YANGON UNIVERSITY OF ECONOMICS

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A STUDY ON THE OBSTACLES OF MSMEs IN DIGITAL TRANSFORMATION PROCESS IN MYANMAR (A CASE STUDY OF CHANMYATHAZI TOWNSHIP, MANDALAY)

MYAT SI THU

EMDevS -29 (19th BATCH)

JUNE, 2025

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A Thesis submitted in partial fulfilment towards the requirements for the degree of Master of Development Studies (MDevS)

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This is to certify that the thesis entitled "**A STUDY ON THE OBSTACLES OF MSMEs IN THE DIGITAL TRANSFORMATION PROCESS IN MYANMAR (A CASE STUDY OF CHANMYATHAZI TOWNSHIP, MANDALAY)** " submitted as partial fulfilment towards the requirements for the degree of Master of Development Studies has been accepted by the Board of Examiners.

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ABSTRACT

Digital transformation through e-commerce, cloud computing, and digital finance is essential for MSMEs to enhance efficiency, competitiveness, and sustainability. However, many MSMEs still face significant barriers to adoption despite their key role in local economies. This study examines these obstacles through a quantitative survey of 298 MSMEs in the service sector. Results reveal that financial constraints, particularly the high cost of digital tools and limited access to credit, are the most critical challenges. Technological issues, including unreliable electricity, poor internet connectivity, and a lack of IT support, further hinder progress. Socio-cultural factors, such as low digital literacy, fear of cyber fraud, and a preference for cash-based transactions, also significantly impact adoption. Only 20–30% of businesses actively use advanced digital tools. The findings indicate that digital transformation in Myanmar is not just a technical matter but a broader socio-economic issue that requires inclusive, practical, and locally tailored solutions to promote meaningful participation in the digital economy.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

MSME	Micro, Small and Medium Enterprises
DT	Digital Transformation
ICT	Information and Communication Technology
CRM	Customer Relationship Management
POS	Point of Sale
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
SPSS	Statistical Package for the Social Sciences
IRT	Innovation Resistance Theory
KBZPay	Kanbawza Mobile Wallet
AI	Artificial Intelligence
MMQR	Myanmar Quick Response Code
MoE	Ministry of Education
MoC	Ministry of Commerce
QR	Quick Response (Code)
VPN	Virtual Private Network
ASEAN	Association of Southeast Asian Nations
CBM	Central Bank of Myanmar
ADB	Asian Development Bank
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
OECD	Organisation for Economic Co-operation and Development
SME	Small and Medium Enterprise
IT	Information Technology
ERP	Enterprise Resource Planning
SEO	Search Engine Optimization
ROI	Return on Investment

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

In the 21st century, digital transformation is a key driver of productivity, competitiveness, and economic sustainability across the globe. For Micro, Small, and Medium-sized Enterprises (MSMEs), embracing digital technologies such as e-commerce, cloud computing, and digital financial tools is no longer optional. These tools help MSMEs streamline operations, expand market reach, and remain agile in the face of rapidly changing business environments.

In Myanmar, MSMEs constitute approximately 99% of all businesses and employ around 70% of the national workforce, as reported by the Ministry of Industry. Sectorally, MSMEs are distributed as follows: 65% in services, 20% in trade, and 15% in manufacturing. Despite their critical role in the economy, digital adoption among Myanmar's MSMEs remains limited, particularly in semi-urban and rural areas. Most businesses continue to rely on traditional practices, cash-based transactions, and manual recordkeeping, which impedes innovation and scalability.

Recent digital developments, such as the rise in mobile banking, fintech expansion, and the COVID-19-induced push for cashless transactions, have spurred interest in digital payments. The Central Bank of Myanmar (CBM) has supported these shifts through regulatory frameworks and initiatives like the upcoming Myanmar Quick Response (MMQR) code system, set to launch in 2025, which aims to standardize digital payments and promote financial inclusion. Nevertheless, MSMEs continue to face key barriers, including limited internet access, low digital literacy, concerns over cybersecurity, and financial constraints that hinder technology adoption.

