

Conference Paper

Unlocking the Story: Piloting Interviews to Illuminate the Journey of Indigenous Chicken Micro-farming

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Abstract.

Qualitative interviews provide invaluable insights into human experiences, but they can be challenging, especially for novice researchers. Therefore, conducting a preliminary study becomes crucial to refine interview techniques and improve the overall research process. The present study focuses on the importance of a preliminary study in understanding indigenous chicken micro-farming and aims to gain insights into the interview process and associated issues before conducting a full-scale study. This study represents the first attempt, to the best of our knowledge, to pilot interviews before conducting a comprehensive investigation in the context of indigenous chicken micro-farming. It highlights the methods employed in designing and conducting the preliminary study, as well as the valuable lessons learned throughout the process. The interviews were conducted with indigenous chicken micro-farmers as part of the preparation for a dissertation centered on developing an integrated supply chain model for indigenous chicken in Malaysia. Additionally, this study outlines the modifications made based on the preliminary study for the main study, which subsequently led to the implementation of a pilot study. These adaptations include changes to the interview guide, adjustments in vocabulary to enhance participant understanding, rephrasing of certain questions, and the addition of more interview questions to gain a comprehensive understanding of the issues related to indigenous chicken operations. This study underscores the significance of a preliminary study and its role in informing and shaping the subsequent main study. The findings and insights derived from this preliminary investigation contribute to the development of a robust research design for the main study in indigenous chicken micro-farming.

Keywords: indigenous chicken, preliminary study, pilot study

Corresponding Author: Iffat Abbas Abbasi; email: EMAIL

Published 7 December 2023

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the ICESG Conference Committee.

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1. Introduction

Qualitative research, utilizing interviews as the primary data collection method, offers valuable insights into subjective experiences, opinions, and beliefs (Mohd Aliff Abdul Majid, Mohhidin Othman and Mohamad, 2017; Johan Malmqvist, Kristina Hellberg, Gunvie Mo'illa's and Shevlin, 2019; Kim, 2010). Preliminary studies or pilot studies play a crucial role in refining the research method and ensuring its feasibility, thereby saving time and resources (Mohd Aliff Abdul Majid, Mohhidin Othman and Mohamad, 2017; Johan et al., 2019; Kim, 2010). These studies help identify barriers, evaluate protocols, and enhance the rigor and validity of qualitative research. The current preliminary study focuses on indigenous chicken micro-farming operations, which have significant potential for achieving Sustainable Development Goals. Indigenous chicken farming plays a vital role in agrarian economies by providing livelihoods, food security, and income opportunities for rural communities. It contributes to GDP, empowers marginalized groups, and promotes sustainable social business aligned with triple bottom line criteria. However, challenges in the supply chain hinder the realization of the true potential of indigenous chicken micro-farming (Abbasi, IA et al., 2021; Abbasi, IA et al., 2023; Abbasi, I.A.; Ashari H., & Yusuf., 2023). Limited studies exist on supply chain interactions, emphasizing the need for qualitative research in understanding these complex dynamics (Abbasi, IA et al., 2021; Abbasi, IA et al., 2023; Abbasi, I.A.; Ashari H., & Yusuf., 2023).

The current preliminary study aims to refine interview questions, address issues in the interview process, and establish smooth interactions with interviewees before conducting a large-scale qualitative study. By conducting this research, a deeper understanding of the indigenous chicken micro-farming supply chain can be gained, enabling improvements, and enhancing the overall potential of this agricultural activity.”

2. Literature Review

2.1. Preliminary Studies

Preliminary or pilot studies serve as smaller versions of large-scale studies and act as pretests for specific research instruments like questionnaires or interview guides. These studies are conducted in quantitative, qualitative, and mixed-method research designs. Teijlingen., and Hundley, (2002) categorized preliminary studies in social sciences into two major types: feasibility studies and pre-testing of research instruments. It is important

to note that pilot and feasibility studies should not be used interchangeably. Feasibility studies aim to identify crucial components necessary for the development of the main study, while pilot studies are shorter versions of the main studies. **Bugge et al., (2013)** also emphasized that feasibility studies assess the practicality and doability of the full-scale study, whereas pilot studies test various aspects of the study design and processes before implementing a larger-scale study. **Eldridge et al., (2016)** argued that while pilot studies may pose similar questions to feasibility studies, they have specific design features. Historically, pilot studies were perceived as time-consuming and burdensome due to their narrow range of purposes. However, contrary to this belief.

