Business Incubation Strategy of Information Technology in Stimulating Innovation and Supporting SME Growth in the Community Environment

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1. INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) have established their position as a fundamental pillar in the economic structure of many countries, including Indonesia (Ausat & Suherlan, 2021). The contribution of MSMEs is not only limited to job creation, but also plays an essential role in efforts to increase economic inclusion and reduce socio-economic disparities that exist in society (Subagja et al., 2022). With their small-scale operational characteristics and ability to adapt to local market needs, MSMEs are often regarded as catalysts that drive resilient economic growth, making them an important element in the roadmap for sustainable economic development.

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While recognised as having considerable potential, MSMEs often face significant challenges related to access to adequate resources, cutting-edge technology, and open markets. In today's advanced digital era, the adoption of information technology is key in dealing with the various changes and opportunities that arise (Kamar et al., 2022). However, the digital divide that still exists between MSMEs that are able to optimally utilise information technology and those that are not, is still a major obstacle in efforts to improve the overall competitiveness and growth of MSMEs. In this context, integrated collaborative efforts between the private sector, government, and non-government agencies are needed to overcome these barriers and ensure that MSMEs can fully utilise the potential of information technology for their advancement.

The development of Information Technology has reinforced its crucial role in undergoing business transformation in various sectors of the economy (Sutrisno, Ausat, et al., 2023). Well-planned and effective utilisation of information technology has great potential to make significant contributions to MSMEs, ranging from improving operational efficiency, expanding market reach, to enhancing more personalised interactions with customers. However, in implementing information technology, MSMEs are faced with various complexities and challenges that require in-depth understanding and appropriate guidance to optimise its benefits (Arjang et al., 2023). Structured and continuous support in terms of training, access to technology infrastructure, and understanding of business needs are key elements that must be carefully considered to ensure that MSMEs can make the best use of information technology in responding to increasingly dynamic market demands.

The business incubator approach has proven to be an effective method of providing support for MSME development. Through incubators, MSMEs can gain an environment specifically designed to support growth and innovation, which includes not only access to the necessary infrastructure, but also to qualified human resources and extensive business networks (Theodorakopoulos et al., 2014). Nonetheless, developing incubation strategies geared specifically towards MSMEs in the information technology sector remains a challenge. It requires a targeted approach that is based on the specific needs of MSMEs in the sector, as well as ongoing adjustments to address the changing market dynamics and technological developments. Sustainability and strategic adaptation are thus key in ensuring that business incubators can make a significant impact in supporting the growth and sustainability of MSMEs in this digital era.

Therefore, this study aims to identify and analyse business incubation strategies that are effective in stimulating innovation and supporting the growth of MSMEs in the information technology sector. With a better understanding of the factors that influence the success of business incubation in the context of IT MSMEs, it is hoped that this research can provide valuable insights for stakeholders in designing more effective policies and programmes to support the growth of MSMEs and strengthen the business ecosystem in society as a whole.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Business Incubation

Business incubation is a mentoring process aimed at assisting the development and growth of new businesses or startups (Annas & Meilinda, 2023). Typically, business incubation is carried out by institutions or organizations that have the experience and adequate resources to provide guidance to entrepreneurs or business owners who are just starting out. The main goal of business incubation is to enhance the chances of success for new businesses by providing access to the necessary resources, networks, and knowledge. The process of business incubation often involves various activities, such as business counseling, training, mentoring, access to physical facilities (such as coworking spaces), access to business networks and investors, as well as assistance in developing business plans and marketing strategies (Jones et al., 2021). Business incubators also typically provide an environment that supports collaboration among entrepreneurs and the exchange of ideas. Business incubation can take place over varying periods, ranging from a few months to several years, depending on the needs and development of the businesses being incubated. During the incubation period, business owners are provided with ongoing support to help them overcome challenges they face in developing their ventures, such as financial issues, management, marketing, and product or service development. The success of business incubation is often measured based on the level of growth and sustainability of the businesses incubated after they exit the incubation program (Ssekiziyivu & Banyenzaki, 2021). Overall, business incubation plays a vital role in supporting the entrepreneurial ecosystem by creating a conducive environment for innovation, growth, and the creation of new job opportunities.
Information Technology (IT)
Information Technology (IT) is a term that refers to the use of technology in the collection, processing, storage, and dissemination of information (Manda HM & Abidin, 2023). It encompasses various hardware and software used to manage and transfer data, as well as the infrastructure and networks that support communication and information exchange (Kraugusteeliana, 2023). The main components of Information Technology include: 1. Hardware: This includes computers, servers, data storage devices, communication networks, and other hardware used to process and store information. 2. Software: These are computer programs used to manage, analyze, and manipulate data. This includes operating systems, business applications, word processing software, spreadsheets, databases, and more. 3. Network Infrastructure: This is the communication network that connects various hardware and software, both locally and over the internet. It includes cables, routers, switches, firewalls, and other infrastructure needed to transfer data between devices. 4. Human Resources: Information Technology also involves the use of trained personnel to manage and utilize technology effectively. This includes IT professionals who develop, implement, and maintain IT systems, as well as end-users who use the technology to carry out business operations and daily activities. Information Technology plays a crucial role in various aspects of modern life, including business, education, healthcare, communication, entertainment, and more. With rapid advancements in information technology, new breakthroughs continue to emerge, creating new opportunities for innovation and improving efficiency in various sectors of life (Rijal & Saranani, 2023).

