CHAPTER 4
RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

Chapter 4 provides an explanation of the research design and methodology used in this study. Section 4.1 consists of the research design that explains the quantitative approach employed in this study. Then, Section 4.2 will discuss the research approach adopted in this study, and Section 4.3 will explain the population and sampling selected in this study. Next, the data collection methods used and data analysis method will be explained in Sections 4.4 and 4.5, respectively. This both sections will elaborate the data analysis methods, including reliability analysis and multiple regression analysis, which were performed using the Statistical Package for Social Science (SPSS). Finally, Section 4.6 will provide a summary of Chapter 4.

4.2 Research Design

Research design is one of the initial steps that must be completed before conducting data collection and data analysis. According to Cooper and Schindler (2003), the research design can be summarised as a framework for specifying the relationships among the study's variables. It is important as it guides the researcher during the data collection process together with the different types of data analysis techniques to be used that fit the research objectives. It eventually helps the researcher to perform the study in a systematic way along the right path.

Zikmund (2003) classified the research design into three types, which are exploratory, descriptive, and causal research. Exploratory research is conducted to explain and define the cause of a problem, while descriptive research is conducted when

the problem is evident. It aims to describe the characteristics of a phenomenon or population. Meanwhile, causal research is conducted to identify or delineate the cause of one or more relationships or problems (Zikmund, 2003; Sekaran, 2003). Therefore, a causal hypothesis must have at least two variables, and it is expressed as a prediction of expected future outcome.

Hence, causal research was chosen for this study since the objective of this study is to examine the factors affecting an individual's intention to claim zakat as a tax rebate. This is because this study aims to determine the cause (attitude, subjective norm, and perceived behavioural control) and effect (intention) relationships. This study is undertaken to ascertain and describe the three variables included in TPB by Ajzen (1991), including knowledge as an additional variable.

Saunders et al. (2009) described two research approaches, which are the deductive and inductive approach. The deductive approach is used to test a theoretical proposition by using a research strategy, while the inductive approach aims to develop a theory based on observations of empirical data. Therefore, the deductive approach was chosen in this study as it appears to be the most appropriate approach as it can be used to test a theory (TPB).

4.3 Research Approach

Several research approaches are commonly employed in conducting research, namely, the qualitative, quantitative, and mixed method approach. Each of these research approaches has its advantages and disadvantages. As stated by Onwuegbuzie et al. (2004), qualitative data are in the form of words so that the data can provide a better understanding and description of people's individual experiences of a phenomenon. This approach also helps the researcher to explore how and why a

phenomenon occurs. Hence, it is useful for the researcher in describing a complex phenomenon. However, according to Creswell and Clark (2011), one disadvantage of the qualitative approach is its inability to generalise findings as it only emphasises the perceptions of a few participants.

Meanwhile, the quantitative approach uses data collection methods such as questionnaire and data analysis techniques, including statistics that generate or use numerical data (Saunders et al., 2009). According to Onwuegbuzie et al. (2004), these data collection and data analysis techniques can collect and analyse data relatively quickly as they are less time-consuming. Onwuegbuzie et al. (2004) also indicated that this approach is useful to study a large number of people. Therefore, it focuses on the collective viewpoints of respondents in interpreting the findings (Creswell & Clark, 2011). Furthermore, it was also mentioned by Onwuegbuzie et al. (2004) that this approach is used to test the hypotheses constructed for a study and it allows the generalisation of findings to the larger population (Grove et al., 2015).

In contrast, the qualitative approach has difficulty in generalising findings to a large group as only a small number of participants are involved in this approach. Therefore, the quantitative approach helps to offset this weakness (Cresswell & Clark, 2011). Furthermore, according to Onwuegbuzie et al. (2004), the mixed method approach provides stronger evidence for the conclusion as this approach is not restricted to quantitative or qualitative approach only. Various methods can be used to collect data in the mixed method approach (Creswell & Clark, 2011). Also, as indicated by Wheeldon (2010), it increases the credibility and validity of the findings from different instruments. However, the weaknesses of this approach are that it is time-consuming and expensive (Onwuegbuzie et al., 2004).

Hence, the quantitative approach was adopted in this study because the study involved a large number of respondents, namely Muslim resident taxpayers. Furthermore, this approach was used because the study tested the hypotheses constructed for the study. Meanwhile, for data collection methods, the researcher used the questionnaire since this is the most general design for obtaining quantitative data (Parahoo, 1997), and it is appropriate for the aims of the study.