However, contrary to this belief **Cope (2015)** stated that researchers should view pilot studies as beneficial steps toward improving the main study. Pilot studies are conducted to determine the viability of techniques, methods, questionnaires, and interviews, as well as how they function together in a particular setting. They help identify design flaws, improve data collection and analysis plans, train the research team, assess the recruitment process, and gather important participant information before conducting a large-scale study. During pilot studies, if participants encounter difficulties in completing the survey instrument, researchers may rephrase items, change the question sequence, or modify the instrument's style. A substantial body of literature suggests that pilot studies should be conducted to identify and reduce risks related to future study design, sample size, selection, data collection, management, and analysis. Feasibility studies, in contrast to pilot studies, assess individual components crucial for the full-scale study, such as participant recruitment, the capability to execute interventions, and the accuracy of intervention practices. Feasibility studies are seen as a learning process in which research procedures and interventions are modified during the study to achieve favorable outcomes. Researchers conducting feasibility studies aim to identify strategies to address any issues and modify components as necessary before developing pilot studies to formally assess the intervention's effectiveness. While there is some overlap between feasibility and pilot studies, feasibility studies primarily focus on the process of creating and executing an intervention, leading to a preliminary study of participant responses to the intervention.

Adaptation is an important feature of feasibility studies, establishing fidelity to demonstrate that intervention procedures or protocols have been implemented as intended, which often occurs during the pilot stage. Pilot studies, on the other hand, more clearly focus on outcomes rather than procedures, involving a controlled evaluation of participant responses to the intervention (**Cope, 2015**). Researchers including **Lee et al., (2014)** argue that pilot trials aim to provide sufficient certainty to enable the conduct

of a larger final experiment. They disagree with the sequence of feasibility and pilot studies as described by (Dobkin, 2009; Gitlin, 2013; Orsmond and Cohn, 2015). Lee, Whitehead, Jacques, and Julious (2014) have supported the idea proposed by Leon, Davis, and Kraemer (2011) propose that the results of pilot studies assess feasibility and determine the modifications required for larger hypothesis-testing research (Mukhtar et al., 2023; Mukhtar, B, Shad, M.K, Woon, F.K, 2023; Mukhtar, B, Shad, M.K, Woon, L.F.; 2023; Mukhtar, B, Shad, M.K, and Woon, L.F.; 2023).

Pilot studies serve an earlier-phase developmental function that enhances the likelihood of success in subsequent larger studies. They allow researchers to evaluate recruitment rates, the usability of instruments, and the feasibility of implementing specific technologies, making necessary adjustments as needed. It's worth noting that pilot studies can be the first step in exploring new interventions or procedures or innovative applications of existing ones. Pilot studies involve hypothesis testing and evaluate safety, efficacy, and effectiveness. Therefore, they do not require large sample sizes like full-scale studies that aim to have sufficient power for statistical null hypothesis testing. According to Lee et al. (2014) pilot studies are more focused on learning than confirming and provide an estimate of the range of possible responses. Pilot studies are more commonly reported in medicine and nursing compared to other fields, especially in qualitative studies. Thus, the current study has chosen a pilot study approach to understand indigenous chicken micro-farming. The following section will discuss indigenous chicken micro-farming and the issues involved in it.

2.2. Indigenous Chicken Value Chain and Constraints in Indigenous Value Chain

The available literature on indigenous chicken farming highlights the involvement of various actors in indigenous chicken micro-farming. These actors include pre-producers, producers, frontline assemblers, wholesalers, processors, retailers, and consumers (Abbasi I.A. al., 2021; Abbasi I.A et al., 2023; Abbasi et al., 2023; Ndenga, Bett and Kabuage, 2020; Ndenga, 2018; Miklyaev, Hashemi and Schultz, 2017; Richard Bwalya, 2014; SUNGU, 2014; Ronaldo, 2020; Asem-Bansah CK, Sakyi-Dawson O and Marquis, 2012; Lubandi et al., 2018). Among these actors, the key role is played by the producers, who are responsible for rearing chickens. Producers sell mature chickens to customers through different channels. Pre-producers are also crucial actors in indigenous chicken micro-farming as they provide essential materials to the producers for chicken rearing. These materials include feed, feed supplements,

