CHAPTER THREE: STUDY DESIGN AND METHODOLOGY

The preceding chapter has analysed relevant literature available in the relevant research canon, established a conceptual framework, and reviewed prior studies, focusing on the taming of operational management risks model in micro-insurance organisations at SamChi. The chapter turned its attention to outlining the research methodology and research paradigm used for this research. A thorough description of the research process was also provided. In particular, the research philosophy, research design, target population and sampling, data collection methods, data analysis and interpretation, ethical considerations and limitations of the study are outlined and canvassed herein. The objectives of the study were, *inter alia*: to explore the plausible sources of operational risks associated with SamChi micro-insurance operations, to assess the operational risk management strategies currently being employed at SamChi micro-insurance, to establish the plausible benefits of effective operational risk management to micro-insurance companies and to design a framework that can be used to effectively manage operational risks at SamChi micro-insurance and other similar micro-insurance organisations.

The study applies the positivist philosophy as its research main paradigm. Positivism is an empirical research approach that relies on scientific methods and aims to study phenomena objectively through quantifiable observations and measures (Kivunja and Kuyini, 2021; Ryan, 2021). There are a few key tenets of positivism that characterise this philosophy. Ontologically, positivists believe in a single objective reality that exists externally and can be directly observed and measured (Ryan, 2021). In terms of epistemology, positivism asserts that only observable and measurable facts derived from rational and logical methods can constitute valid knowledge (Eisner, 2021). Methodologically, positivism emphasises quantitative techniques like controlled experiments to test causal explanations and hypotheses objectively (Chekure, 2020).

The study is applying positivism specifically. Positivism augers well with the aims, research questions and mixed methods approach adopted in the study. Firstly, the overarching aim is to empirically assess the operational risk

management strategies at SamChi Microinsurance in an objective, quantifiable manner (Murahwa, 2019). Positivism supports such an empirical, measurable investigation of phenomena (Ryan, 2021). Secondly, the research questions focus on clearly identifying current issues scientifically through hypothesis testing, a hallmark of positivism (Chekure, 2020). The mixed qualitative and quantitative methods used, including interviews, document review and assessment of practices, enable collection of factual data required for positivism (Makumbe, 2020). This provides observable evidence to test hypotheses as required by positivism.

Thirdly, the literature review established relevant conceptual frameworks and theories to understand operational risks and strategies objectively, again aligning with positivism's empirical stance (Berger, 2022; Kivunja and Kuyini, 2021). This theoretical base can then be used to ground conclusions in empirical observations, an approach advocated by positivism. Given the research aims, questions, methods and need for an objective assessment, positivism provides the most appropriate research philosophy. Its empirical stance supports investigating the phenomenon in a quantified, scientifically valid manner to answer the research questions. The positivist ontological and epistemological assumptions thus provide a suitable paradigm for the study.

The study adopted a descriptive research design to achieve its stated objective. Descriptive research design is suitable when a researcher intends to obtain an accurate profile and description of a population or phenomenon that was being studied (Kothari, 2021). It helps provide an accurate representation of characteristics, patterns or trends in relation to the variables of interest in a situation (Bell, 2023). This design was appropriate for the study as the objective was to explore the taming operational management risks model in micro-insurance organisations at SamChi. A key strength of this design was that it allowed collection of large data sets from a population that was considered adequately representative, enabling generalisation of findings and conclusions (De Vaus, 2022). Further, it did not involve manipulation of variables but rather observed phenomena as they occurred in their natural setting (Saunders *et al.*, 2019).

Within the overarching descriptive design, a cross-sectional survey strategy was adopted. Survey designs are suitable for descriptive research as they facilitate collection of quantitative data from a sizeable sample to help draw statistically meaningful conclusions about populations (Koul, 2021). Specifically, a cross-sectional survey involved collection of data at one point in time from a sample that represented the population (Given, 2021). This made it appropriate for description of characteristics, opinions, or attitudes. The survey strategy was preferred over experimental methods because the latter are more suited for determining causal relationships that require manipulation of variables (Given, 2021). Considering the aim was to provide profiles and describe associations between variables as they occurred naturally without manipulation, a survey best addressed this. Furthermore, surveys allowed for collection of large datasets efficiently compared to case study designs whose samples are usually small (De Vaus, 2022).

The descriptive survey design was best suited to address the research objective by providing an accurate portrayal of the current state of variables under study in their natural context. It also facilitated collection of sufficient quantitative data to statistically describe characteristics of the target population and establish associations between the identified study variables.

