proposed hypotheses.

4.10 The Mediating Analysis

The previous study and approach by Baron and Kenny (1986) suggests three variables with two causal paths leading to one outcome variable. Path ‘a’ shows a direct relationship between the variable and mediator. Path ‘b’ shows the impact of the mediator leading to the outcome variable. Path ‘c’ entails the direct impact of the independent variable (without mediator) on the outcome variable. A variable functions as a mediator when it fulfils the following conditions: (a) variations in the level of the independent variable significantly account for variations in the presumed mediator (path a), and (b) variations in the mediator significantly account for variations in the dependent variable path ‘b’ and ‘c’ when path a and path b are controlled, a previously significant relation between the independent and dependent variable is no longer significant, with the strongest demonstration of mediation occurring when path ‘c’ is zero. The model is illustrated in Figure 4.8:



Source: Baron and Kenny (1986)

Figure 4.8: Path Mediation Model

The mediating analysis suggested by Baron and Kenny (1986) requires that all directions be significant prior to mediation. However, this has been criticized due to several factors such as having a small sample size in a significant direct relationship and low power to predict a relationship which may result in inconsistent mediation to accommodate the model (MacKinnon & Fairchild, 2009; Preacher & Hayes, 2004, 2008; Rungtusanatham et al., 2014; Zhao et al., 2010). Preacher and Hayes (2008) recommended a mediating analysis by running the bootstrapping to assess the indirect effect output. Hair et al. (2013), Preacher and Hayes (2008), and Hair et al. (2017) all strongly agreed that it fits to be applied in SEM-PLS due to the no assumption on the form of the variables distribution or statistical sampling distribution which employed small sample sizes. The function of the mediator is viable to the relationship between the endogenous and exogenous constructs when the finding value of $\beta > 0$ and $t > 1.96$ with 95% confidence interval bias-corrected and a two-tailed test is significant.

Analysis of mediation occurs when at least one underlying variable or mediator indirectly influences the relationship between a predictor and a dependent variable (Henseler et al., 2009; Preacher & Hayes, 2008). Mediation aims to understand the strength of the causal relationship by testing respective theories using standard techniques and procedures (Baron & Kenny, 1986; MacKinnon & Fairchild, 2009; Preacher & Hayes, 2004). A mediator is a construct that represents mediation and a third variable in the relationship between the exogenous and endogenous constructs. Mediating analysis identifies the presence of an intermediary variable which transmits the effect of an antecedent variable to an outcome by analyzing the direct and indirect relationships in the structural model (Aguinis et al., 2017; Baron & Kenny, 1986; Henseler et al., 2009; Preacher & Hayes, 2004, 2008).

4.11 Summary

This chapter presented issues relevant to the methodology used in this research. As for the philosophical stance, positivism was adopted through the deductive approach and quantitative method. Next, the collection of data is cross-sectional through a self-administered survey. A sample of 378 waqifs serve as the respondents in this study, as selected through a probability sampling technique, specifically stratified random sampling. Several experts were involved in validating the constructs and revising the questionnaire. Finally, the SEM-PLS was employed as a tool for testing the proposed hypotheses of this study. In the next chapter, the empirical results of the data analysis will be presented.