vaccines, and extension services. Producers sell mature chickens through the most convenient options available. If local markets are in close proximity, producers prefer to sell directly to customers. In cases where the local market is far, producers sell live birds to middlemen or wholesalers. These middlemen then sell the chickens to wholesalers, who, in turn, sell them to retailers and processors. Processors, the only actors in the indigenous chicken value chain who add value, encompass various frozen markets and eateries that supply and serve chicken products to end consumer(Iffat et al.,2021;Iffat et al., 2023;Iffat et al., 2023; Ndenga, Bett and Kabuage, 2020; Ndenga, 2018; Miklyaev, Hashemi and Schultz, 2017;Richard Bwalya, 2014;SUNGU, 2014;Ronaldo, 2020;Asem-Bansah CK, Sakyi-Dawson O and Marquis, 2012;Lubandi et al., 2018). Figure 1 provides a visual representation of the actors involved in indigenous chicken micro-farming.

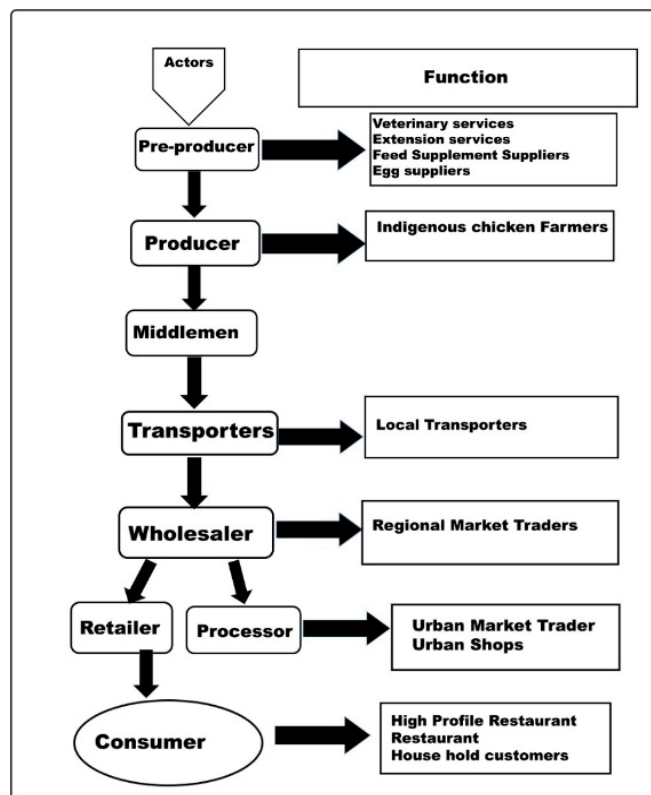


Figure 1: Mapping of Actors Involved in Indigenous Chicken Supply Chain.

Despite the active participation of actors in indigenous chicken micro-farming, they face numerous constraints that hinder the smooth operation of their activities. The following subsection discusses the constraints commonly encountered in indigenous chicken micro-farming.

2.2.1. Challenges in Indigenous Chicken Micro-farming

The current literature on indigenous chicken micro-farming reveals that the value chain of indigenous chicken is not well-integrated, resulting in various constraints experienced by all actors involved in the supply of indigenous chicken. One of the main challenges faced by pre-producers is limited capital, which affects their efficient production and service delivery. Additionally, pre-producers encounter challenges such as limited knowledge and skill development in business development and management, inadequate training facilities, high labor costs, and insufficient government support for extension services (Lubandi et al., 2018; Asem-Bansah et al., 2012). Producers, as major players in the indigenous chicken value chain, face numerous challenges. Financial constraints, stemming from limited capital, make it difficult for producers to increase production capacity. Other constraints reported by producers include infectious disease outbreaks, high disease mortality, contaminated feed, predation, poor housing, lack of technical knowledge about good farming practices, high feed costs, price variation, limited knowledge of basic breeding principles, and limited knowledge of better, faster maturing, and locally adaptable breeds. Producers also struggle with the unavailability of proper markets, as middlemen or traders manipulate prices without considering production cost (Lubandi et al., 2018; Asem-Bansah et al., 2012).

