

**THE USE OF DIGITAL TECHNOLOGY BY INDONESIAN  
SMES IN THE DIGITAL ECONOMY**

**THESIS**



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**CONSENT PAGE**

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**ABSTRAK**

Dalam beberapa tahun terakhir, penggunaan teknologi digital semakin lazim di kalangan perusahaan dan UMKM Indonesia, sehingga memungkinkan mereka beroperasi secara global, meningkatkan efisiensi operasional, dan meningkatkan keterlibatan pelanggan. Pergeseran ini didorong oleh faktor-faktor seperti penetrasi internet, popularitas e-commerce, dan alat digital yang terjangkau. Ekonomi digital telah berkembang, memungkinkan UMKM untuk mempromosikan produk dan layanan mereka melalui platform online. Penerapan platform digital telah mengubah operasional bisnis dan berkontribusi terhadap pertumbuhan ekonomi digital Indonesia. Namun, tantangan seperti kesenjangan keterampilan digital, masalah keamanan siber, dan keterbatasan infrastruktur perlu diatasi demi pertumbuhan berkelanjutan platform digital bagi UKM di Indonesia.

Penelitian ini bertujuan untuk menggunakan data sekunder dari Global Entrepreneurship Monitor (GEM) untuk memberikan pemahaman tentang hubungan kewirausahaan dan pembangunan ekonomi nasional. GEM menyediakan sumber data tentang sikap terhadap kewirausahaan, kegiatan usaha yang baru didirikan dan didirikan, serta aspirasi pengusaha terhadap usahanya. Pendekatan kuantitatif akan digunakan untuk menganalisis data ini dan mengkaji dampak adaptasi teknologi oleh UKM Indonesia, menjajaki peluang dan kontribusinya terhadap ekonomi digital. Data akan dievaluasi menggunakan perangkat lunak SPSS V.26 dan AMOS V.26 untuk akurasi dan pemahaman yang lebih baik.

**Kata Kunci:** Indonesia; Usaha Kecil dan Menengah (UMKM); Ekonomi Digital, Platform teknologi digital.

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**ABSTRACT**

In recent years, the use of digital technology has become increasingly prevalent among Indonesian companies and SMEs, enabling them to operate globally, improve operational efficiency, and enhance customer engagement. This shift is driven by factors like internet penetration, e-commerce popularity, and affordable digital tools. The digital economy has expanded, allowing SMEs to promote their products and services through online platforms. The adoption of digital platforms has transformed business operations and contributed to the growth of Indonesia's digital economy. However, challenges like digital skills gaps, fear of technological adaptation failure, and infrastructure limitations need to be addressed for the sustainable growth of digital platforms for Indonesian SMEs.

This research study aims to use secondary data from the Global Entrepreneurship Monitor (GEM) to provide an understanding of the relationship between entrepreneurship and national economic development. GEM provides a source of data on attitudes towards entrepreneurship, start-up and established business activities, and entrepreneurs' aspirations for their businesses. A quantitative approach will be used to analyze this data and examine the impact of technological adaptation by Indonesian SMEs, exploring opportunities and their contribution to the digital economy. Data will be evaluated using SPSS V.26 and AMOS V.26 software for greater accuracy and understanding.

**Keywords:** Indonesia; Small and Medium Enterprises (SMEs); Digital Economy, Digital technology platforms

## FOREWORD

Indonesia is among the countries that recognize the power of digital transformation and its role in the growth of the country's digital economy, which is a very important factor for inclusive growth in the coming years. Medium and small enterprises (SMEs) are also an integral part of the Indonesian economy with their contribution to job creation and the country's GDP. The digitalization of these SMEs could make a significant contribution to the development of Indonesia's digital economy.

This brought interest to the author, who is from a country amid economic development based on digitalization and wrote the thesis report entitled "The Use of digital technology by Indonesian SMEs in the digital economy". Aside from the author of this thesis report, during its preparation, a lot of experience, help, and support were gained from various parties. Therefore, the author would like to express his sincere thanks on this occasion:

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Nijimbere Alain Desire

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# CHAPTER I: INTRODUCTION

In recent years, digital transformation has contributed to the evolution and growth of technology, particularly in information and communication technologies, where there is an increase in the use of the Internet and mobile applications in all sectors of economic activity.

After the COVID-19 pandemic, most companies started digitizing their operations online due to distancing hygiene measures. Indonesian small and medium-sized enterprises (SMEs) have started using digital platforms for online e-commerce and participate in the countrys economy by contributing to job creation and economic growth.

This research aims to study the use of digital technology platforms by Indonesian SMEs in the digital economy, highlighting their advantages and challenges and exploring potential opportunities for future growth.