The Mandalay Region, a major economic hub in Upper Myanmar, hosts over 30,000 MSMEs, about 15% of the national total (Ministry of Industry, 2022). Despite its strategic role in transport and industry, digital transformation (DT) among these

enterprises remains inconsistent, especially for those with limited resources. MSMEs in Mandalay encounter several barriers, including financial constraints, limited digital literacy, insufficient human resources, unreliable internet and power supply, lack of ICT support, unclear digital regulations, and cultural resistance such as reliance on cash and distrust of digital systems (World Bank, 2020; ADB, 2021; GIZ Myanmar, 2021).

Most MSMEs in Myanmar, especially in Mandalay, continue to rely on manual processes with limited exposure to digital currency or e-commerce tools, which weakens their competitiveness and efficiency (IFC Myanmar, 2019). The adoption of online platforms, mobile payments, and digital systems remains low due to strong structural and capacity barriers. Although a 60.2% positive association was found between digital transformation and MSME resilience, it highlighted existing barriers such as low capital, low technological knowledge, cybersecurity risks, and poor infrastructure. Similarly, MSMEs struggle with financial constraints, human resource shortages, and limited access to digital tools. Inadequate infrastructure. It further demonstrates that unclear regulatory frameworks and cultural reliance on traditional practices hinder MSME growth. These global challenges highlight the broad and multifaceted nature of digital transformation challenges in developing countries.

These parallels underline that MSMEs in Mandalay face globally recognized DT challenges, reinforcing the need for targeted financial support, digital literacy programs, improved infrastructure, and clearer legal frameworks to ensure inclusive transformation.

Within Mandalay, Chanmyathazi Township is an important industrial and commercial hub. The township is an important area for business and industry, with over 1,300 MSMEs. Of these, 75% are in the service sector, 13% are in the trade sector and 12% are in the manufacturing sector. However, MSMEs are still unable to embrace digital transformation due to various barriers fully. These barriers include the same challenges as those mentioned above, including financial constraints, lack of technical knowledge, unstable internet and electricity supply, lack of ICT support, unclear legal regulations and cultural mistrust.

Due to financial constraints, MSMEs are unable to invest in the necessary digital tools, infrastructure and training. Due to lack of technical knowledge, entrepreneurs and employees are distrustful of digitalization and are less efficient. Internet and power instability limit MSMEs' use of digital systems and also hinder their

access to online platforms. Due to the lack of clarity in laws and policies, MSMEs find it difficult to understand and comply with digital regulations. Cultural barriers include distrust of digital systems, a reliance on cash, and a reluctance to change traditional business models.

Due to these barriers, MSMEs are still unable to fully participate in digital platforms, online systems, and the digital economy. Addressing these barriers is crucial for the transition to a digital economy with the upcoming Myanmar Mobile Quick Response (MMQR) system. While service and trade sectors can benefit more from digital payment technologies and platforms such as social media, manufacturing sectors face greater technological complexity and logistical challenges. Therefore, to enhance the growth and competitiveness of MSMEs, there is a need for financial support, technical training, infrastructure improvements, clearer regulations, and cultural change.

This study aims to explore the current state of digital adoption among MSMEs in Chanmyathazi Township and identify key obstacles, both technological and financial, that hinder their transition to digital practices. It will analyze sectoral differences and submit practical recommendations for improving digital readiness. By doing so, the study aims to contribute to more inclusive and effective digital transformation strategies that align with Myanmar's national development goals.

1.2 Objectives of the Study

The main objective aims to analyze the key barriers that hinder the digital transformation of MSMEs in Chanmyathazi Township, with particular emphasis on identifying the specific challenges faced by service-based enterprises within this group.

1.3 Method of Study

This study adopts a quantitative research method to analyze the key technological and financial barriers that hinder digital transformation among service-based MSMEs in Chan Myat Thasi Township, Mandalay. Focusing exclusively on MSMEs within the service sector, such as beauty salons, travel and tourism services, hospitality, logistics, healthcare, and educational training centers, this research recognizes their growing reliance on digital platforms for service delivery, customer

engagement, and payment systems. Primary data were collected through a structured questionnaire featuring close-ended questions on a 5-point Likert scale, designed to capture MSMEs' perceptions of digital transformation barriers. Data collection was carried out via both in-person interviews and digital platforms like Google Forms. Additionally, secondary data were sourced from credible materials including government publications, Central Bank reports, MSME policy documents, and studies conducted by the Asian Development Bank (ADB) and the World Bank.