Middlemen, including distributors and transporters, also face challenges within the indigenous chicken value chain. These challenges include poor transportation facilities leading to increased chicken mortality, inadequate infrastructure, insufficient information about avian diseases, shortage of quarantine facilities, limited capital, rising feed costs, low profit margins due to the unavailability of nearby markets (Lubandi et al., 2018; Asem-Bansah et al., 2012). Wholesalers and retailers, who are part of the indigenous chicken supply chain, encounter constraints such as the inaccessibility of organized specialized commercial indigenous chicken producers, insufficient operating capital, high incidences of diseases and mortalities, increasing maintenance costs until the sale, market charges, trade license payments, stall rentals, and competition from other traders in the same market niche (Lubandi et al., 2018; Asem-Bansah et al., 2012). Lastly, end customers, the final actors in the indigenous chicken value chain, encounter challenges such as limited access to indigenous chicken and products, price volatility, limited supply of indigenous chicken meat in fast food establishments, poor bird processing, and limited access to trustworthy supply networks. Addressing these challenges requires targeted interventions such as improving access to capital,

providing training and knowledge enhancement programs, strengthening market linkages, enhancing infrastructure and transportation facilities, promoting disease control measures, and establishing reliable supply networks. By addressing these constraints, the actors involved in indigenous chicken micro-farming can overcome obstacles and improve the overall efficiency and profitability of the value chain. Figure 2 has shown the summary of constraints experienced by each actor.

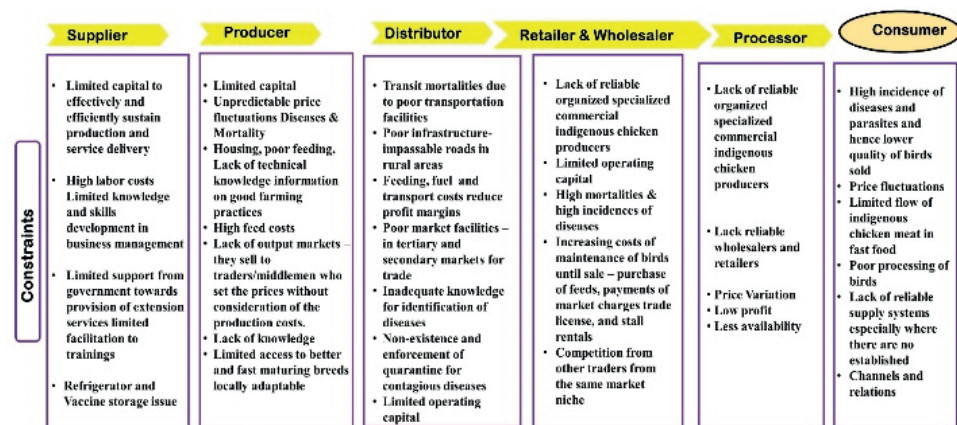


Figure 2: Summary of the constraints in indigenous chicken value chain.

The above discussion clearly highlights the ineffectiveness and poor integration of the indigenous chicken value chain. It emphasizes the need for a comprehensive understanding of the indigenous chicken value chain and the issues it faces. Therefore, conducting a qualitative study to gain insights into the operations and challenges of indigenous chicken micro-farming is essential for developing a viable model for the industry. The current preliminary study serves as the initial step toward conducting a full-scale qualitative study to delve deeper into the intricacies of indigenous chicken micro-farming systems. The following section will discuss the methodology employed to conduct the preliminary study.

3. Methodology

This paper outlines the steps taken to gather the necessary information required to address the objective of the study. Figure 1 illustrates the sequential process followed to conduct the study.

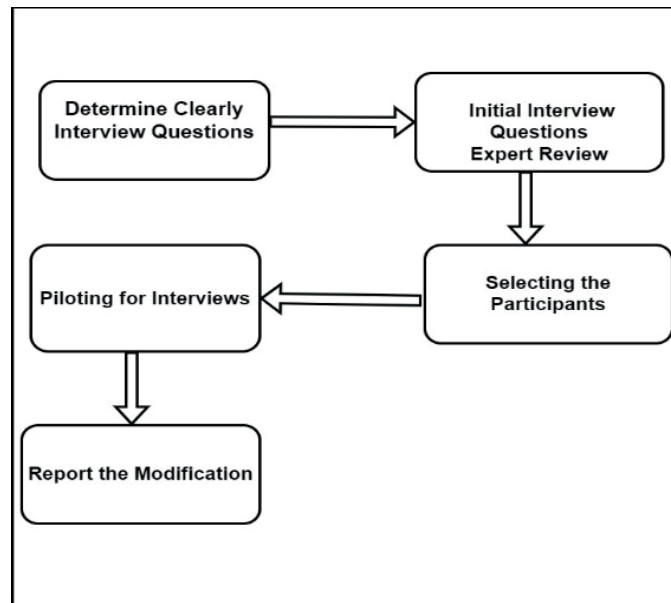


Figure 3: Steps Involved in Pilot Study.

