FEASIBILITY STUDY AND THE DEVELOPMENT OF MSME BUSINESS INCUBATOR MOCKUP IN TOBA DISTRICT

a Mutiara Zallya Rizkita, b Palti Marulitua Sitorus, c Khairunnisa, d Andry Alamsyah, e Maman Abdurohman

ABSTRACT

Theoretical Framework: Toba Regency is one of the regions in North Sumatra that has considerable MSME potential. However, there are still many MSMEs that experience difficulties in developing their business due to constraints in capital, infrastructure, and market access. Therefore, it is necessary to have an MSME business incubator that can help develop the business of MSME players. However, before building an MSME business incubator, it is necessary to conduct a feasibility study.

Purposes: This aims to objectively evaluate the potential success of the business incubator development project. This research aims to conduct a feasibility study and the construction of an MSME business incubator mockup in Toba Regency by looking at financial, technical, social, and environmental aspects.

Method: This research uses a qualitative descriptive method with a feasibility study approach and mockup design. Data were collected through literature studies, interviews with relevant stakeholders, and direct observation of the conditions and needs of MSMEs in Toba Regency.

Results: The results showed that the development of MSME business incubators in Toba Regency has great potential and good investment feasibility. In the feasibility study, it was found that MSME business incubators can provide benefits to MSME actors in terms of facilities, training, and market access. Meanwhile, in the financial analysis, it was found that the MSME business incubator development project can generate considerable profits with a payback period of around 5 years. The proposed MSME business incubator mockup design also meets the needs of MSME business development by being equipped with adequate facilities and effective marketing strategies.

Keywords: feasibility study, development, incubator mockup, MSME, toba regency.

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a Graduate Student of Management of Business in Telecommunication and Informatics, School of Economics and Business, Telkom University, Indonesia, E-mail: mutiarazallya@gmail.com, Orcid: https://orcid.org/0009-0006-2829-1809
b Doctoral in Business Management, Lecturer, School of Business, Institut Pertanian Bogor, Indonesia, E-mail: paltisitorus@telkomuniversity.ac.id, Orcid: https://orcid.org/0000-0001-5002-8536
c Master of Financial Management, Lecturer, School of Economics and Business, Universitas Padjadjaran, Indonesia, E-mail: khairunnisa@telkomuniversity.ac.id, Orcid: https://orcid.org/0009-0008-1600-5208
d Doctor of Philosophy, Lecturer, School of Electrical Engineering and Informatics (STEI), Institut Teknologi Bandung, Indonesia, E-mail: andrya@telkomuniversity.ac.id, Orcid: https://orcid.org/0000-0001-5106-7561
e Doctor of Philosophy, Lecturer, Computing Technology/Computer System Technology, Institut Teknologi Bandung, Indonesia, E-mail: abdurohman@telkomuniversity.ac.id, Orcid: https://orcid.org/0000-0002-7321-3440
ESTUDO DE VIABILIDADE E O DESENVOLVIMENTO DE MSME INCUBADORA MOCKUP NO DISTRITO DE TOBA

RESUMO

Estrutura Teórica: A Regência de Toba é uma das regiões do norte de Sumatra que tem um considerável potencial de MSME. No entanto, ainda existem muitas MPME que enfrentam dificuldades no desenvolvimento dos seus negócios devido a restrições de capital, infraestruturas e acesso ao mercado. Por conseguinte, é necessário ter uma incubadora de empresas MSME que possa ajudar a desenvolver o negócio dos intervenientes MPME. No entanto, antes de construir uma incubadora de empresas MSME, é necessário realizar um estudo de viabilidade.

Objetivo: Trata-se de avaliar objetivamente o sucesso potencial do projeto de desenvolvimento de incubadoras de empresas. Esta pesquisa tem como objetivo realizar um estudo de viabilidade e a construção de um modelo de incubadora de empresas MSME na Regência Toba, analisando aspectos financeiros, técnicos, sociais e ambientais.