Table 3.1: Research methodological matrix

Objective	Variables	Source of Data	Important Assumptions
1. To explore the plausible sources of operational risks associated with SamChi Micro-insurance operations.	Sources of operational risks e.g. staff errors, technology failures, external events	Questionnaire items exploring perceptions of risks faced by SamChi. Open-ended questions allowing elaboration.	Respondents have sufficient understanding of operational risks at SamChi to identify sources.
2. To assess the operational risk management strategies currently being employed at SamChi Micro-insurance.	Existing risk management strategies e.g. risk assessments, standard procedures, outsourcing, staff training.	Questionnaire items on current practices. Document review of policies and reports.	Relevant documents are made available and accurately reflect current state of risk management.

Objective	Variables	Source of Data	Important Assumptions
3. To establish the plausible benefits of effective operational risk management to micro-insurance companies.	Potential benefits of risk management e.g. improved resilience, reputation, profitability.	Questionnaire measuring perceptions of benefits. Literature review provides conceptual framework.	Benefits of risk management for micro-insurers identified from literature are applicable in the local context.
4. To design a framework that can be used to effectively manage operational risks at SamChi Micro-insurance and other similar micro-insurance organisations.	Components of risk management framework e.g. risk identification, assessment, monitoring, control activities.	Data on strengths and weaknesses of current approach. Existing frameworks from literature adapted based on findings.	A usable framework can be designed based on analysis to improve risk oversight at SamChi.

The target population in the study referred to the specific group about that the researcher intended to generalise the study results (Mack et al., 2005). It consisted of the managerial personnel and employees of SamChi Microinsurance located within the city of Harare, Zimbabwe. This population was well-defined as the research focused only on individuals working for this particular organisation within the given location. A sampling technique was necessary to systematically select a subset of participants from the target population to take part in the research. In this case, the stratified random sampling method was applied. Stratified random sampling involved dividing the target population into mutually exclusive strata or subgroups first before randomly selecting participants proportionally from each stratum.

There were several key reasons why stratified random sampling was chosen among other available sampling techniques. First, it helped ensure representation of important subsets in the target population (Johnson & Christensen, 2021). The target population in the study was stratified into four zones - Central Business District, Avondale, Chitungwiza, and Borrowdale - based on the geographical locations of the company's Harare offices. This promoted coverage of individuals distributed across different parts of the city. Second, by randomly selecting participants proportionally from each stratum,

it accounted for any differences in strata sizes. For instance, the number of employees located in one zone may have differed from another. Stratified random sampling balanced this through proportional allocation.

Lastly, this technique aided in obtaining a more accurate and precise sample that better replicated the characteristics of the target population compared to simple random sampling (Blair et al., 2023). It minimized the possibility of underrepresenting any important subgroups in the population that simple random sampling carried (Creswell & Creswell, 2021). Stratified random sampling was the most appropriate technique in this situation given the heterogeneous nature and identifiable strata within the target population distributed across multiple locations in Harare. It enabled both representation and generalisation of findings essential for this research.

Yaman (1967:886 cited by Israel G, (2022) provided a formula for calculating sample sizes, that is as below;

$$n = \frac{N}{1 + N(e)2}$$

$$= \frac{120}{1 + 120(0.05)2}$$

Where *n* is the sample, *N* is the population and *e* is the level of precision. There was a population of 120 from the selected four zones in Harare at 95% confidence interval and a level of precision of 0.05. Calculations provided a sample size of 92 members. Therefore, the sample size was be 92.

Questionnaires were the main data collection instrument used to obtain primary data from respondents. Questionnaires were deemed appropriate for the study for several reasons. First, they allowed for collection of structured data from a large sample in a standardised manner. With a population of 120 employees spread across different locations, questionnaires provided an efficient means to gather responses from a large sample within a short time as compared to interviews. Second, questionnaires promoted anonymity and confidentiality since respondents could fill them privately without feeling judged. This was vital in obtaining honest responses about operational risks and controls from staff. Third, questionnaires had low administration costs

compared to other methods like interviews. Given the resource constraints, questionnaires provided a cost-effective way to collect primary data.

However, questionnaires had some limitations such as potential low response rates. To mitigate this, the researcher provided pre-stamped return envelopes and followed up with reminder emails to encourage prompt submission of filled questionnaires. Questionnaires also lacked probing ability that could be addressed through inclusion of additional open-ended questions allowing for elaboration of answers. The wording and sequence of questions were pretested to ensure clarity and logical flow.