Innovation
Innovation refers to the process of creating or introducing something new or different that adds value or benefit (Muhamad et al., 2023). It involves the development and implementation of new ideas, products, services, processes, or business models that result in positive changes in various aspects of human life (Sutrisno, Kuraesin, et al., 2023). There are several types of innovation, including: 1. Product Innovation: This occurs when new products or significant enhancements are made to existing products. Product innovation may involve changes in design, additional features, or new technologies that make the product more effective, efficient, or appealing to consumers. 2. Service Innovation: This involves the development of new services or improvements to existing services. Service innovation may include changes in how services are delivered, the use of technology to improve accessibility or quality of service, or the introduction of entirely new services to meet evolving market needs. 3. Process Innovation: This occurs when there are changes in the way work is done or production processes that result in efficiency, cost savings, or improved quality. Process innovation often aims to increase productivity, reduce cycle times, or eliminate bottlenecks in business operations. 4. Business Model Innovation: This involves changes in how an organization generates revenue, delivers value to customers, or operates its business. Business model innovation may include the introduction of new sales models, different pricing strategies, or the use of technology to create new platforms for value exchange. Innovation is a key driver of economic growth, business competition, and improved quality of life. Organizations or individuals who can innovate continuously have a competitive advantage in a constantly changing market (Wanof, 2023). Therefore, innovation is often a primary focus for companies, governments, and other institutions seeking to enhance competitiveness and meet evolving needs in society.

MSMEs
MSMEs refer to the sector of businesses that consist of enterprises with relatively small operational scales, in terms of the number of employees, turnover, and assets owned (Sutrisno, 2023). Here is a more detailed explanation of MSMEs: 1. Micro Enterprises (ME): Micro-enterprises are businesses with very small operational scales, typically with fewer than 10 employees. These businesses are often started by individuals or small groups, and they often operate at the local or regional level. Examples of micro-enterprises include small shops, tailors, cooks, or street food vendors. 2. Small Enterprises (SE): Small enterprises have slightly larger operational scales than micro-enterprises, with the number of employees usually between 10 and 50 people. Although still relatively small, small enterprises typically have higher turnover and assets than micro-enterprises. Examples of small enterprises include grocery stores, motorcycle repair shops, or small service companies. 3. Medium Enterprises (ME): Medium enterprises have larger operational scales than micro and small enterprises, with the number of employees usually between 50 and 500 people. Medium enterprises often have significant turnover and assets, and they may already have a broader market reach. Exam-
The community environment refers to the social, cultural, economic, and political context in which individuals or groups live and interact (Wang et al., 2023). It includes various factors that influence daily life, values, norms, and behaviors within a community or society (Adhiarso et al., 2019). Here is a further explanation of the community environment:

1. Social Aspect: The social aspect of the community environment involves interactions among individuals, groups, and institutions within society. This includes interpersonal relationships, social structures, cultural values, and ethnic, religious, or gender identities. The social aspect forms the basis for norms, traditions, and social norms that govern behavior and interactions in society.

2. Cultural Aspect: The cultural aspect of the community environment refers to the cultural heritage and traditions held by a community. This includes language, customs, arts, music, food, religion, and religious practices that shape the cultural identity of a society. Culture plays a significant role in shaping values and norms upheld by members of society.

3. Economic Aspect: The economic aspect of the community environment involves the economic structure, wealth distribution, job opportunities, and access to economic resources. This includes unemployment rates, poverty, economic inequality, as well as opportunities for education and improving economic well-being. The economic aspect greatly influences individuals' ability to achieve a decent living and fulfill their potential.