3.1. Determine Clearly Interview Questions

The interviews in this study are guided by open-ended questions that focus on various issues related to indigenous chicken, rural farming, the indigenous chicken value chain, and the issues faced within the value chain. These interview questions are designed based on the existing literature on indigenous chicken micro-farming value chains, drawing inspiration from the works of (Richard Bwalya and Thomson Kalinda., 2014; **Abah Helen Owoya, and Abdu Paul Ayuba., 2018; Charity Masole, Gare Keabetswe Mphothwe, 2015; John Cassius Moreki, 2016; Moreki, Nelson and Boitumelo, 2016; Okeno, Kahi and Peters, 2012**). The aim is to ensure that the interview questions are designed in a way that can effectively address the research questions and contribute to the overall objectives of the study. This approach enhances the significance and effectiveness of the research questions by ensuring that they align with the study's aims (**Castillo-Montoya, 2016**). Additionally, Dikko (2016), the interview protocol, including the open-ended questions, has been sent to three experts for review to ensure the inclusion of necessary concepts and enhance the quality of the interview process.

3.2. Initial Questions Reviewed by Experts

Subsequently, the interview question protocol was reviewed by experts to ensure its language, wording, and relevance. One of the reviewers suggested rephrasing the

questions to make them more indirect and friendly. For example, the initial question ‘When do you start rearing indigenous chicken micro-farming?’ was rephrased as ‘

“Please tell when you planned to rear indigenous chicken”.

The language of the question was modified based on the experts’ suggestion to make it more friendly and easily understandable. Following the initial review, the interview protocol was divided into six sections, with each section containing four main questions related to indigenous chicken micro-farming. The modified version of the interview protocol was then used for the preliminary study. The next subsection will discuss the procedure for selecting participants.

3.3. Participants Selection

For the pilot study, three small-scale farmers and one indigenous chicken integrator farm located in Malaysia were selected as participants. Prior to the interview, formal consent was obtained from each participant. According to Turner (2010); Hennink, Hutter and Bailey (2011), it is important for the participants in a pilot study to share similar criteria to those in the main study group. In this case, the participants were selected based on the inclusion criteria previously provided, and they were identified through referrals from the same field. Purposive sampling was used to select the participants, ensuring their willingness to participate in the preliminary study. Efforts were made to interview all three farmers, and Table 1 provides a summary of the demographic characteristics of the participants.

TABLE 1: Summary of The Demographic Characteristics of The Participants.

Pseudonym	Age	Gender	Education	No of Chicken
A	37	M	SPM	Above 3000
B	21	M	SPM	500
C	20	M	SPM	500

3.4. Piloting for Interviews

The pilot study was conducted in July and August to gather insights from small-scale indigenous chicken farmers. Each of the three participants was interviewed separately on different days and at different times. The integrator was interviewed on their farm due to their busy schedule, while the other two participants were invited to a different location for their interviews, which were conducted separately. Prior to the interviews,

all participants signed a consent form. To ensure the participants' commitment and comfort, the interviews were kept within a recommended time frame of 90 minutes, as suggested by Jacob and Furgerson, (2012). The interviews in this preliminary study lasted for approximately 80 minutes, including social conversation. The purpose of this preliminary study was to test the appropriateness of the interview questions and gather early suggestions regarding the feasibility of the larger-scale research. It also provided the researcher with valuable experience in conducting in-depth, semi-structured interviews and establishing rapport with the informants. The preliminary study was instrumental in helping the researcher develop interviewing skills and navigate the flow of conversation. Building a good relationship with the participants is crucial for obtaining better responses, as emphasized by Jacob and Furgerson (2012). Therefore, the interviewer engaged in social conversation with the participants before the formal interview. While general topics were discussed in depth, the interviews were designed to establish a good rapport with the interviewees. Probing questions were used to elicit in-depth information, and all participants were given the opportunity to openly discuss their experiences based on the questions provided. The same set of questions was asked to each participant during the interview.