4.4 Population and Sampling

4.4.1 Sampling Design

Mukesh et al. (2013) mentioned that sampling is defined as the selection of some part of the population based on which judgement or inference about the entire population is made. In most of the research work and surveys, the usual approach is to make generalisations or to draw inferences based on the sample about the parameters of the population from which the sample is taken. Sampling can also make data collection less costly and more manageable (Pandiyan & Chandran, 2011). Hence, the sample should be drawn in such a way that it is a true representative of the entire population.

This definition can also be parallel to reasons for sampling, which save not only money but also time and energy. Contacting the whole population would often be time-consuming. Along the same line, Mukesh et al. (2013) emphasised that the cost of studying the entire population could be very high. Therefore, a sample study is usually less expensive than a census study. Next, the researcher will discuss the target population, sampling frame and sampling location, sampling elements, sampling technique, and sampling size for the survey conducted in this study.

4.4.1.1 Target population

According to Sekaran (2003), the target population refers to the entire group of people, events, or things that researchers wish to investigate. It is a combination of elements, boundaries, time, and geographies. Identification of the target population starts by identifying the characteristics of the population.

The target population of this study is the individual Muslim resident taxpayers who have no business income and are eligible to pay both tax and zakat. These target respondents were chosen according to their total yearly income in the year of assessment 2017. All the respondents must earn at least RM34,000 per year. According to the IRBM (2015), people who earn an annual employment income of RM34,000 and above (after EPF deduction) must register a tax file, and they are generally eligible to pay both tax and zakat.

4.4.1.2 Sampling Frame and Sampling Location

The sampling frame for this study consisted of population in Selangor which consisted of 6,380,000 people in 2017 (Department of Statistics Malaysia, 2017). Besides that, according to zakat collection statistics, Selangor recorded the second highest zakat collection in 2017 among all states and Federal Territories in Malaysia (JAWHAR, 2017). Hence, Selangor was chosen as the sampling location of the study.

4.4.1.3 Sampling Elements

Sampling elements are the objects that have the information needed by researchers and usually refer to the respondents. For this research, the sampling element is the resident individual Muslim taxpayers who are eligible to pay both tax and zakat.

4.4.1.4 Sampling Technique

Mukesh et al. (2013) indicated that the sampling technique is the process of selecting sufficient elements from the population. Hence, the study of the sample and understanding of its properties or characteristics would make it possible for the researcher to generalise such properties or characteristics to the population elements. In the sampling technique process, the researcher selected several elements of the population as the subjects of the sample.

There are two types of sampling techniques, which are probability and non-probability sampling techniques. In this study, the researcher chose the sample by using non-probability sampling through the purposive sampling technique. This sampling technique is chosen due to several reasons. The purposive sampling technique has the advantages of ease of use and accuracy of representation. It is readily accessible, more convenient and the researcher can select only those individuals that are relevant to research design. More emphasis for this sampling technique is placed on the ability of the researcher to assess the elements of the population (Salkind, 2014). Besides, this technique allows the researcher to complete the research in a shorter time. The time saved can be used for data analysis and interpretation.

4.4.1.5 Determination of the Sample Size

Sample refers to a subgroup of the population. In a quantitative approach, the responses of the sample are used to discover the findings and draw conclusions on the population. Usually, the sample size is figured out after considering the required confidence level and the extent of the precision accepted from the sample (i.e., standard error).

Various methods can be used to determine the appropriate sample size, as suggested by Sekaran (2003), Onwuegbuzie et al. (2004), Cohen et al. (2007), Saunders et al. (2009), and Sekaran and Bougie (2010). In this study, the researcher relied on the guidelines provided by Krejcie and Morgan (1970), which simplified the sample size decision based on the population (*N*) and sample size (S). The population in Selangor in 2017 is 6,380,000. Thus, the population of this study consists of 3,332,912 people which constitute 52.24% of Muslim in Selangor. In reference to Krejcie and Morgan (1970)'s table of sample, the appropriate sample size of the study is 382.

4.5 Research and Data Collection Method

Research method comprises the techniques utilised in collecting data for analysis in order to achieve the stipulated goals of the study (Sekaran & Bougie, 2010). It involves the efforts of collecting, interpreting, and recording the data and information obtained. Data can be obtained from either primary or secondary sources or both. As explained, the study adopted quantitative data gathering techniques. In this research, data were obtained from secondary sources through the survey research method. The researcher used a questionnaire as the research instrument to meet the objectives and find the answers for the research questions of the study.