Método: Esta pesquisa usa um método descritivo qualitativo com uma abordagem de estudo de viabilidade e projeto de maquete. Os dados foram coletados através de estudos de literatura, entrevistas com as partes interessadas relevantes e observação direta das condições e necessidades das MPME na Regência Toba.

Resultados: Os resultados mostraram que o desenvolvimento de incubadoras de empresas MSME na Regência Toba tem grande potencial e boa viabilidade de investimento. No estudo de viabilidade, verificou-se que as incubadoras de empresas MSME podem proporcionar benefícios aos atores MSME em termos de instalações, formação e acesso ao mercado. Enquanto isso, na análise financeira, constatou-se que o projeto de desenvolvimento da incubadora de empresas MSME pode gerar lucros consideráveis com um período de retorno de cerca de 5 anos. O projeto de modelo de incubadora de empresas MSME proposto também atende às necessidades de desenvolvimento de negócios MSME, sendo equipado com instalações adequadas e estratégias de marketing eficazes.

Palavras-chave: estudo de viabilidade, desenvolvimento, incubadora mockup, MSME, toba regency.

1 INTRODUCTION

Toba Regency is one of the regions in North Sumatra that has considerable MSME potential. Toba Regency is located in the Lake Toba area, which is one of the famous tourist attractions in North Sumatra. Lake Toba is the largest volcanic lake in Indonesia and Southeast Asia with an area of around 1,145 km² and a depth of up to 450 meters (Saputra, 2020). Lake Toba is surrounded by hills and mountains that make the scenery very beautiful and attractive to tourists (Soetopo, 2011). In addition, Lake Toba is also
inhabited by the Toba Batak tribe which has a distinctive culture and customs (Lumbanraja, 2022).

Lake Toba is one of the most popular tourist destinations in Indonesia and a source of income for the surrounding communities. Tourists can enjoy beautiful scenery, water sports activities, swimming, sailing, or just relaxing to enjoy the cool air and natural beauty. In addition, around Lake Toba there are also many regional culinary specialties, such as Batak food, which is a special attraction for tourists (Sihombing & Sos, 2021).

The existence of Lake Toba tourism has had a positive impact on the development of the MSME sector in Toba Regency, especially in the fields of handicrafts, culinary, and tourism (Siregar et al., 2018). Micro, small, and medium enterprises (MSMEs) are the main source of growth, innovation, and employment, and have a much greater potential impact in achieving various sustainable development goals compared to their size (Endris et al., 2022). In addition, Toba Regency also has abundant natural resources, such as agricultural and plantation products, which can become raw materials for MSMEs in the area (Kasman, 2020). These factors make Toba Regency one of the regions in North Sumatra that has considerable MSME potential.

Although Toba Regency has great potential for MSMEs, there are still many MSMEs that experience difficulties in developing their businesses due to several factors. The first factor is related to the capital needed to develop a business, which can be an obstacle for many MSMEs due to their limited financial resources (Rianto & Olivia, 2020). The second factor is infrastructure, where the lack of accessibility to business centers or distribution centers can hinder the progress of MSME businesses (Pakpahan, 2021). According to Priyadi & Prasetyo (2018), Business Model Canvas is a strategic mapping tool for business development that describes, designs and focuses on strategic aspects to become a unified business strategy. Finally, market access is also an obstacle due to a lack of knowledge about the market or the absence of connections with potential buyers (Ramdhana & Tanjung, 2021). In fact, according to Tambunan (2019), a lot of literature states that micro, small, and medium enterprises (MSMEs) in developing countries have an important role socially and economically. Therefore, there is a need for an MSME business incubator that can help the business development of MSME players.

