Chapter 3: Research Methodology

Chapter three presents the research method adopted for the study. The guiding positivist philosophy is explained and this forms the basis of the research approach and strategy. A cross-sectional study was undertaken through a survey of hospitality SMEs. The choice of survey as a study strategy is informed by the research hypothesis making the study quantitative. In addition, the population, sampling and research instruments were presented. The chapter also acted as a precursor to data analysis; therefore, the analysis tools and techniques were explained in this chapter that concludes with an ethics statement and summary. The truth and the authenticity is independence and freedom from the viewer and observer perspective which means the truth is very objective hence it's called positivism.

In this study, the researcher adopted a value free approach aligned to this philosophy by conducting a survey to confirm or not whether the theory adopted in the study was conceivable in explaining the phenomenon under examination through empirical evidence. In essence, it shall be obtained in this study whether or not employee technology readiness to adopt digital media is linked to online consumer engagement.

The research was causal in nature as it seeks to answer the question of whether a causal link exists between employee technology readiness and consumer engagement. As such, inquiry involved measurement and analysis of causal relationships (hypotheses testing) where mode of enquiry was deductive based on testing prior theories (Al-Masroori, 2006).

Research approach for present study was deductive in nature because it was informed by theory. Therefore, choice of method was quantitative. A cross-sectional study was conducted through a survey. The survey research design entailed data collection from a sample of employees and

management of hospitality SMEs and measuring technology readiness variables individually and using quantitative methods to analyse the data.

Table 3:1 (Primary Data, 2020)

Study Units	**Number of Chosen Respondents**	
	Owner /Managers	Employees
	Population	Population
	12	20
Owner / Managers	18	30
Marketing/ PR		
TOTAL	**30**	**50**

The target population groups for this study were hospitality SME owners / managers in Victoria Falls as these are involved in decision making as is highlighted on table 3.1. Victoria Falls is the main tourism attraction in Zimbabwe (ZTA, 2017); as such the researcher saw it feasible to use it as the research setting as it is the first port of call for many international tourists. The nature of the study required that data be collected from this population groups and the total number of hospitality SMEs in Victoria Falls amounts to 35.

It was assumed that at-least three individuals are responsible for making technology decisions at each of these organisations. These individuals or managers were drawn from the information technology (IT) and marketing departments. The owners of the business were also included in the study. Ultimately, the target population was approximately 80.

A database of registered hospitality SMEs in Victoria Falls was used to identify respondents. Respondents constituted the IT and marketing managers and owners of the SME.

Table 3.2: Sample Size (Primary Data, 2020)

Study Units	Number of Chosen Respondents			
	Owner Managers		Employees	
	Population	Sample	Population	Sample
Owner Managers – Director (s)	12	10	20	13
Marketing/ PR	18	15	30	17
TOTAL	30	25	50	30

When you choose a quantity or number of observations which you want to include in a statistical sample this is called sample size determination. When making an empirical study for the ultimate goal of drawing up an inference about a particular sample or population, then the most important feature to be considered is a sample size. For one to design a correct sample size, it has to be based on the correct sub groups of the total population in question and then have a proportional allocation of these subgroups which then provides a correct and realistic representation of the total population in question.

In doing quantitative research it is of paramount importance to take at least a 30% or more sample size of the population. However, in contrast to this, in qualitative research, you look for data but there comes a time when you continue getting the same data or information which becomes somehow redundant or repetitive. This is a point of saturation where the same information is what you keep collecting or gathering. On that point you then need to stop further information collection and start analysing what you have already collected. Saunders *et al. (*2017) observe how qualitative research uses this term called saturation to stop further data collection and start analysing what you have. Getting to reach saturation has a very positive impact on the quality of the research you conduct. As alluded to by Fusch and Ness (2015). Table 1 above summarised the number of managers and employees who were chosen as respondents for the study.

The instrument that was used in this study for the survey was adopted from Parasuraman (2000) and So *et al. (*2012). Parasuraman (2000) developed the technology readiness index to determine the motivators and inhibitors in technology adoption in consumers. However, scholars (Walczuch *et al.,* 2007) also feel that the same index should be used on service employees as they equally adopt technologies as do customers. So *et al. (*2012) developed and tested an instrument to measure online consumer engagement with tourism brands.

The adopted measurement scales, have already been tested in prior studies, however, a pilot study was done to determine appropriateness of instrument in the underlying research setting. The researcher saw the adoption of the survey instrument fit for present study which was deductive in nature and was also based on theory from which the measurement scale was developed. Table 3.3 below is a summary of the instruments administered across respondents.