1.4 Scope and Limitations of the Study

This study focuses on the digital transformation challenges of MSMEs operating in Chan Myat Thasi Township, Mandalay Region, Myanmar. The geographical scope is limited to this township, which is a major economic area with a mix of retail, manufacturing and service-based MSMEs. The study focuses on only service-based businesses as they are increasingly relying on digital tools and online transactions. The research is targeted at MSMEs recognized by the Ministry of Industry and includes businesses of all sizes and sectors. Only MSMEs that are currently operating and have some knowledge or interest in digital transformation are included in the sample. The study primarily investigates the financial, technological and socio-cultural barriers to digital payment systems, with a special focus on digital payment systems, internet access and digital literacy gaps. The main limitations of this study are that sectoral disparities arise from the deliberate focus on service-based businesses, which may limit the generalizability of the findings to manufacturing or retail sectors, which may face different digital transformation challenges. Furthermore, while the research examines key barriers including financial, technological, regulatory, infrastructure, policy, and sociocultural factors, this survey may exclude the identification of other less obvious digital technologies.

1.5 Organization of the Study

This study is structured into five interconnected chapters. The first chapter introduces the research by outlining its background, rationale, objectives, scope, methodology, and structure. The second chapter is overview on the existing studies, theoretical frameworks, and conceptual models associated with the digital transformation of MSMEs and identifies research gaps. The third chapter focuses on

the national context of MSMEs in Myanmar, examining legal definitions, sectoral trends, and the major categories of barriers—financial, technological, regulatory, and socio-cultural that hinder digital adoption. The fourth chapter presents and discusses the research findings based on structured surveys, offering statistical insights into digital adoption levels, barriers, and sectoral variations. Finally, the fifth chapter concludes the study by summarizing the key insights, discussing their implications, and providing policy recommendations to facilitate digital transformation among MSMEs.

CHAPTER II

LITERATURE REVIEW

2.1 Definition and Classification of MSMEs

Micro, Small, and Medium Enterprises (MSMEs) are widely recognised as crucial contributors to economic growth, employment generation, and poverty alleviation, particularly in developing countries. However, their definitions and classifications differ across countries and institutions, depending on specific economic contexts, regulatory frameworks, and policy priorities. Typically, MSMEs are classified based on quantitative indicators such as the number of employees, annual turnover, and total assets.

The World Bank Group, United Nations, International Finance Corporation (IFC), and Organisation for Economic Co-operation and Development (OECD) are among the key international organizations that provide classification guidelines for MSMEs. These standards offer a benchmark for countries to adapt definitions suited to their local conditions and facilitate cross-country comparison and policy formulation.

According to the World Bank, MSMEs are defined using three primary indicators, number of employees, total assets, and annual sales. Microenterprises typically have fewer than 10 employees, with total assets and annual turnover not exceeding USD 100,000. Small enterprises employ between 10 to 49 employees, while medium enterprises employ 50 to 300, with proportional increases in financial thresholds (IFC, 2012).

Similarly, the United Nations Industrial Development Organization (UNIDO) emphasizes the employee-based classification, with microenterprises having fewer than 10 employees, small enterprises having 10 to 49, and medium enterprises between 50 and 250 employees. This simplified definition is particularly relevant for data collection and policy implementation in developing countries (UNIDO, 2020).

The International Finance Corporation (IFC), a member of the World Bank Group, utilizes the same tripartite structure of indicators (employees, assets, and

turnover) and provides thresholds aligned with the World Bank's framework. Meanwhile, the OECD primarily classifies MSMEs based on the number of employees, designating firms with fewer than 250 employees as MSMEs, with further sub-categories for micro (1–9), small (10–49), and medium (50–249) enterprises (OECD, 2005). Table 2.1 summarizes the comparative definitions used by major international organizations.