## 1.1 Background of the study

According to Bank Indonesias review, Indonesias small and medium -sized enterprises (SMEs) play a strategic role as the backbone of the Indonesian economy, based on data released by the Ministry of Finance in March 2021. MSMEs totaled 64.2 million units, contributing over 61% of the gross domestic product (GDP), absorbing 97% of the workforce, and attracting up to 60% of total investments in Indonesia (Hermawan, 2022). This has made the digitalization of SMEs an area of study that has become increasingly crucial with the increasing penetration of the Internet and smartphone applications, opening up more opportunities for SMEs by allowing them to take advantage of digital platforms.

Negara and Sugiana (2022) report on the state of Indonesias digital economy 2022 states that the COVID-19 pandemic has accelerated the growth of Indonesias digital economy, attributed to a substantial young population that is digitally savvy; the high mobile penetration facilitates the frequent use of e-commerce and social media sites to buy and sell products and services; the growing popularity of digital payments is also correlated with the increase in online consumption; and the government has introduced supportive policies to boost the digital economy, accompanied by improvements in the digital infrastructure. In Indonesia, five main sectors drive the countrys digital economys growth: e -commerce, financial services, online travel, online media, transportation and food. E-commerce has become a crucial part of the digital economy, as 88% of internet users, especially SME owners, have adopted it due to the pandemic.

Containment measures have accelerated online work, learning, entertainment, gaming, and communication platforms. There is also a sizable portion of the unbanked population with low income, and 65% of e-commerce users prefer e-wallets, with 90% of transactions being less than Rp 500,000, contributing to the increase in the adoption of financial technologies. The digital economy continues to attract new consumers, merchants, and startups post-pandemic, with contactless payment becoming increasingly prevalent with popular e-wallet platforms such as GoPay, GrabPay, OVO, and ShopeePay, which continue to attract low-income groups. Meanwhile, food delivery continues to grow, with 69% of users ordering food online using an e-wallet and paying on delivery (COD).

The authors conclude that the rise of digital technology and market consolidation will lead to increased competition and potential bankruptcies for some companies because of the high fixed costs and thin margins created by the high cost of the innovation phase (testing and errors) before offering the digital technology platform to quickly increase their business volume in order to benefit from economies of scale. The company must adapt to a changing regulatory environment and invest in cybersecurity, consumer data protection and cloud systems. The Indonesian government should focus on improving digital infrastructure to support the growth of its digital economy, promote digital literacy and ensure protection against cyberattacks. It is also crucial to expand online services to remote areas and focus on cloud computing.

Furthermore, the Global Entrepreneurship Monitor (GEM) data refers to a comprehensive dataset collected through the Global Entrepreneurship Monitor project, which is an annual assessment of the entrepreneurial activity, aspirations, and attitudes of individuals across various countries. The GEM dataset includes information gathered from the Adult Population Survey (APS) and the National Expert Survey (NES), providing insights into different aspects of entrepreneurship within a specific country or region.

In Indonesia, the Global Entrepreneurship Monitor data offers valuable information on various aspects related to entrepreneurship, including entrepreneurial behaviour, attitudes, and activities that can shed light on the state of technological innovation in Indonesian businesses. The GEM data emphasizes a significant aspect of Indonesia's entrepreneurial activity, which includes indicators like the Established Business Ownership Rate and Total Early-Stage Entrepreneurial Activity (TEA). These indicators can give an indication of the prevalence of new business creation and the sustainability of existing ventures in the country.

Moreover, GEM data also covers factors like Perceived Opportunities Rate, Perceived Capabilities Rate, Fear of Failure Rate, and Entrepreneurial Intentions Rate. These metrics provide insights into how individuals perceive opportunities for starting businesses, their confidence in their capabilities, their willingness to take risks, and their intentions to become entrepreneurs. Understanding these factors can help assess the readiness of Indonesian entrepreneurs to engage in technological innovation.

Furthermore, considering Motivational Index and Gender Equity ratios from the GEM data can offer additional perspectives on the drivers behind entrepreneurial activities in Indonesia. By examining whether entrepreneurs are primarily opportunity-driven or necessity-motivated and analyzing gender disparities in entrepreneurship, it becomes possible to gauge the motivations and inclusivity within Indonesia's entrepreneurial landscape.

However, by understanding the overall entrepreneurial ecosystem through GEM indicators, policymakers, investors, and stakeholders can gain a better understanding of how conducive the environment is for fostering technological innovation and its impact on Indonesia's digital economy.

## **1.2 Problem statement and research objectives**

Technology has now taken a big part in our lives and in the business world. Owners and managers recognize that leveraging technology can provide a significant competitive advantage by allowing them to innovate more quickly, provide better products or services, and respond quickly to market changes. Adopting technology helps increase the efficiency and productivity of the company by automating some repetitive tasks, streamlining processes, and allowing employees to focus on more strategic and value-added activities.