4. Political Aspect: The political aspect of the community environment includes the political structure, governance system, decision-making processes, and political participation within a country or region. This includes freedom of speech, human rights, social justice, as well as power and distribution of power within society. The political aspect plays a crucial role in determining the quality of democracy and the balance of power within a country. A deep understanding of the community environment is essential for designing policies, programs, and interventions that effectively promote welfare and sustainable development within a society.

### 3. RESEARCH METHOD

This research employs a literature review method to compile a comprehensive understanding of the topic "Business Incubation Strategies in Stimulating Innovation and Supporting the Growth of MSMEs in the Community Environment." A literature review approach is used to gather, evaluate, and synthesize recent literature and research relevant to this topic. Data for this literature review is obtained from Google Scholar with a timeframe ranging from 1994 to 2023. Google Scholar is chosen as the primary data source because the platform provides access to various articles, journals, theses, and scholarly publications across various fields, including business management, information technology, and MSME development. In data retrieval, this research utilizes strict selection criteria to ensure the relevance and quality of the sources used. Articles and publications considered must have direct relevance to the research topic, make significant contributions to understanding business incubation strategies in information technology, and provide valuable insights into the growth of MSMEs in the community environment. Data obtained from Google Scholar is then critically analyzed to identify patterns, trends, and significant findings in the relevant literature. The analysis process involves thorough reading of each source, gathering essential information, and synthesizing significant findings to strengthen arguments and conclusions in this research. While Google Scholar is a vast and diverse data source, this research may be limited to the availability of literature indexed within this platform. Some publications may not be covered within the scope of Google Scholar, which may limit the completeness and representation of this literature review. By employing a literature review method and gathering data from Google Scholar spanning from 1994 to 2023, this research aims to provide an in-depth understanding of business incubation strategies in information technology and their impact on the growth of MSMEs in the community environment.

### 4. DATA ANALYSIS AND DISCUSSION
In the rapidly evolving digital era, information technology has become an indispensable foundation for the advancement of a number of sectors, including Micro, Small and Medium Enterprises (MSMEs). In this situation, the implementation of information technology business incubation strategies plays a central role in fostering innovation and providing vital support for the growth of MSMEs in various community settings.

One aspect that is the main focus of the incubation strategy is to create a conducive environment for MSME entrepreneurs to easily access and adopt information technology. In this context, it is essential to provide not only easy but also affordable access to technology infrastructure, including high-speed internet connection facilities and the necessary hardware. In addition, an inclusive approach that accommodates the various needs and technological skill levels of MSME players is crucial in the overall strategy (Loo et al., 2023). This approach can be realised through the provision of tailor-made training, ongoing technical support, and through various business coaching programmes focused on the optimal use of information technology.

In addition to facilitating access, the incubation strategy should uphold the promotion of collaboration between Micro, Small and Medium Enterprises (MSMEs) and other stakeholders in the information technology ecosystem. This includes the active participation of entities such as technology companies, higher education institutions, government, and non-profit organisations in providing MSMEs with direction, resources, and opportunities to develop and implement innovative solutions (Ridwan Maksum et al., 2020). Such collaborative engagement has the potential to generate mutually beneficial synergies, where MSMEs will benefit from a wider wealth of knowledge and experience in the information technology domain, while other stakeholders will also be stimulated by the contributions and evolving market needs of MSMEs.

In the context of IT business incubation strategies, it is important to prioritise community-based approaches. This includes efforts in establishing networks and communities that aim to facilitate the exchange of knowledge, experience and resources between Micro, Small and Medium Enterprises (MSMEs) and other stakeholders in the industry. Such communities can serve as platforms that enable productive collaboration, shared learning, and mutual support in facing challenges and capitalising on opportunities that arise in the information technology domain (Anders, 2016). Thus, a community-based approach not only strengthens connectivity between actors in the business ecosystem, but also provides a solid foundation for sustainable growth and innovation in the MSME sector.

Not only important, but essential, information technology business incubation strategies must take into account the dimensions of sustainability in three interrelated aspects: economic, environmental and social. Sustainability in this context refers to ensuring that the adoption of information technology does not only provide temporary economic benefits for Micro, Small and Medium Enterprises (MSMEs), but also has a sustainable impact over time (Martínez-Peláez et al., 2023). Achieving this requires developing environmentally-friendly technology solutions, implementing sustainable business models, and emphasising the principles of social justice and inclusion in every aspect of the strategy. By adopting a holistic approach to sustainability, incubation strategies can provide a solid foundation for sustainable economic growth, environmental conservation, and greater social inclusion in the context of MSMEs.