Although a translator was available for the interview sessions, interviews were conducted in English as all participants were comfortable communicating in English. However, the interviewer did not follow a strictly orderly form of questioning, but rather allowed the conversation to flow naturally. Importantly, after the interview with the integrator, the researcher realized the need for improvement in the interview process. Some questions emerged during the analysis of the integrator's interview, and these newly identified questions were added to the interview protocol to gather additional information from the other two participants in the preliminary study. The researcher acknowledged the need to refine the interview approach, as each interview necessitated a unique way of probing important areas.

At the end of each interview, the participants were given pseudonyms to represent them. They were given the liberty to choose any name they preferred. The following section will discuss the modifications made based on the insights gained from the interviews.

3.5. Finding of Preliminary Interview

After conducting the first interview with the integrator (Participant A), the researcher and the supervisor transcribed the interview verbatim, managed the data, and applied

coding techniques. During the analysis, several issues were identified that were missed during the interview with the integrator A. The researcher overlooked discussions related to egg breakage, unhatched eggs, and the management system for waste from indigenous chickens. These topics are crucial for understanding the backward linkage in the indigenous chicken integrated supply chain. Furthermore, there were misunderstandings between the integrator and the researcher regarding technical jargon, particularly between grandparent and parent indigenous chickens. Despite the integrator’s expertise, it was observed that they lacked sufficient information about certain technical terms.

To address these issues, modifications were made after the first interview. The researcher made a conscious effort to replace technical words with more commonly understood language. The aim was to enhance clarity and avoid confusion during the interview. The second round of interviews was then conducted with the same integrator (Participant A) to obtain detailed responses and cover the topics that were missed in the first round. The second interview proceeded smoothly and lasted approximately 30 minutes. Table 2 provides examples of vocabulary changes made for the interview questions.

TABLE 2: An Examples of Vocabulary Changes.

Initial Word	Replaced Word
Rear	Grow
Litter	Waste
Barn	Shed
Incubation period	Time and Days

The second round of interviews proved valuable in further refining the interview questions. Interviewing small-scale farmer B prompted the researcher to use more common vocabulary to ensure better understanding. For example, the question

”Please tell me, do you seek your siblings’ support to rear chickens” was rephrased as

”Please tell me, do you ask your brothers and sisters to help you grow indigenous chickens”

Despite having similar levels of education, the researcher observed differences in the understanding of technical terms among small-scale farmers and the integrator. To make the interviewees more comfortable, the researcher opted for simpler and more accessible language. During the study, the researcher noticed that small-scale farmers, as growers, often do not hire labor for assistance in indigenous chicken micro-farming. Consequently, more family-related questions were asked to save time.

The third interview with a small-scale farmer went smoothly as the questions had been refined based on the previous rounds. After interviewing the third small-scale farmer, the researcher decided to include questions about chicken breeds. These questions provided more detailed information about the specific needs, expenses, and overall operations related to different chicken breeds. They also shed light on variations within the supply chain system.

In summary, the preliminary study in indigenous chicken micro-farming proved instrumental in improving the interview guide. Refinements were made, including rephrasing certain questions and structuring probes more effectively based on the issues encountered during the preliminary study. The interview framework was revised to include additional questions, allowing for better quality data and deeper responses from the participants. For the full-scale study, the interview framework consists of seven sections, with three main questions in each section, along with other guiding questions to enhance the utility of the interview in understanding the participants' lived experiences.

4. Conclusion

The present preliminary qualitative study focuses on indigenous chicken micro-farming to gain insights into the indigenous chicken supply chain and the challenges associated with it. Indigenous chicken micro-farming has the potential to contribute to food security and provide a stable source of income for both urban and rural populations in developed and developing countries. Additionally, it aligns with the principles of the triple bottom line, encompassing social, environmental, and economic aspects.

However, the full potential of indigenous chicken micro-farming has not been realized due to the absence of an integrated supply chain or value chain system. This lack of integration results in various challenges for all actors involved in the indigenous chicken supply chain. Thus, there is a compelling need for an in-depth qualitative study to comprehensively understand the operations and challenges of indigenous chicken micro-farming and to develop an integrated supply chain model.