4.5.1 Questionnaire Design

The questionnaire is one of the more popular instruments used by researchers for collecting data, in which the selected respondents will provide answers to a series of questions. The questionnaire must be designed appropriately to ensure that the research objectives can be achieved based on the findings. According to Sekaran (2003), the questionnaire is an efficient data collection method because it provides an

opportunity for the study to be administered personally. This study developed the questionnaire's process by following the procedure by Churchill and Iacobucci (2002), which consists of nine steps, as discussed below.

4.5.2 Questionnaire Design Procedures

The researcher constructed a survey questionnaire to meet the research objectives and find the answers to the research questions posed. The basis of all questionnaires is the questions, and the built questionnaire needs to follow certain procedures. The procedure for developing a survey questionnaire is shown in Figure 4.1.

Step 1: Specify the information to be sought
Step 2: Determine type of questionnaire and method of administration
Step 3: Determine content of each question
Step 4: Determine form of response to each question
Step 5: Determine wording of each question
Step 6: Determine the sequence of the questions
Step 7: Determine the physical characteristics of the questionnaire
Step 8: Re-examine steps 1 to 7 and revise if necessary
Step 9: Pre-test the questionnaire and revise if necessary

Figure 4.1: The Procedure for Developing a Survey Questionnaire

Source: Churchill & Iacobucci (2002)

Step 1: Specify the information to be sought

First, the questionnaire must translate the research objectives into specific questions. The questions must motivate the respondents to provide the information

being sought (Chava & David, 1996). For this study, the survey questionnaire was constructed within two sections, which are:

Section 1 was labelled 'demographic information' and the listed variables consisted of general information of the respondents. This section contained eleven items which covered demographic information such as gender, age, education level, employment sector, employment industry, yearly income level (RM per year), whether the respondent pays tax or not, whether the respondent pays zakat or not, zakat organisation, knowledge about zakat as a tax rebate, and whether the respondent claims zakat payment as a tax rebate or not.

Section 2 was labelled 'factors that influence Muslim resident taxpayers to claim zakat payment as a tax rebate'. This section comprised 29 questions related to the four factors discussed in Chapter 3, which are attitude, subjective norm, perceived behavioural control, and knowledge along with the intention of Muslim resident taxpayers to claim zakat payment as a tax rebate.

Step 2: Determine the method for distributing the questionnaire

There are several methods for distributing a questionnaire. In this study, the chosen methods for distributing the questionnaire are the internet (e-mail) and paper-based survey. Both types of surveys provided flexibility to the participants to answer the survey at their leisure time but still within the given survey period (Mukesh et al., 2013).

Internet Survey

According to Mukesh et al. (2013), an internet survey can be done in three ways, which are:

i) The survey forms can be distributed as an attachment to an electronic mail (e-mail) to be sent to the potential respondents.

ii) The survey forms can be distributed via publicly available computers in high traffic areas, such as libraries and shopping malls.

iii) The survey forms can be posted as World Wide Web forms on the internet.

Therefore, for the internet survey, the researcher used the first way where the survey forms were distributed as an attachment to e-mail messages and sent to the potential respondents. This study used Google Docs to create the internet surveys. The questionnaire was sent randomly to the potential respondents via their email addresses. The researcher chose academicians in Selangor as the potential respondents for the internet survey.

Paper-Based Survey

For the paper-based survey, the researcher printed out copies of the questionnaire and distributed them to the potential respondents. The researcher met all the potential respondents personally. By using this method, the researcher had higher confidence that the questionnaires were responded by the right people who have the right intention to claim zakat as a tax rebate.

Step 3: Determine the content of each question

For this study, the researcher adapted questions from the studies conducted by Bidin and Md Idris (2007) and Al-Mamun and Haque (2015). The measures listed for each variable are shown in Table 4.1, and the operational definition for each variable is summarised in Table 4.2.

Table 4.1: Summary of Measures Listed in the Questionnaire

No	Variables	Questions	References
1	Attitude	1. I pay zakat to get a tax rebate 2. I feel happy when I get a tax rebate from the payment of zakat that I made. 3. For me, a tax rebate for zakat payment can avoid "double taxation". 4. For me, the tax rebate is an efficient system to avoid Muslim taxpayers from "double taxation". 5. For me, the tax rebate system is fair for Muslim taxpayers.	Adapted from Bidin and Md Idris (2007).
2	Subjective Norm	1. Most important people to me think that I should claim zakat payment as a tax rebate. 2. Most important people to me support if I claim zakat payment as a tax rebate. 3. Most important people to me agree if I claim zakat payment as a tax rebate.	Adapted from Bidin and Md Idris (2007).