Table 2.1: Classification of MSMEs

Organization	Micro	Small	Medium	Criteria Used
World Bank / IFC	<10 employees; ≤$100k turnover	10–49 employees; ≤$3M turnover	50–300 employees; ≤$15M turnover	Employees, Assets, Turnover
UN / UNIDO	<10 employees	10–49 employees	50–250 employees	Employees
OECD	1–9 employees	10–49 employees	50–249 employees	Employees

Source: World Bank Group IFC (2012). IFC SME Ventures: Impact Evaluation Report.UNIDO (2020). Promoting SME Development in Developing Countries.OECD (2005). SME and Entrepreneurship Outlook.

Table 2.1 clearly illustrates the diversity in MSME classification among international organizations, which can impact policy development and research comparisons. While employee size is the most commonly used criterion, financial metrics such as turnover and assets also play a significant role in certain frameworks. Harmonizing these definitions helps enable international alignment and targeted support to MSMEs.

2.2 Theoretical Frameworks for Digital Transformation Adoption

Digital transformation refers to the integration of digital technologies into all aspects of a business, fundamentally changing how businesses operate and deliver value to customers (Vial, 2019). For MSMEs, this process involves adopting digital tools, including online marketing platforms, digital payment systems, customer relationship management (CRM) software, and cloud-based accounting tools. Understanding the

factors that influence the digital transformation of Micro, Small, and Medium Enterprises (MSMEs) is essential to designing effective strategies for economic development. While many theoretical models have been developed globally to explain how and why organizations adopt new technologies, their practical application must be tailored to the local context, especially in regions where MSMEs face distinctive constraints.

Digital transformation among MSMEs is not solely dependent on the availability of technology. It is shaped by a constellation of interrelated barriers, including financial, technological, regulatory, and socio-cultural factors. The Technology–Organization–Environment (TOE) framework developed by Tornatzky and Fleischer (1990) offers a comprehensive perspective on how these multiple dimensions affect technology adoption. According to this framework, the decision to adopt digital innovations is influenced by three key domains: technological factors (such as the perceived usefulness and complexity of digital tools), organizational factors (including firm size, resources, and digital literacy of staff), and environmental factors (such as government policy, market competition, and infrastructure). The TOE framework is particularly useful in examining MSMEs in developing contexts, as it highlights how internal readiness and external constraints must be considered simultaneously.

In this study, the TOE model is supported by the Innovation Resistance Theory (Ram & Sheth, 1989), which emphasizes the psychological and practical barriers to adopting new technologies, even when their benefits are known. Regulatory environments (Scott, 2001) and social norms (Rogers, 2003) further contribute to the complexity of technology integration decisions, especially in traditionally structured economies.

One of the most critical barriers is financial constraint. Many MSMEs operate on limited capital and are unable to afford the upfront investment needed for digital infrastructure, including devices, software, and employee training. This economic limitation is further compounded by technological challenges, such as low digital literacy among owners and staff. Without sufficient skills or knowledge, even businesses that recognize the value of digital tools struggle to implement and sustain them. These issues reflect the organizational and technological contexts highlighted in the TOE framework.

Infrastructure-related barriers also play a pivotal role. Unreliable internet connectivity, inconsistent electricity supply, and lack of access to ICT resources hinder daily operations and digital engagement. These infrastructural gaps particularly affect service-based MSMEs, which rely heavily on timely communication and customer interaction. From the environmental perspective of the TOE framework, such limitations significantly weaken the broader ecosystem necessary for digital transformation.

At the same time, regulatory and policy issues contribute to the hesitation. Unclear or frequently changing digital business regulations, absence of supportive legal frameworks (e.g., for e-payments or cybersecurity), and limited awareness of existing government support programs reduce the confidence of MSMEs to transition toward digital solutions. These reflect both environmental and institutional concerns that the TOE model encourages researchers to evaluate.

Furthermore, socio-cultural factors significantly influence digital adoption behavior. Traditional reliance on cash-based transactions, mistrust in digital platforms, and resistance to change, especially among older or less formally educated business owners, undermine the willingness to engage with new technologies. Social influence and peer behavior also affect decision-making; MSMEs are more likely to adopt digital tools if they observe success stories within their local networks. These social norms and behavioral patterns reinforce the importance of considering not only structural but also cultural components in the transformation process.