To the best of the researchers' knowledge, this study represents the first systematic attempt to address these issues. It serves as a preliminary step towards conducting a full-scale study in indigenous chicken micro-farming. Significantly, this pilot study has provided the researcher with an opportunity to refine interview techniques, improve the interview questions, and enhance the overall study design. The modifications and suggestions incorporated in this study are based on the researcher's first-hand experiences during the interviews.

The findings and insights from this study are expected to offer valuable guidance for further qualitative and preliminary research in the agriculture sector and its subsectors. Additionally, it is recommended to expand the scope of this study by investigating different cultural contexts. Such an extension would provide a broader understanding of indigenous chicken micro-farming and its dynamics, thus contributing to the knowledge base in this field.

5. Funding

We would like to express our gratitude to the Ministry of Higher Education Malaysia (MOHE) to support this study under the Fundamental Research Grant (FRGS) grant [grant number: FRGS/1/2019/SS01/UTP/02/2] and Yayasan Universiti Teknologi Petronas grant [grant number: 015LC0-203].

Acknowledgments

Thank you to Universiti Teknologi PETRONAS for financial support.

References

- [1] Abah HO, Abdu PA, SL. Village Poultry Production Health and Management System in Benue State, Nigeria. *International Journal of Applied Agricultural Sciences*, 2018;4(6):117–122. <https://doi.org/doi:https://doi.org/10.11648/j.ijaas.20180406.11>.
- [2] Asem-Bansah CK, Sakyi-Dawson O, A.-N. E. Marquis, CE. and G. Enhancing backyard poultry enterprise performance in the techiman area: A value chain analysis. *African Journal of Food, Agriculture, Nutrition and Development*. 2012;12(1):5759–5775.
- [3] Mukhtar B, Shad M, Won L, Waqas A, Mukhtar Z. role of green technology innovation to promote sustainability performance in malaysian manufacturing solar pv industry: A conceptual framework. *Platform: A Journal Of Management And Humanities*. 2023;6(1):36-46.
- [4] Bilal Mukhtar, Muhammad Kashif Shad, and L. F. W. (2023). Predicting the Effect of Environment, Social and Governance Practices on Green Innovation: An Artificial Neural Network Approach. Springer Nature Switzerland AG. https://doi.org/https://doi.org/10.1007/978-3-031-16865-9_42
- [5] Mukhtar B, Shad MK, Woon LF, Haider M, Waqas A. Integrating ESG disclosure into the relationship between CSR and green organizational culture toward green

- Innovation. Soc Responsib J. 2023; <https://doi.org/10.1108/SRJ-03-2023-0125>.
- [6] Mukhtar B, Shad MK, Woon LF, Hamad S. Risk management implementation and its efficacy towards green innovation: a conceptual framework for Malaysian solar photovoltaic industry. *Journal of Economic and Administrative Sciences*. Bugge, C., Williams, B., Hagen, S., Logan, J., Glazener, C., Pringle, S., & Sinclair, L. (14 C.E.). A process for decision-making after pilot and feasibility trials (ADePT): development following a feasibility study of a complex intervention for pelvic organ prolapse. *Trials*. 2023;1:353.
- [7] Castillo-Montoya M. Preparing for interview research: the interview protocol refinement framework. *Qual Rep*. 2016;21(5):811–31.
- [8] Masole C, Mphothwe GK. J. C. M. (2015). Value Chain Analysis of Botswana Poultry Industry: The Case of Gaborone, Kgatleng, Kweneng and South East Districts. *Journal of World's Poultry Research*, 5(3), 64–72. <http://jwpr.science-line.com/>
- [9] Cope DG. Conducting pilot and feasibility studies. *Oncol Nurs Forum*. 2015 Mar;42(2):196–7. Available from: <https://doi.org/doi>
- [10] Dobkin BH. Progressive staging of pilot studies to improve Phase III trials for motor interventions. *Neurorehabil Neural Repair*. 2009;23(3):197–206.
- [11] Eldridge SM, Lancaster GA, Campbell MJ, Thabane L, Hopewell S, Coleman CL, Bond C, M. Defining feasibility and pilot studies in preparation for randomised controlled trials: Development of a conceptual framework. *PLoS One*. 2016. <https://doi.org/doi:10.1371/journal.pone.0150205>
- [12] Gitlin LN. Introducing a new intervention: an overview of research phases and common challenges. *American Journal of Occupational Therapy*. 2013;67(2):177–184.
- [13] Abbasi IA, Ashari H, Ariffin AS, Yusuf I. Farm to Fork: Indigenous Chicken Value Chain Modelling Using System Dynamics Approach. *Sustainability (Basel)*. 2023;15(2):1402.
- [14] Abbasi IA, Ashari H, Yusuf I. System Dynamics Modelling: Integrating Empty Fruit Bunch Biomass Logistics to Reduce GHG Emission. *Resources*. 2023;12(4):1–13.
- [15] Abbasi IA, Hasbullah Ashari.; & Ariffin, A.S. (2021). Integrative Literature Review Analysis of Indigenous Chicken Micro-Farming Value Chain:Preliminary Studies Towards Transforming Indigenous Chicken Micro-Farming. IMMS Chengdu, China, 89–95.
- [16] Malmqvist J, Hellberg K, Mo'illa's G, Rose R, Shevlin M. Conducting the Pilot Study: A Neglected Part of the Research Process? Methodological Findings Supporting