An MSME business incubator is an institution or facility that provides a conducive business environment and various resources needed by MSME actors to develop and expand their businesses (Otieno, 2015). Meanwhile, the National Business Incubator
Associations (NBIA) defines business incubators as a business support process that accelerates the successful development of new and emerging companies by providing entrepreneurs with a variety of targeted resources and services (Ogutu and Kihonge, 2016). Business incubators are a very important medium for entrepreneurs, especially for business startups in developing their business or entrepreneurship (Farid et al, 2021). The MSME business incubator itself aims to assist MSMEs in overcoming various obstacles in business development, such as capital problems, limited market access, and lack of managerial skills. In business incubators, MSMEs can get access to funding, business consulting, training and skills development, and access to business networks and markets.

Hewwit et al (2020) explain that the failure of MSMEs is due to the inability of entrepreneurs to deal with the requirements of contextual business complexity associated at various stages of the business. One of the advantages offered by MSME business incubators is the convenience provided by the emergence of technology-based information systems that can increase the amount of income and facilitate business activities (Tricahyono et al., 2018). According to Yuldinawati et al. (2018), the purpose of technopark is to act as an information mediator for academics, business, government, and society, or what is referred to as a university 'bridge' to conduct research. One of the benefits offered by MSME business incubators is the facilities provided. MSME business incubators can provide workspaces equipped with various facilities such as internet, telephones, printers, and other equipment needed by MSME actors to develop their businesses. In the feasibility study, it was found that the presence of these facilities can help MSME actors to focus more on developing their businesses. Thus, MSME business incubators are expected to help MSMEs become more productive, competitive, and sustainable (Lwesya et all, 2021). One of these business incubator models is Mockup.

A business incubator mockup is a model or prototype of a business incubator built with the purpose of showing an overview of the desired design and functionality of the business incubator (Carvalho et al., 2020). The mockup can be a visual representation, a 3D design, or a physical model made to an appropriate scale. The purpose of creating an MSME business incubator mockup is to provide a clear and understandable picture of the business incubator concept to potential investors, stakeholders, or the general public before the actual construction of the business incubator is carried out (Davaris et all, 2013). With the UMKM business incubator mockup, it is expected to make it easier to
get the support and investment needed for the actual construction of the UMKM business incubator.

The development of an MSME business incubator mockup requires a feasibility study. Feasibility studies aim to effectively investigate the potential of the project, as well as evaluate the potential success of the proposed endeavor (Bowen et al., 2009). In a feasibility study, the benefits and cons, environmental effects, resource requirements, and long-term viability of the proposed project are analyzed objectively and reasonably (Suaib et al., 2022). This is done to ensure that the construction of the MSME business incubator mockup has a high potential for success and can provide optimal benefits for MSMEs in Toba Regency.

Based on the background description of the problem, researchers are interested in conducting research with the title "Feasibility Study and Construction of MSME Business Incubator Mockups in Toba Regency". This research aims to conduct a feasibility study and construction of an MSME business incubator mockup in Toba Regency by looking at financial, technical, social, and environmental aspects.

2 RESEARCH METHODS

2.1 TYPE OF RESEARCH

This research uses a qualitative descriptive method with a feasibility study approach and mockup design. According to Mukhtar, (2013) descriptive qualitative research method is a method used by researchers to obtain knowledge or theory about a phenomenon at a certain time. Feasibility studies are conducted by collecting data from related sources and analyzing financial, technical, social, and environmental data. According to Eldridge (2016) a feasibility study asks whether something can be done, should we proceed, and if so, how. The design of the MSME business incubator mockup is done by designing and building a physical model or appearance of the proposed MSME business incubator.

2.2 DATA COLLECTION TECHNIQUES

Data was collected through three techniques, namely literature study, interviews with relevant stakeholders, and direct observation of the conditions and needs of MSMEs in Toba Regency. Literature study was used to obtain information on theories and practices related to business incubators and MSMEs. Interviews with relevant
stakeholders were conducted to obtain information on the needs and challenges faced by MSMEs in Toba Regency as well as the potential for business development in the area. Direct observation was also conducted to obtain information about the condition and potential of MSMEs in Toba Regency directly.