		4. My family would think that I should claim zakat payment as a tax rebate. 5. My family would support me if I claim zakat payment as a tax rebate. 6. My family would agree with me if I claim zakat payment as a tax rebate.	
3	Perceived Behavioural Control (PBC)	1. I have the ability to claim zakat payment as a tax rebate. 2. For me, the procedure for claiming zakat payment as a tax rebate is easy. 3. The decision to claim zakat payment as a tax rebate is under my control. 4. With my ability, I can easily claim zakat payment as a tax rebate.	Adapted from Bidin and Md Idris (2007).
4	Knowledge	1. Zakat paid to the zakat institutions can be claimed as a tax rebate. 2. Zakat *fitr* can be deducted as a tax rebate. 3. Zakat *al-mal* (wealth) can be deducted as a tax rebate.	Adapted from Al-Mamun and Haque (2015).

		4. Zakat payment as a tax rebate can avoid Muslims from "double taxation". 5. Muslim taxpayers must keep the evidence such as the receipts issued by zakat institutions if they want to claim zakat payment as a tax rebate. 6. The amount of tax rebate for zakat is restricted to the amount of zakat paid during the year.	
5	Intention	1. If I had the opportunity, I would claim zakat payment as a tax rebate. 2. In the future, I may claim zakat payment as a tax rebate. 3. I agree that it is acceptable to enjoy a tax rebate through zakat. 4. I will recommend zakat payment as a tax rebate to all my family. 5. I agree that the tax rebate through the zakat system will increase the state's zakat fund. 6. I feel I am fairly treated by the government because I can avoid double taxation of my total earnings.	Adapted from Al-Mamun and Haque (2015).

		7. I agree on the tax rebate through the zakat system will motivate Muslims to pay their tax and zakat. 8. In general, my intention to claim zakat as a tax rebate is higher.	

The operational definition is the process of how the researcher decides to measure the variables selected to be tested in the study. Each of the variables will have a specific definition according to the suitability and objectives of the study.

Table 4.2: Operational Definitions for Independent and Dependent Variables

Independent Variables	**Operational Definition**
Attitude	The belief of Muslim taxpayers towards zakat payment as a tax rebate influences their intention to claim zakat payment as a tax rebate.
Subjective Norm	The belief of Muslim taxpayers that is conveyed by other people who are important to them to claim zakat payment as a tax rebate.
Perceived Behavioural Control (PBC)	The confidence level of Muslim taxpayers about the ability to claim zakat payment as a tax rebate.
Knowledge	The knowledge of Muslim taxpayers towards zakat payment as a tax rebate.

Dependent Variable	Operational Definition
Taxpayers' Intention	The intention that influences the Muslim taxpayers to claim zakat payment as a tax rebate.

Step 4: Determine the form of response to each question

For this study, the researcher constructed the questionnaire in the form of close-ended questions for Section 1 to ensure that the answers are standardised. It can also save time while conducting the survey and analysing the data. Meanwhile, Section 2 used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Step 5: Determine the wording of each question

The researcher constructed the questionnaire in simple words to ensure that the respondents will understand the questions better. The questionnaire was originally in English because it was adapted from previous researcher that used the same language in their past study. Later, the researcher translated the questionnaire to Bahasa Melayu to ensure the respondents will understand all the questions and likely to be distributed. According to Bates and Khasawneh (2005), translation is done to increase the readability among respondents and help respondents to understand the questions well. Therefore, the questionnaire was distributed in Bahasa Melayu since the target respondents in this study are Muslim resident taxpayers.

Step 6: Determine the sequence of questions

In this step, the researcher discussed the first draft of the questionnaire with the supervisor to ensure all the questions are sequentially constructed and possible to be distributed. The supervisor gave comments, and adjustments were made on some of the contents and wordings used in the questionnaire.

Step 7: Determine the physical characteristics of the questionnaire

The researcher also discussed with the supervisor about the physical characteristics of the questionnaire used in the study. The questionnaire contained a cover page and consisted of two sections. The cover page included the logo of Universiti Sains Islam Malaysia (USIM), the research title, the researcher's name, the researcher's contact numbers and email address, as well as the faculty and university's address. The cover page also highlighted the confidentiality of the respondent's identity and response and the approximate time required to complete the questionnaire.

Step 8: Re-examine steps 1 to 7 and revise if necessary

Before the questionnaire was pre-tested, all the questions were reviewed to ensure that they are not confusing or ambiguous. The questionnaire is attached in Appendix B.