By applying a holistic and sustainable approach to information technology business incubation as described earlier, it is expected to trigger innovation and provide strong support for the growth of Micro, Small and Medium Enterprises (MSMEs) in the community. More than just improving the competitiveness of MSMEs in the adoption of information technology, this approach has the potential to generate positive impacts in various sectors, both economically, environmentally, and socially. Through the integration of strategies that cover aspects such as the development of environmentally friendly technology solutions, the establishment of sustainable business models, and the application of social justice and inclusion principles, business incubation can become a driving force for sustainable economic transformation, environmental preservation, and overall community empowerment (Elkington, 1994). As such, this holistic approach has the potential to create a far-reaching ripple effect in improving welfare and sustainability for society as a whole.

In continuing the implementation of the information technology business incubation strategy, several concrete steps can be taken to optimise its impact in stimulating innovation and supporting the growth of MSMEs in the community.

1. Establishment of Information Technology Incubation Centres: Incubation centres can serve as development and knowledge-sharing centres and resources for MSMEs in implementing information technology. The centre can provide the necessary facilities, training and technical
guidance to help MSMEs develop and implement information technology solutions that suit their needs.

2. Training and Skills Development: Training and skills development programmes in information technology should be held regularly. These trainings can cover a wide range of topics, from the basics of software usage to the latest technologies such as artificial intelligence and cloud computing. The goal is to improve the digital literacy and technical skills of MSMEs so that they can more effectively utilise information technology in their business operations.

3. Provision of Access to Financial Resources: One of the main barriers for SMEs in adopting information technology is the lack of financial resources. Therefore, incubation strategies should encompass financial support programs such as business loans, technology grants, or venture capital investments for SMEs looking to develop or upgrade their technological infrastructure.

4. Development of Community-Based Solutions: Involving local communities in the development of information technology solutions can enhance the relevance and acceptance of these solutions at the local level. This can be achieved through open consultations, discussion groups, or collaborative projects involving SMEs, technology developers, and other community members.

5. Measurement and Performance Evaluation: It is important to continuously monitor and evaluate the performance of information technology business incubation strategies to ensure that the set objectives are achieved. This involves collecting and analyzing data on technology adoption, business growth, and the socio-economic impact of information technology implementation by SMEs.

6. Development of Supportive Policy Frameworks: Governments and relevant institutions should collaborate to develop policy frameworks that support SME growth through the adoption of information technology. This may include fiscal incentives, deregulation, or the development of digital infrastructure that facilitates SME access to information technology.

By implementing this series of strategic steps, information technology business incubation strategies can play a crucial role as a primary driver in stimulating innovation and providing strong support for the growth of Micro, Small, and Medium Enterprises (MSMEs) in the community. Thus, the hope is to create a business ecosystem that is not only more dynamic but also more inclusive and sustainable in this ever-evolving digital era. With a planned and sustainability-oriented approach, business incubation has the potential to facilitate the creation of a business environment that is innovation-friendly, allowing MSMEs to thrive and compete effectively in an increasingly global and competitive market. Therefore, these steps will not only strengthen the position of MSMEs in the market but also enrich the overall business ecosystem with their innovative and sustainable contributions.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS
The business incubation strategy of information technology holds great potential in stimulating innovation and supporting the growth of Micro, Small, and Medium Enterprises (MSMEs) in the community environment. By providing access, training, collaboration, and appropriate financial support, MSMEs can effectively leverage information technology to enhance their competitiveness and productivity. The implementation of the business incubation strategy of information technology has several important implications. Firstly, it can enhance digital inclusion and technology literacy among MSMEs. Secondly, it can foster the creation of a collaborative ecosystem involving various stakeholders, including technology companies, government, universities, and local communities. Thirdly, it can contribute to the growth of the local economy through increased productivity and innovation among MSMEs.

To successfully implement the business incubation strategy of information technology, several recommendations can be made. Firstly, there needs to be cooperation among various stakeholders to provide the necessary infrastructure, training, and financial support. Secondly, continuous evaluation and monitoring of the incubation strategy’s performance are essential to adjust and improve its effectiveness. Thirdly, attention must be paid to sustainability aspects, including economic, environmental, and social factors, in designing and implementing the incubation strategy. Despite its significant potential, the business incubation strategy of information technology also faces some limitations. Firstly, access to information technology may be limited in underdeveloped or marginalized areas. Secondly, MSMEs may encounter barriers in adopting new technologies due to human resource limitations or inability to bear initial investment costs. Thirdly, the
incubation strategy is vulnerable to political challenges, regulations, or unforeseen economic conditions. Recognizing these limitations, strategic steps can be taken to overcome or minimize their impact in the implementation of the business incubation strategy of information technology.

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