Table 3.3: Respondents and Instrument administration (Primary Data, 2020)

Respondent	Instrument administration
SME owners	Questionnaires through email
IT and Marketing managers	Self-administered questionnaires

The present study relied on primary data sources and also secondary data sources. Secondary data were obtained and gathered from ZTA write-ups and its website, POTRAZ website and that of techzim, empirical evidence from secondary sources was accessed from refereed academic journal articles. Primary data sources were the actual collection of primary empirical data from research subjects through the use of a survey instrument generated for this study.

Questionnaires were sent to all owners via email per company. This enabled them to respond in their comfort zones. Email addresses were provided in the ZTA database. Phone calls were made to SME owners in

advance prior to emails being sent and thereafter follow-up after a week of emailing research instruments. Follow-ups were made weekly until 3rd week and the research window was closed.

Regarding IT and marketing managers, the questionnaires were self-administered and the same follow-up process was done as that of the owners. Questionnaires have the element of objectivity therefore are impartial, as such, there was no interference from the researcher during data collection.

Either primary data or secondary data can be gathered for the purposes of getting the required information in a study study. The use of questionnaires was used as a tool for gathering primary data. Since the procedure for collecting data entailed gaining access to both respondents, the researcher sought authority in writing from the university and from ZTA. Because the outcome of this research required highly technical experts' know-how, the researcher used the Delphi Technique as it enables numerous ways to researchers than the conventional method of research with a single questionnaire.

The essential components of this method involved the process of communication by a group of technocrats (who did not necessarily have to be in one roof simultaneously) and essential feedback. The Delphi method is always visible through a process of group communication which has proved to be very effective in enabling a set of group individuals to jointly deal with a complex situation. It has been established that whenever one needs to base his ideas, plans or policies on an informed judgement, he needs to use the Delphi method.

The Delphi method is quite handy where respondents are not gathered at one place of which these respondents are expert and practitioners who are presumed to have the requisite knowledge and expertise on the matter at hand. The issue of time, distance or proximity to gather all these people at one place or in one room to form a panel is practically

not possible. The experts are not able to be physically at the same location at the same time. The researcher then uses a set of questionnaires which are sent to these technocrats on the issues at hand. As a result on this study, the researcher adopted the Delphi method to design answers on those complex issues of which absolute information was not present.

Usually time and cost issues inhibit frequent group meetings and as such the Delphi method is an ideal method of collecting data. Besides just getting and using analytical techniques which are very precise, the research benefits from subjective judgements on a collective system. The method also allows individuals to greatly contribute to the interrogation of a broad and ambiguous situation representing various backgrounds in respect of expertise and experience. Also more individuals are a necessity than can only interact facially. Moreover we need a heterogeneous group of participants to maintain uniformity to get valid results.

There was an identification of two scenarios by Linstone (1978) regarding the appropriate application and use of the Delphi method. The first is that there is no exact or absolute analytical technique on which a problem can find itself in. As such the solution is likely to come from subjective judgements emanating from collective opinions. The second scenario is that it is always very difficult to bring individuals who would like to debate on a similar project into one place where they can have direct physical or face-to-face discussions because of geographical locations, time and expenses involved. With the foregoing, current research satisfies all of the above requirements.

It should be accepted that there were some limitation in the collection of primary data as a result of time and other resource constraints. To try and deal with this, emails in batches of ten were sent to various selected respondents. These were followed up through telephone calls especially

those which had not yet been responded to after the 7th day which was a way of trying to persuade them to complete the questionnaires.

For anonymity purposes, the questionnaires had to be coded before sending. All returned questionnaires had to be edited and submitted in a summary format for the purposes of coming up with a correct construction of the second questionnaire with a correct format to get the correct responses as per the ratings by the respondents. While this process required repetition for up to 4 times, for purposes of this academic study, the researcher employed a mini version of the Delphi otherwise known as a mini-Delphi and repeated the process only twice. The results of Questionnaire Two and the final questionnaire were arranged and given as the final statement of group consensus. This final version is what was analysed.

Secondary information is that data which is already in existence, collected or written by academics and researchers which are readily available in different publications. Documented information about technological readiness to adopt digital media for consumer engagement was obtained from the sampled tourism agents. Secondary data were harvested from sampled tourism industry players.

It was of importance to look into primary data later after having exhausted secondary data or when it showed 'diminishing returns'. Most of this information is publicly available and its advantage is that it is public information which can be accessed and collected for an insignificant cost without having to undergo any bureaucratic procedures. More so, the researcher reviewed documents.

In Education and evaluation research most researchers use questionnaires as a tool for data collection. Questionnaires are good sources for information gathering about behaviours, attitudes, knowledge and facts over a particular research in context. When having a group of people whom you want to question on a specific topic with

closely defined alternatives then the best instrument to use is the questionnaire.