Step 9: Pre-test questionnaire and revise if necessary

Lastly, the questionnaire must be pre-tested for necessary revisions. Therefore, for pre-test, the questionnaire was sent to two academicians from the Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM). Both are lectures with a doctoral degree and specialising in the taxation area. They were encouraged to state their comments concerning the length and suitability of the questionnaire, the words used, sentence structure, and any confusing questions deemed unsuitable to be asked to the respondents.

Discussions were also held with Assoc. Prof. Dr. Kalsom Ab Wahab, who is an expert in quantitative survey from the Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM). She suggested that the definition of zakat rebate must be provided on the first page of the questionnaire to ensure the respondents understand the

objectives of the study clearly. The questionnaire was improved accordingly upon receiving feedback from these people.

A new set of the questionnaire had resulted after the pre-test sessions. To ensure the measures developed in the instrument were relevant and appropriate, the researcher conducted a pilot study before undertaking major data collection for the study among the public. A pilot study was conducted in August 2017 by distributing the questionnaire to 50 respondents. This pilot test was conducted among the academicians who are eligible to pay both tax and zakat in Selangor. Some of them refused to answer the questions due to unfamiliarity with the zakat rebate system. Only 30 questionnaire sets were returned to the researcher.

According to Nieswiadomy (2002), the researcher can still obtain sufficient results for a pilot study, even with approximately 10 participants. The sample size for a pilot study usually consists of 15 to 30 respondents, and the sample size may increase substantially if the pilot study involves several stages (Malhotra, 2008). Hence, a total of 30 respondents for the pilot test in this study is acceptable.

Next, a reliability analysis was conducted to test the suitability of the questionnaire to measure the variables. Nunally (1978) recommended the Cronbach's alpha method to test the internal consistency of the total scale. Cronbach's alpha test was used in this study, as it is the most well-accepted reliability test tool applied by social researchers. In this context, if the reliability coefficient is close to 1.0, the appropriateness of the questionnaire to measure the variables is better (Sekaran, 2003). However, generally, a reliability coefficient of less than 0.6 is considered poor, in the 0.7 range is acceptable, and over 0.8 is classified as good (Sekaran, 2003).

After analysing the results of the pilot study, it was found that attitude, subjective norm, perceived behavioural control, knowledge, and intention had achieved

the recommended minimum level of Cronbach's alpha value as the variables obtained values within the 0.7–0.849 range. Table 4.3 provides the results of the reliability analysis conducted in the pilot study.

Table 4.3: Results of Reliability Analysis in Pilot Study

Variables	Number of items	Cronbach's alpha value
Attitude	5	0.849
Subjective norm	6	0.783
Perceived behavioural control	4	0.700
Knowledge	6	0.782
Intention	8	0.834

Thus, the results of the pilot test and reliability analysis in the pilot study showed that the questionnaire are reliable and relevant to be used in the final survey.

4.5.3 Questionnaire Distribution for Actual Study

Finally, after all the inputs in the forms of comments, suggestions, ideas, corrections, and views were received and corrected, the final questionnaire was sent to the targeted respondents for the actual study. The questionnaire was distributed using two distribution methods, namely, paper-based and e-mail survey to Muslim resident taxpayers who are generally eligible to pay both zakat and tax.

For the paper-based survey method, the researcher printed out copies of the questionnaire and distributed them manually to 500 respondents (N = 500). The researcher used the purposive sampling method by meeting all the respondents that researcher think would be appropriate for the study. The researcher distributed the

questionnaire to the respondents who worked in the four main industries chosen in this study, which are audit and accounting, banking, media and entertainment, and academic. The researchers met all the respondents personally in the selected companies from each industry. Respondents from the academic industry were asked to write the name of the university they worked for while answering the questionnaire. By using this method, the researcher achieved the sample size in a relatively short time.

Meanwhile, for the e-mail survey method, the questionnaire was emailed to a total population of 100 (N = 100) respondents. The respondents for this method are the academicians from three universities in Selangor, which are the University of Malaya (UM), International Islamic University Malaysia (IIUM), and Universiti Selangor (UNISEL). The email addresses of the academicians were obtained via the website of each university. The three universities selected are different from those chosen for the paper-based survey to avoid multiple participation of the respondents in the study.

Time horizon is the time allocated by the researcher to distribute the questionnaire and conduct the survey completely. It can be divided into two types of design, which are cross-sectional design and longitudinal design. The cross-sectional design was adopted in this study. As indicated by Sekaran (2003), this design is an incorporated design as the researcher can obtain the data from the respondents at once or in one shot. Levin (2006) stated that cross-sectional design is done once, at one time, or over a short period to take a snapshot of a population at a specific point in time.