In addition, secondary data were collected through document review. Relevant documents on operational risk management policies, procedures, reports and records kept at SamChi Microinsurance were examined. Document review provided an unobtrusive way to gather contextual background information useful in understanding current practices and challenges. It allows extraction of factual details from existing documents without interrupting regular activities through direct interaction with staff (O'Leary, 2023). However, documents may have been incomplete or outdated. To improve validity, data from multiple sources were triangulated (Mathison, 1988).

The data were analysed through a rigorous statistical approach in Chapter Four. Descriptive statistics including frequencies, percentages, means and standard deviations were used to summarize the sample demographics and questionnaire responses. Exploratory factor analysis was conducted to assess the dimensionality and validity of scales used in the study, while reliability analysis confirmed the internal consistency of scales. Additionally, hypothesis testing involving linearity, homoscedasticity and normality assumptions were examined through Levene's test, ANOVA and normal probability plots prior to conducting inferential analyses. Specifically, multiple linear regression was used to analyze the relationships between independent variables and the dependent variable.

The coefficient tables from the regression output allowed the study hypotheses to be formally tested and results interpreted. Exploratory data

analysis was performed using the Statistical Package for Social Sciences (SPSS) version 25, that helped identify outliers and anomalies and understand the distribution of data. Findings from the descriptive analysis were presented using tables and figures for ease of interpretation.

Collecting research data requires considering various ethical issues around protecting participants (Hazron, 2022). One method for data collection in the study is using an online questionnaire designed through Google Forms. This method addresses important ethical concerns while allowing for an efficient collection of standardised data (Oliver, 2021). Questionnaires provide participants anonymity that respects their privacy and confidentiality (Saunders *et al.*, 2009). When using an online format through Google Forms, respondents can complete the survey without providing any identifying details. This anonymity helps maintain the confidentiality of supplied information as emphasised by Saunders *et al.* (2009) as an important ethical concern. The electronic nature of the questionnaire also ensures participation is optional and respondents can withdraw from the process at any time if they choose (Saunders *et al.*, 2009).

An online questionnaire offers convenience to participants by allowing them to complete the survey as per their own schedule (Saunders *et al.*, 2009). As the link can be distributed via email or messaging apps, it enables gathering responses from a larger sample dispersed over wide geographies. The automated compilation of responses in a Google Sheets spreadsheet further streamlines the data collection process saving time on manual transcription (Saunders *et al.*, 2009). This efficiency is crucial as it keeps the process low-cost, an important consideration given budget constraints for this research study.

By emailing the link, the researcher also maintains control over the response submission process. This helps address ethical requirements around obtaining informed consent from participants and the voluntary nature of their participation (Saunders *et al.*, 2009). The various question types that can be used in a Google Forms questionnaire, such as multiple choice, scales and open-ended, also allows collecting standardised yet nuanced data suitable for quantitative statistical analysis (Saunders *et al.*, 2009).

Using an online questionnaire designed through Google Forms is deemed the most appropriate data collection method for the study due to how it addresses ethical concerns highlighted in the literature (Saunders *et al.*, 2009) while ensuring an efficient and convenient process. The method respects participants' privacy, allows voluntary and informed participation, and streamlines data handling.

One of the limitations of this quantitative research study was that it was conducted as a cross-sectional study at a single point in time. This means that changes in operational risks and management practices over extended periods could not be accounted for. A longitudinal study conducted over multiple years may provide deeper insights into the dynamics of operational risk exposure and the impact of mitigation strategies over time.

Additionally, using self-reported survey data from SamChi employees is subject to potential response bias. Although anonymity was assured, respondents may have responded in socially desirable ways. Triangulating the survey results with official company records on risks and strategies could help enhance the validity of the findings.

Generalising the findings was also limited since the study only focused on analyses at a single micro-insurer, SamChi. Conducting comparative studies that analyse and compare operational risks and practices across multiple micro-insurance firms would help strengthen the external validity and generalizability of the results.

This chapter has outlined the research methodology used in the study. It described the positivist research philosophy as being most appropriate given the aims of empirically investigating operational risks at SamChi Microinsurance. A descriptive research design using a cross-sectional survey approach was employed to provide profiles and describe associations between variables. The target population was managerial and employee staff at SamChi Microinsurance in Harare. Data collection involved questionnaires and document review, while data analysis used descriptive statistics, inferential analysis through structural equation modelling, and interpretation of statistical outputs. Ethical considerations regarding informed consent and

anonymity were also discussed. Finally, limitations around financial constraints, time constraints, and participant apathy were acknowledged as potential threats to validity and reliability. The following chapter discussed the analysis and interpretation of data.