3 DISCUSSION

Feasibility Study is the initial stage in the construction of the MSME Business Incubator Mockup in Toba Regency. This process is carried out to evaluate and determine whether the project is feasible or not (Shehada et al., 2020). Feasibility Study has an important role in a development because it can help evaluate the feasibility of a project before it is carried out. In a Feasibility Study, technical, financial, and market aspects related to a development project are analyzed. Thus, Feasibility Study can provide valuable information for investors, project owners, and decision makers in determining whether the project is feasible to continue or not (Tjiptono & Chandra, 2019). The following are some steps in the Feasibility Study process in the construction of the MSME Business Incubator Mockup in Toba Regency (Sobana, 2018):

1. Market study

The first step in the Feasibility Study process is to conduct a market study. It aims to find out if there is a sizable demand for business incubator services in the Toba District region, as well as study the market profile such as existing MSME businesses, their needs, and market competition.

2. Technical analysis

The next step was to conduct a technical analysis of the project. This includes determining the size and location of the building, the equipment required, and the estimated operating costs. At this stage, it is necessary to assess technical aspects such as the availability of electricity, internet access, clean water and so on.

3. Financial analysis

Next, a financial analysis is conducted which aims to assess the finances of the company as a whole.

4. Management and organization analysis

At this stage, it is necessary to analyze the management and organizational structure that will be implemented in this project. This includes determining the board, the employees needed, and the management system to be implemented.
5. Risk analysis

The final step in the Feasibility Study process is to conduct a risk analysis of this project. This aims to identify potential risks that may occur during the construction and operation of the MSME business incubator in Toba Regency. In this analysis, risk mitigation needs to be carried out so that the impact of risks on the sustainability of the business incubator can be minimized.

After the Feasibility Study stage is completed, the results of the evaluation and assessment of the feasibility of building an MSME Business Incubator Mockup in Toba Regency can be used as a basis for determining whether the project can be continued or not (Wuest et al, 2015).

3.1 RESULTS OF FEASIBILITY STUDY ON THE CONSTRUCTION OF MSME BUSINESS INCUBATOR MOCKUP IN TOBA REGENCY

3.1.1 Market study

The market study in the feasibility study of the Business Incubator Mockup development is carried out to determine the market potential and business opportunities that exist in the region. This study includes an analysis of market needs, consumer behavior, competitors, and other external factors that can affect the MSME incubator business in the region (Tripathi et al, 2019). The results of the market study show that Toba Regency has great potential for the development of MSME incubator businesses. This is due to the high number of MSME players in the region, but the lack of access to capital and adequate business support. In addition, Toba Regency also has high tourism potential that can provide new business opportunities for MSME players.

In addition, the results of the market study also show that consumers in Toba Regency tend to choose local products and try to support MSMEs in the region. This is a potential for MSME business incubators to be able to facilitate and promote local products more effectively. From the results of this market analysis, it can be concluded that the construction of the MSME Business Incubator Mockup in Toba Regency has great market potential and can provide benefits for the development of MSMEs in the region.

3.1.2 Technical analysis

The technical analysis in the feasibility study of the construction of the MSME Business Incubator Mockup in Toba Regency refers to the evaluation of the technical
capabilities of the project, such as the ability to meet technical requirements, the resources required, and the estimated costs to build and operate the project. According to Arias et al. (2021) technical analysis is an assessment of the technical and operational aspects of a project. The aim is to ensure that the project can be implemented properly and achieve the desired goals. Technical analysis includes an assessment of the technology used, system design, specifications of materials and resources needed, and cost estimates.

The results of the technical analysis of the feasibility study for the construction of the MSME Business Incubator Mockup in Toba Regency show that this project is feasible. In this analysis, the size and location of the building, the equipment required, and the estimated operational costs were determined. First of all, the size of the MSME business incubator building in Toba Regency is determined based on the number of rooms needed to accommodate the MSME players who join it. After a survey, it was found that the number of MSME players who want to join this business incubator is quite large. Therefore, a building with a large enough size is needed so that it can accommodate all these MSME players.