Also, this design is relatively inexpensive and requires a short time to carry out. Hence, the researcher can collect data relatively quickly since data are gathered just once, and a follow-up phase is not necessary (Mukesh et al., 2013). For this study, the questionnaire was distributed from October 2018 to January 2018. Thus, it shows that

the cross-sectional design is suitable to be used as it is cost effective and can save the time of the researcher, especially when facing a time constraint.

The return rate for this study is 78% or 390 responses out of 500 hard copies questionnaire that has been distributed for the paper-based survey and 45% or 45 responses out of 100 questionnaires that was e-mail to the respondents for the e-mail survey. Finally, the collected data were coded and processed in February 2018. The data from the questionnaire were analysed to answer the research questions.

4.6 Data Analysis Method

Data analysis is a crucial part of research in ensuring the quality of the study. For this research, Statistical Package for Social Sciences (SPSS) version 23 was used to analyse the data. The SPSS software consists of several different features and functions that could be useful for statistical data analysis. Three tests were chosen, namely, demographic analysis, descriptive analysis, and multiple regression analysis. The procedures for response bias and response representativeness will be discussed at the end of this section.

4.6.1 Demographic Analysis

This study provides an analysis of the demographic characteristics of the respondents. For this study, the demographic information in part one of the questionnaire consisted of gender, age, education level, employment sector, employment industry, and income level per year of the respondents. Respondents were requested to tick the appropriate box either as “male” or “female” to indicate their gender.

The age of the respondents was divided into four groupings: “20 to 29 years old”, “30 to 39 years old”, “40 to 49 years old”, and finally, “50 years old and above”. Education level consisted of five groups, “SPM and below”, “Diploma”, “Undergraduate”, “Postgraduate” and “PhD”. Employment sector was categorised into “Government”, “Private”, “Self-Employed”, and “Others”. Meanwhile, employment industry was divided into “Audit & Accounting”, “Banking”, “Media & Entertainment”, “Academic”, and “Others”.

Income level per year was categorised into four groupings: “RM34,000–RM40,000”, “RM40,001–RM50,000”, “RM50,001–RM60,000” and “RM60,001 and above”. Respondents were also requested to thick the box with either “yes” or “no” to determine whether they paid their tax and zakat on income in 2017. This question was asked to determine the suitability of the respondent to be included in this study. If “no” was chosen for either one of the questions, the questionnaire completed by the respondent was automatically rejected from being analysed for this study.

4.6.2 Descriptive Analysis

The descriptive analysis provides a summary of the statistics such as mean, median, and standard deviation. For this study, descriptive statistics are presented to describe the analysis for each item of the independent variables and the dependent variable. The descriptive analysis involves the statistical procedure used to discover the group that is being studied. It aims to qualify a more thorough profile and the related aspects of the area of interest.

According to Field (2009), mean is a simple statistical mode of the centre of a distribution of scores, whereas standard deviation is an estimate of the average variability (spread) of a set of data measured in the same units of measurements as the

original data. To calculate the mean, all the scores are added up and then divided by the total number of scores. The equation of the mean is:

$$X = (\Sigma xi) / N$$

Meanwhile, to obtain the standard deviation, the variance needs to be calculated first. Variance is the average error between the mean and the observations made and is a measure of how well the model fits the actual data (Field, 2009). The square root of the variance is often taken to obtain the average error that is in the same unit as the original measure.

4.6.3 Validity Analysis

Validity analysis can be summarised as the extent of the accuracy of data collection to determine the variables (Saunders et al., 2009). Factor Analysis (FA) is implemented to measure validity and helps in reducing the high number of variables to an interpretable and manageable set of factors. Through FA, the loading for every item will be viewed for further analysis (Sekaran, 2003). The FA approach applied in this study is the Exploratory Factor Analysis (EFA), which explores the data and provides the researcher with information about how many factors are needed to be present in the data (Hair et al., 2010).

In assessing the factorability of the data, two statistical measures were used, which are Bartlett's test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO). Bartlett's test of Sphericity should be significant ($p < 0.05$) for the factor analysis to be considered appropriate. The KMO index ranges from 0 to 1, with 0.6 being suggested as the minimum value for good factor analysis (Tabachnick & Fidell, 2007).