However, technological adoption by small and medium-sized companies in their innovation and entrepreneurship has already shown its effectiveness and enabled them to become the engine of development of the global economy. Small and medium-sized enterprises (SMEs) play a crucial role in global economic development, reducing poverty, increasing national GDP, and creating jobs. They offer reasonable prices on goods and services, meet the needs of most of the population, and contribute to skills development, poverty reduction, empowerment, and sustainability of community livelihoods.

SMEs play an important role in the global economy by creating jobs, generating income, and distributing wealth, thereby contributing to the socio-economic development of communities. They represent 99% of businesses in developing countries (Chege & Wang, 2020).

In Indonesia, according to Wijanarka & Sari (2022), Indonesian SMEs constitute one of the most important sectors of the Indonesian economy and have greatly benefited from digital economy opportunities, such as the use of e-commerce platforms to expand their sales market, increase their contribution to the national GDP and create employment opportunities. But many SMEs need help understanding and effectively using digital technology platforms, hindering their ability to compete in the digital economy. Indonesia's digital infrastructure is still developing, and many rural and remote areas need more internet connectivity and access to technology. This can make it difficult for SMEs in these areas to adopt and effectively use digital platforms due to difficulties in accessing the necessary financial resources due to a lack of collateral, a limited credit history or low or high interest rates.

Digital technology can provide valuable insights into the operations of SMEs, incentivizing financial institutions to design products and services that meet their specific needs. SMEs perceive access to finance as the most significant barrier hindering growth, and digital financial inclusion is seen as a feasible solution to address these constraints (Johri et al., 2024). They argue that digital financial inclusion has increased money flow, fostered entrepreneurship, and overcome barriers faced by businesses.

According to the Global Entrepreneurship Monitor (GEM) data report, businesses, especially SMEs, often struggle to invest in new technologies and implement them with limited resources. Resistance to change can hinder the adoption of new tools or processes, while a lack of digital skills can hinder the effectiveness of innovation. Market uncertainty can impact the viability and customer acceptance of new technologies. Regulatory compliance is another challenge, as non-compliance can lead to legal issues and reputational damage.

However, new technologies and platforms are constantly emerging, meaning digitalization constantly evolves. Due to a lack of funding or experience, SMEs often struggle to keep pace with these rapid changes, leading them to miss opportunities and become less competitive in the digital economy.

At the same time, the digital economy involves the rapid development of online business transactions using Internet services and leading to the emergence of digital platforms such as online payment and e-commerce, helping developing countries gain a deeper foothold in the multilateral trading system (Wijanarka & Sari, 2022).

Coming from a country undergoing economic and technological development, owners and managers interest in adopting technology in their businesses to be competitive is still growing. This prompted me to research further the impact of Indonesian SMEs use of digital technology platforms and their contribution to the digital economy.

The particular objective would be to examine some factors that drive and motivate managers or owners of SMEs in Indonesia to innovate their businesses by adopting digital platform technology and thus contribute to the growth of the countrys digital econom y.

The questions for this research can, therefore, be:

1. How can indonesian SMEs managers or owners entrepreneurs be influenced or motivated by demographic and psychological factors to adopt technology?
2. How can the growth of SMEs adopting technology influence on the countrys digital economy?

### **1.3 Significance of the study**

This research proposal provides valuable insights and guidance for Indonesian SMEs, policymakers, researchers, and academics in the digital economy. It outlines the benefits, challenges, and future directions for SMEs using digital technology platforms, helping them make informed decisions about e-commerce platform adoption, resource allocation, and digital strategy development. The study raises awareness and encourages adoption, promoting collaboration and knowledge sharing. It informs policy development, identifies areas for investment and support, and facilitates collaboration between government agencies, industry players, and educational institutions. It also contributes to existing research on digitalization and its impact on small businesses in developing economies. The research proposal highlights potential research avenues, such as the impact of platform features on SME performance, cultural factors in digital adoption, and the development of effective training programs for digital literacy. It serves as a foundation for future studies and collaborations, paving the way for a deeper understanding of the complex dynamics of SME digitalization in Indonesia.

## **1.4 Scope of the study**

This research explores the use of digital technology by Indonesian small and medium-sized enterprises (SMEs) in the digital economy. It highlights the benefits of digital technology platforms, such as expanding reach, improving operational efficiency, and providing access to resources. However, it also highlights challenges such as digital literacy gaps, competition, cost constraints, cybersecurity concerns, and unequal access to infrastructure. The paper proposes solutions to overcome these problems, including government initiatives, industry collaboration, and a focus on emerging technologies. It also analyzes the positive contributions of platform adoption by SMEs to economic growth, job creation, and innovation in the digital ecosystem. The paper focuses on the unique context and challenges faced by Indonesian companies.