- the Importance of Piloting in Qualitative Research Studies. *International Journal of Qualitative Methods*. 2019;18(1):1–11.
- [17] John Cassius Moreki KN. Assessment of management practices of Tswana chickens at North East District of Botswana. *Journal of Animal Science and Veterinary Medicine*. 2016;1(1):29–38.
- [18] Kim Y. The Pilot Study in Qualitative Inquiry Identifying Issues and Learning Lessons for Culturally Competent Research. *Qualitative Social Work*. 2010;10(2):190–206. Available from: <https://doi.org/DOI:10.1177/1473325010362001>
- [19] Lee EC, Whitehead AL, Jacques RM, Julious SA. The statistical interpretation of pilot trials: should significance thresholds be reconsidered? *BMC Medical Research Methodology*. 2014 Mar;14(1):41.
- [20] Lubandi C, Lwasa S, Kugonza DR, Babigumira BM, Semahoro F, Nadiope G. Analysis of the indigenous chicken value chain in Uganda. 3(June 2017), 2018:895–912.
- [21] Miklyaev M, Hashemi M, Schultz M. Cost-Benefit Analysis of Rwanda's Poultry Value Chains. 2017:41.
- [22] Majid MA, Othman M, Mohamad SF, Lim SA, Yusof A; Mohd Aliff Abdul Majid. Piloting for Interviews in Qualitative Research: Operationalization and Lessons Learnt. *International Journal of Academic Research in Business and Social Sciences*. 2017;7(4):1073–1080.
- [23] Moreki JC, Nelson K, Boitumelo W. Assessment of management practices of Tswana chickens at North East District of Botswana. 1(2015); 2016:29–38.
- [24] Ndenga C. Economic Analysis of Consumer Demand for Indigenous Chicken Eggs in Kenya. 2018;9(17):56–61.
- [25] Ndenga C, Bett EK, Kabuage LW. Consumers' preference attributes for indigenous chicken in Kenya. 6(January 2017), 2020:1–11.
- [26] Okeno TO, Kahi AK, Peters KJ. Characterization of indigenous chicken production systems in Kenya. 2012:601–608. <https://doi.org/10.1007/s11250-011-9942-x>
- [27] Orsmond GI, Cohn ES. The distinctive features of a feasibility study: Objectives and guiding questions. *Occupational Therapy Journal of Research*. Advance Online Publication. 2015. <https://doi.org/doi:https://doi.org/10.1177/1539449215578649>.
- [28] Richard Bwalya TK. An Analysis of the Value Chain for Indigenous Chickens in Zambia's Lusaka and Central Provinces. *Journal of Agricultural Studies*. 2014;2(2):32–51. Available from: <https://doi.org/https://doi.org/10.5296/jas.v2i2.5918>
- [29] Ronaldo R. Measuring the performance of poultry business through effective supply chain management skills. *Uncertain Supply Chain Management*. 2020;8:55–66.

- [30] SUNGU LJ. Factors influencing establishment of indigenous chicken Value chain in Hamisi constituency, Vihiga county, Kenya. THE UNIVERSITY OF NAIROBI. 2014.
- [31] van Teijlingen E, Hundley V. The importance of pilot studies. *Nursing Standard*. 2002 Jun;16(40):33–36.