4.6.4 Reliability Analysis

The reliability of a measure is established by testing for both consistency and stability (Sekaran, 2003). This study tested for consistency, which represents whether all the items are measuring the same underlying construct. The most widely used consistency test is Cronbach's alpha (Bearden & Netemeyer, 1999). According to Sekaran (2003), Cronbach's alpha indicates how well the items in a set are positively correlated to one another. The rule of thumb provided by George and Mallery (2001) for Cronbach's alpha is shown in Table 4.4.

Table 4.4: Value Range of Cronbach's Alpha

Alpha	**Indicator**
More than 0.9	Very good
0.8 – 0.7	Good
0.6	Acceptable
0.5	Questionable
Less than 0.5	Unacceptable

Source: George and Mallery (2001)

4.6.5 Multiple Regression Analysis

Multiple regression is a statistical method used to anticipate the dependent variable from a combination of independent variables. According to Pallant (2007), multiple regression is a technique used to explore the relationship between dependent and independent variables. Pallant (2007) also mentioned that this analysis is not just a technique but a family of techniques that can be used to explore the relationship between a continuous dependent variable and several independent variables or predictors.

This research aims to determine the relationship of attitude, subjective norm, and perceived behavioural control and knowledge with the intention of taxpayers to claim zakat payment as a tax rebate. Before carrying out the test, attitude, subjective norm, perceived behavioural control and knowledge were recorded into dummy variables. All the variables were recorded into five categories according to the Likert scale of 1 to 5 (strongly disagree, disagree, neutral, agree, and strongly agree). Therefore, the research model for this research is as stated below:

$$Yi = b0 + b1X1 + b2X2 + b3X3 + b4X4 + \mu$$

where:

Y = Actual amount of zakat payment as a tax rebate

X1 = Attitude

X2 = Social Norm

X3 = Perceived Behavioural Control

X4 = Knowledge

μ = Represents the error term

The multiple regression analysis used in this study is the standard multiple regression. This analysis was used to answer all the research questions and test the proposed hypotheses for this study. Each independent variable was evaluated in terms of its predictive power, over and above that offered by all the other independent variables (Pallant, 2007). This analysis provided the researcher with information on how much variance in the dependent variable is explained by the independent variables.

This type of analysis is presented as the Model Summary of variables, ANOVA, and the results of multiple regression analysis. The *R* square values in the Model Summary show how much of the variance in the dependent variable is explained by the model, which includes the independent variables. Meanwhile, ANOVA provides the

statistical significance of the result, and Beta provides information on the contribution of each independent variable. The Sig value shows that the independent variable makes a statistically significant contribution to the equation. This analysis helped the researcher to determine the factors influencing the taxpayers' intention to claim zakat payment as a tax rebate. Table 4.5 provides a summary of the analysis methods used in this study.

Table 4.5: Summary of Analysis Methods

Research Questions	Analysis Method
Does attitude influence taxpayers' intention to claim zakat payment as a tax rebate?	Demographic Analysis Standard Multiple Regression Analysis
Does subjective norm influence taxpayers' intention to claim zakat payment as a tax rebate?	
Does perceived behavioural control influence taxpayers' intention to claim zakat payment as a tax rebate?	
Does knowledge influence taxpayers' intention to claim zakat payment as a tax rebate?	

Figure 4.2 illustrates the flowchart of the research methodology of this study.