Surveys of a descriptive or explanatory nature for the purposes of gathering information on opinions and attitudes of people are usually done using questionnaires. For the purposes of this study, emails were used to administer these questionnaires which were followed up through telephone calls. Telephone calls were to ensure that fully completed questionnaires were completed and returned on time.

The questionnaires were a tool for information collection about the relationship between employee innovativeness towards digital media technology and consumer brand identification, the relationship between employee optimism towards digital media technology and brand absorption by consumers and the relationship between employee innovativeness towards digital media technology and consumer interaction with their brand.

It is through the questionnaire that the researcher established the technological readiness. As normal questionnaires always have their advantages. There was no difference to this research. It enabled collection of huge volumes of data from a wider target group in sequence at a very low cost. The researcher "twinned" the questionnaire by means of telephone follow-up phone calls which positively aided to the response rate for a conventional questionnaire. The validity and reliability of the data collected was not affected so much by the use of questionnaires. Collected data can be scientifically and objectively analysed with much ease through the use of reliable software (SPSS). Data collected from this method was used to test the hypothesis.

It must however, be noted that besides the above advantages, questionnaires also have their disadvantages. It must be clearly understood that it certainly is not an adequate and comprehensive instrument to gather all information. The reliability of the collected data

hinges on the direct function of a combination of both the reliability and in-depth knowledge of the respondents. This will compromise to a certain extent the validity of the study findings. Different respondents are most likely to interpret and respond differently to some questions.

As a way forward, the research addressed these shortcomings of the questionnaire by identifying the most highly skilled and influential respondents. No questions were left ambiguous and the respondents were advised and knew that they could contact the researcher any time to clarify any ambiguous questions. However, despite the current evaluation of the questionnaire advantages and disadvantages, it is still considered to be the best data gathering instrument in a study study.

The following stages were developed for the questionnaire; reliability testing, running alpha revisions and testing the instrument. First of all, the objectives, the research questions and hypothesis of the study were to be determined. This involved examining the audience and their background and also not forgetting their experiences. Thereafter questions or statements were generated from the literature that was reviewed for questionnaire formulation. This led to the identification of several variables. At this stage, the emphasis was mainly on measurement of scales of which the appropriate one was the bipolar Likert scales.

The total responses or answers on several Likert items are what are referred to as the Likert Scale. A Likert item is a statement which a respondent is expected to evaluate through providing a quantitative value on a subjective or objective dimension that has a level of agreement or disagreement being the dimension most commonly used. The Likert scales made use of in this study showed the necessary attributes of similarity and balance which had the following responses: (i) strongly disagree (ii) disagree (iii) neither agrees nor disagrees (iv) agree (v) strongly agree. Ultimately, the study figured out the reliability

and validity of the questionnaire in relation to measuring the systematic or built-in error in its measurement as according to (Norland, 1990).

The research instrument was designed in line with the research questions and objectives as articulated in Chapter I. The questionnaires were critical as they assisted in the study with pertinent primary data that had to be sifted with the main agenda of coming up with accurate results and proper recommendations. Due diligence was also adopted to avoid over loaded or double-barrelled questions. The questionnaires were both closed and open-ended questions. The use of closed questions was to give a guided view where it was noted that there were very few possible answers and it was also meant to keep the focus of the research in line with set objectives.

Closed questions at times have a problem of not getting adequately answered. So where it was felt not enough information has been explained the respondents had to justify their answers to the questionnaires. There were also open-ended questionnaires which were used. These got the respondents to give a wider option of giving various possible responses as compared to being confirmed without much explanation as was the case with closed questionnaires. A graphic rating scale technique was another method that was used to get the general responses on the influence and effect of technology in the tourism industry. Therefore, there was room for aggregation of scores from those interviewed which enabled the investigation to look into crucial issues which were picked up as drivers of investment policies.

The questionnaire was taken as a satisfactory instrument by those interviewed as it proved to be a convenient tool which enabled them to clearly state their views mainly as result of open-ended questionnaires which proved that they understood the questions very well. On that vein the research instrument is therefore taken to have satisfied the requirements of validity and reliability.

Enough time was availed to respondents through the questionnaires as they completed these during their spare free time hence they were not rushed into responding without giving a proper thought. They had no pressure to respond immediately. This gave room for receiving feedback which was more accurate and truthful. More so, the researcher managed to reach and cover a huge number of respondents at a lesser cost and in a short space of time. The only problem is that this technic would not give much room for further probing on unclear issues as there was no room for the use of either verbal cues or non-verbal cues which are always good when further explaining a point.