The location of the building has also been determined through a study of technical aspects such as accessibility, electricity availability, internet access, clean water, and so on. In this analysis, it was found that the right location to build an MSME business incubator is in the city center of Toba Regency, because this location is easily accessible to MSME actors and has adequate facilities such as stable electricity and internet access. In addition, the technical analysis has also determined the equipment needed in the operation of the MSME business incubator, such as computers, printers, business software, and so on. The equipment was selected based on the needs and budget available for this project.

In determining the estimated operational costs, estimates have been made of the various costs required, such as electricity costs, internet costs, water costs, building rental costs, equipment maintenance costs, and so on (Sayadi et al., 2012). In this analysis, it was found that the MSME business incubator development project can generate considerable profits with a payback period of around 5 years.

3.1.3 Financial analysis

Then is financial analysis, according to (Purwana & Hidayat, 2016) financial aspects are aspects used to assess finances in the company as a whole. The purpose of
financial analysis is to evaluate the financial performance of a company or project by analyzing financial statements and other related financial factors, such as cash flow, investment, and risk (Brigham & Houston, 2019). There are several approaches that can be taken to assess company finances, namely through the Net Present Value (NPV) and Payback Period (PP) approaches (Purwana & Hidayat, 2016).

1. **Net Present Value (NPV)**

   NPV is an analysis used to measure the feasibility of a business by calculating the difference between cash inflows and outflows over a certain period of time. The formula of NPV:

   \[
   NPV = -A_0 + \sum_{t=1}^{n} \frac{A_t}{(1 + r)^t}
   \]

   **Description:**

   \(A_0\) = Year-0 investment expenditure  
   \(A_t\) = Net cash inflow in year \(t\)  
   \(r\) = The rate of return required by the owner of capital with taking into account business risk  
   \(n\) = Number of years

2. **Payback Period (PP)**

   PP is a method of evaluating the period of return on capitalization of a project or business. This calculation can be seen from the calculation of net cash obtained every year. The formula of PP:

   Payback Period (PP) = Investment: Net Cash/year

   In this case, it was found that the results of the feasibility study of the MSME business incubator development project in Toba Regency can generate considerable profits, which means that the investment can be considered. The payback period found is about 5 years, which means that the time required to get back the investment capital is about 5 years.
3.1.4 Management and organizational analysis

Management and organizational analysis is a process of evaluating and changing the structure, behavior, and performance of an organization Robbins & Coulter (2014). At this stage, it is necessary to determine a clear and well-defined organizational structure, including who will be the director, operational manager, financial manager, and other employees. The duties and responsibilities of each position need to be determined to avoid overlapping work. Next, the management system that will be applied to the business incubator is analyzed, such as the financial management system, marketing, human resource management, and business services offered to MSME players. In the overall results of the management and organizational analysis, it was found that the management, employees, and management system were well-defined and able to carry out business functions and services well. Therefore, it can be concluded that this feasibility study is feasible and can provide significant benefits for the development of MSMEs in Toba Regency.

3.1.5 Risk analysis

Risk analysis is very important in a feasibility study, including in the construction of the MSME Business Incubator Mockup in Toba Regency. Risk analysis is a technique for identifying and evaluating the likelihood of risks and their impact on a project or business activity. Risk analysis helps decision makers to take appropriate action to reduce or avoid these risks (Hubbard, 2009).

At the risk analysis stage, it is necessary to identify and evaluate potential risks that may occur during the construction and operation of the MSME business incubator in Toba Regency. Some potential risks that may occur are security risks, financial risks, technical risks, environmental risks, human resource availability risks, and regulatory risks (Aernoudt, 2005). To reduce these potential risks, appropriate mitigation measures need to be taken.