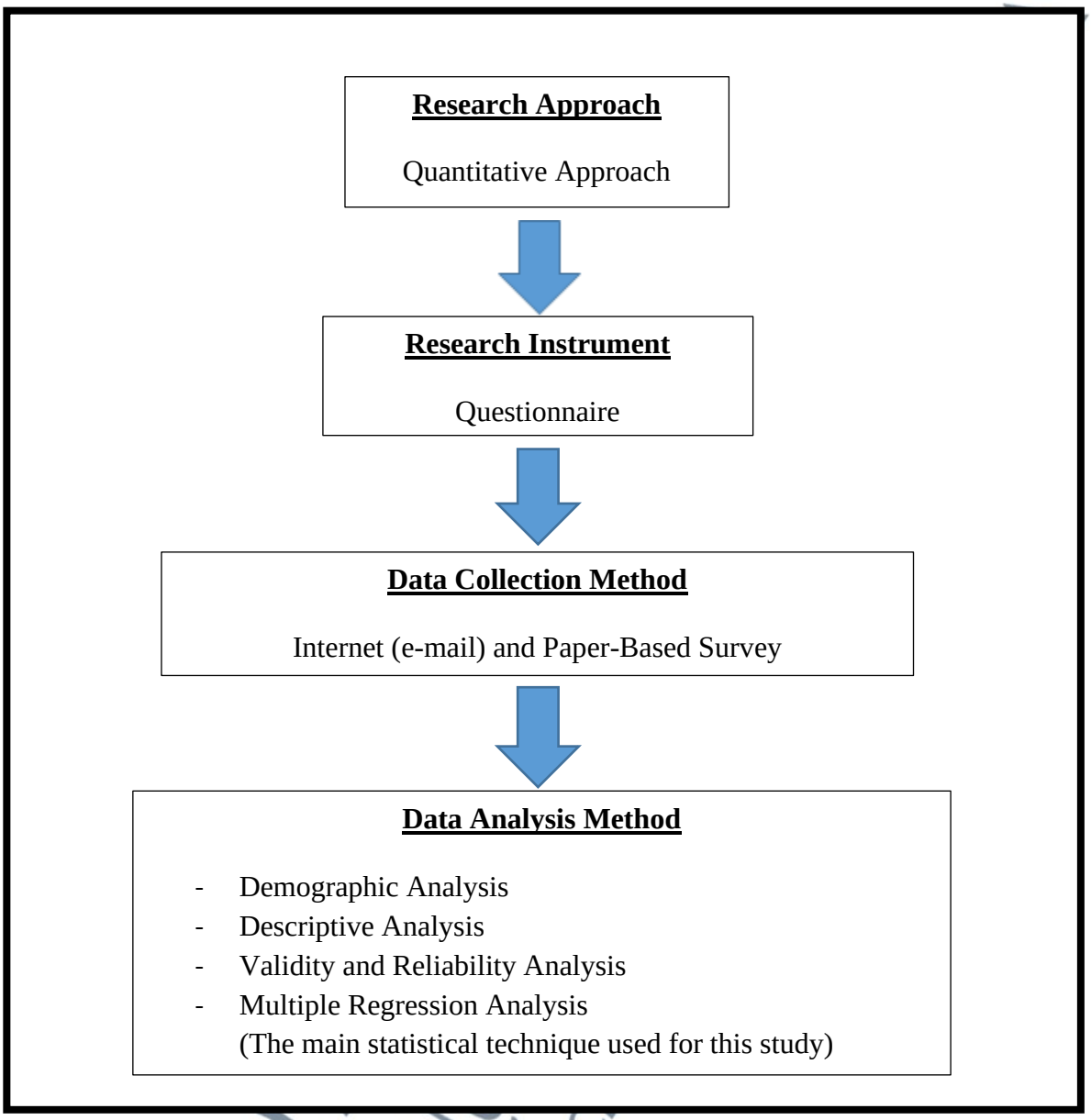

Figure 4.2: Flowchart of the Research Methodology

4.6.6 Non-Response Bias

In this study, a non-response bias test was performed to ensure that there was no bias in the sample. Non-response bias is a challenging issue in using a survey as a data collection instrument since a high non-response rate could result in bias in responses. Non-response bias occurs when some respondents in the sample do not want to

participate in the study, which could be due to the failure to contact them, they are not in the position to answer the questionnaire, time constraints, or for some other unknown reasons they refuse to cooperate (Bryman & Bell, 2011).

Benke and Street (1992) highlighted that the popular approach to proving non-response bias is by comparing early responses to later responses or first responses to responses generated after follow-ups. If there are no significant differences between the two groups of responses, it can be assumed that there is no problem of non-response bias.

4.7 Summary

This chapter explained the research methodology adopted for this study. The researcher adopted the quantitative approach and used a questionnaire as the research instrument in order to meet the objectives and find the answers to the research questions of the study. The questionnaire was distributed using two distribution methods, namely, paper-based and internet (e-mail) survey to Muslim resident taxpayers.

In the section on sampling design, the researcher discussed the target population, sampling frame and sampling location, sampling elements, sampling technique, and sampling size used for the survey in this study. The target population of this study is the individual Muslim resident taxpayers who have no business income and are responsible for paying both tax and zakat. These target respondents were chosen according to their total yearly income in the year of assessment 2017. All the respondents must earn an income of at least RM34,000 per year after EPF deduction.

The sampling frame for this study consisted of 6,380,000 people in 2017, which is the total population in Selangor. The total population (*N*) for this study is 3,332,912 which constitute 52.24% of Muslims in Selangor for 2017. The researcher used the

purposive sampling method by meeting all the respondents that the researcher think they would be appropriate for the study.

Finally, Statistical Package for Social Sciences (SPSS) version 23 was used to analyse the data. The SPSS software consists of several different features and functions that could be useful for statistical data analysis. Three tests were chosen, which are demographic analysis, descriptive analysis, and multiple regression analysis.