It must also be noted that there were some respondents who had a negative feeling towards providing the information since the information was considered confidential. Nevertheless, the researcher assured that the information received from them was not for disclosure to external parties and that it was meant for the purpose of the study only.

TRI is a relatively new index and has not been widely tested especially on employees (Walczuch *et al.,* 2007) therefore a pilot study was undertaken to ascertain scale suitability in the study context. The pilot was conducted at the researcher's convenience in Harare where other hospitality SMEs resides. Harare is also one of the tourism cities in Zimbabwe (ZTA, 2017), though not as active as Victoria Falls. Since this study sought to test the relationship between two separate models, convergent and discriminant validity tests were conducted.

This was followed by a Pearson correlation test and Cohen's effect which helped determine the effect strength between the constructs of TRI and those of customer engagement. To gain consistency internally, determination was enabled through the Cronbach's coefficient alpha whose acceptable values are 0.7 (Nunnally, 1978). If the value is less, it then means the instrument is not reliable therefore an exploratory factor analysis may need to be done.

Three different experiments were used to get the research's validity. These were the constructive validity, internal validity and external validity. When constructive validity is mentioned, it refers to practical measurements establishment when one is looking for harmony or synergy between his theoretical framework and the specific measurement procedures or systems.

For the purposes of ensuring validity of the research, the external validity of the thesis by the researcher was enhanced through desktop work which made use of various books and internet-based sources of evidence which also included varied data collecting methods from literature sources and further investigation.

The validity was also enhanced by employing the mini-Delphi techniques rather than employing the ordinary questionnaire data gathering technique. To enhance validity of data it was put through the Explanatory Factor Analysis. The idea of doing a factor analysis with this regard was to ensure grouping of similar variables into dimensions that are sometimes referred to as identification of latent. Factor analysis was of great significance in the present study to test theory with regards to verifying and operationalizing the scale construction.

If the study's operational level gets to a point where it is repeated getting the same results then it is called Reliability. A reliable questionnaire is where mostly 23 other independent researchers get consistent results from the same research repeated at various times but of course under same environment. This random error measurement is what is referred to as Reliability. The reliability of the questionnaire was measured using Cronbach's Alpha with an acceptable value alpha of 0.7 thereby rendering the questionnaire reliable (Cronbach, 1959)

An excel and the Statistical Package for Social Scientists (SPSS) v.16 was used to analyse, code and capture the data which was collected. In respect of investment attitude, relevant information was produced

through thematic analysation. Existing literature was used to design strong argument themes by the researcher. For the particular purposes of this study, ideal patterns and themes were deduced which were in line with the questions which related to the actual life experiences as inferred from the interviews.

SPSS was used to analyse data after cleaning it using Microsoft Excel. Presentation was presented making use of tables and graphs. Given the small sample size and that the study sought to establish relationships between employee technology readiness and consumer engagement, non-parametric analysis was done. Quantitative data obtained through questionnaires was analysed using SPSS version 16. An SPSS template of data were formulated. The SPSS version 16 was able to test the reliability of the quantitative instrument using Cronbach's Alpha and proved to be reliable.

Factor analysis as this stage was done to verify and operationalize the scale construction. Validity and reliability issues were to be addressed first. Thereafter there was the capturing of data which was screened to remove all possible errors. After the careful screening of data, it was now analysed. Frequency tables were used to present quantitative data while the table bars and line graphs were used for presenting descriptive statistics. The central hypothesis of the study was addressed through computation using Pearson's correlation coefficient. The hypothesis was to determine whether there is a relationship between employee innovativeness towards digital media technology and consumer brand identification.

There was a clearance authority from the Midlands State University to undertake the research study. The researcher also sought clearance from ZTA, the regulating authority for the tourism sector under study. It should be noted that confidentiality was maintained during the period of this study.

Before any start of the interviews, the respondents were advised of the purpose of this research which was purely for academic purposes and nothing else. It was further explained that the participation was purely on a voluntary basis and it was up to an individual respondent to withdraw any time if he or she felt otherwise. It was also made clear that the participants could get access of the research findings soon after if they so wished to have access and for free as well. All the above ethical considerations were observed throughout the interviews and any information which could potentially lead to respondents being revealed their identities was discarded. As such the researcher was under an obligation to protect the rights of the participants.

This was a preparatory chapter for the next chapter which analysed data, presented and discussed findings. The research philosophy was outlined together with the design, population and sampling. Due to the size of SMEs in the hospitality sector, a census was deemed apt to fulfil the requirements of a quantitative survey where not less than 30 observations were made. Data analysis was done on SPSS and validity of constructs was done.