For example, to reduce security risks, it is necessary to increase security around the business incubator location, such as installing CCTV and sufficient security. To reduce financial risk, it is necessary to conduct a thorough financial planning and proper financial management during business incubator operations. To reduce technical risk, it is necessary to plan and select appropriate and tested equipment and infrastructure, as well as strict supervision during construction and operation. Meanwhile, to reduce
environmental risks, proper and environmentally friendly waste management needs to be carried out.

In addition, it is necessary to increase the availability of qualified and adequate human resources and adjust to applicable rules and regulations. By conducting proper risk identification and evaluation and taking appropriate mitigation steps, it can prove that the feasibility study of the construction of the MSME Business Incubator Mockup in Toba Regency is feasible to carry out and can provide benefits to MSME actors in the area.

3.2 CONSTRUCTION OF MSME BUSINESS INCUBATOR MOCKUP IN TOBA REGENCY

The design of the Toba Regency MSME business incubator mockup is designed in such a way as to meet the needs of MSME business development in the area. Some of the facilities provided include:

1. Workspace

The workspace is designed to provide comfort and productivity for MSME entrepreneurs. This facility is equipped with tables, chairs, and stable internet access.

2. Meeting room

Meeting rooms are designed for meetings between MSME entrepreneurs and investors or potential customers. The room is equipped with presentation equipment such as a projector, screen, and sound system.

3. Training room

The training room is designed to provide training to MSME entrepreneurs in various fields such as business management, marketing, finance, and technology.

4. Creative space

The creative space is designed to give MSME entrepreneurs a place to create and innovate. The facility is equipped with equipment and materials to create new products.

5. Support facilities

Other supporting facilities such as canteens, toilets, and parking are also provided to meet the needs of MSME entrepreneurs visiting the business incubator.

In addition, the design of the proposed Toba Regency MSME business incubator mockup is also complemented by an effective marketing strategy. According to (Kotler & Keller, 2016), an effective marketing strategy involves a good understanding of market needs and wants, as well as the ability to create value for customers in a unique and
che competitive way. One of the marketing strategies used is branding and promotion through social media and websites. Thus, the MSME business incubator in Toba Regency can be widely recognized by MSME entrepreneurs throughout Indonesia and even the world. It is hoped that with complete facilities and marketing strategies, MSME entrepreneurs in Toba Regency can more easily develop their businesses and contribute to the regional economy.

4 CONCLUSION

Toba Regency has great MSME potential, but many MSMEs have difficulties in developing their businesses due to capital, infrastructure, and market access factors. Therefore, an MSME business incubator is needed to assist the business development of MSME players. Before undertaking the construction of an MSME business incubator, it is necessary to conduct a feasibility study. The feasibility study shows that the development of MSME business incubators in Toba Regency has great potential and good investment feasibility. In the feasibility study, it was found that MSME business incubators can provide benefits to MSME players in terms of facilities, training, and market access. The financial analysis shows that the MSME business incubator development project can generate considerable profits with a payback period of around 5 years. The proposed MSME business incubator mockup design also meets the needs of MSME business development by being equipped with adequate facilities and effective marketing strategies.

SUGGESTION

The following are some suggestions for further research related to the feasibility study and the construction of the UMKM business incubator mockup in Toba Regency:

1. Evaluate the effectiveness and impact of MSME business incubators after they are built. By conducting an evaluation, it will be known whether the MSME business incubator really provides benefits to MSME actors and is able to improve the overall welfare of the Toba Regency community.

2. Conduct research on technology development and innovation for MSMEs in Toba Regency. In today's digital era, technology and innovation are very important to improve the competitiveness of MSME products. Therefore, it is necessary to conduct more in-
depth research on technology development and innovation that can help MSME players in Toba Regency improve the quality of their products.

3. Conduct research on more effective marketing strategies for MSME products in Toba Regency. Proper marketing can help MSME products gain a wider market and increase their competitiveness. Therefore, it is necessary to conduct research on appropriate marketing strategies for MSME products in Toba Regency.
REFERENCES


Feasibility Study and the Development of MSME Business Incubator Mockup in Toba District