In recent years, numerous studies have emphasized the importance of digital transformation for MSMEs in developing countries, highlighting the multifaceted barriers they face. Commonly reported obstacles include financial limitations, technological gaps, regulatory uncertainty, and human resource constraints. Financially, MSMEs often struggle with the high costs of adopting digital tools and limited access to affordable financing. Technological barriers such as poor internet connectivity and limited access to reliable digital infrastructure are particularly pressing in both urban and rural settings.

Cybersecurity concerns further hinder digital adoption, especially in fragile digital environments like Myanmar, where weak data protection mechanisms erode trust in online systems (Dimitrova, 2023). Regulatory and policy barriers, including unclear guidelines and burdensome compliance requirements, discourage many small enterprises from transitioning to digital platforms (Khanra et al., 2020). These

challenges reflect the broader institutional and infrastructural constraints that characterize emerging economies.

From a socio-cultural perspective, generational attitudes and low digital literacy significantly influence adoption patterns. Moorthy et al. (2017) observed that younger entrepreneurs are generally more receptive to digital change than older, traditional business owners, a pattern also evident in Myanmar. Human capital shortages, especially the lack of skilled IT personnel, continue to constrain digital readiness among MSMEs.

Context-specific studies in Myanmar underscore these findings. The Myanmar Digital Economy Roadmap (2023) and Sandi Zun (2020) highlight insufficient infrastructure, digital skill deficits, and limited financial resources as key obstacles. These are compounded by political instability and socio-cultural resistance to change, making the transformation process more complex. Despite these barriers, regional efforts like the "Go Digital ASEAN" program illustrate how targeted support can significantly boost MSME digital participation.

Collectively, these studies reinforce the need for context-sensitive digital strategies that take into account the unique economic, political, and social realities of countries like Myanmar. A flexible, multi-dimensional policy approach, grounded in technological, organizational, and environmental readiness, is essential to fostering inclusive and sustainable digital transformation.

2.3 Barriers to Digital Transformation Faced by MSMEs

Despite the acknowledged importance of digital transformation in enhancing productivity, market access, and resilience, Micro, Small, and Medium Enterprises (MSMEs) in developing economies continue to face numerous barriers to digital adoption. These obstacles are often structural, financial, technological, and socio-cultural and tend to reinforce one another (OECD, 2021; UNESCAP, 2023).

Financial Barriers: Limited access to capital remains a major constraint for MSMEs seeking to adopt digital technologies. Many enterprises operate with minimal profit margins and are unable to invest in necessary hardware, software, or training (ADB, 2021). The cost of high-speed internet, e-commerce platform subscriptions, cybersecurity tools, and digital infrastructure is often prohibitive for small enterprises, particularly those operating informally or outside major urban centers (World Bank, 2020).

Technological and Digital Literacy Challenges: The adoption of digital tools requires not only physical infrastructure but also human capital capable of leveraging these technologies. However, low levels of digital literacy among MSME owners and employees are a significant barrier (GSMA, 2022). The lack of basic training in digital tools such as mobile banking, online marketing, or inventory software further delays the pace of digitalization (McKinsey Global Institute, 2021).

Infrastructural Limitations: Reliable infrastructure, including stable electricity, mobile network coverage, and broadband internet, is a prerequisite for digital transformation. The infrastructural gaps create operational disruptions and limit access to online platforms and services, particularly for MSMEs that lack the resources to maintain backup systems or ICT support.

Regulatory and Policy-Related Constraints: Regulatory uncertainty and limited institutional support are also key factors hindering digital adoption. MSMEs often report confusion about taxation on digital sales, unclear licensing requirements for online transactions, and insufficient protection for digital payments and data privacy (UNCTAD, 2021).

Socio-Cultural and Behavioral Barriers: Cultural preferences for face-to-face interactions and cash transactions also slow the uptake of digital tools. Many business owners and customers still perceive digital payments as risky or impersonal (Oxford Insights, 2021). Resistance to change, generational gaps in technology use, and fear of fraud further discourage MSMEs—especially those in the services sector—from integrating digital solutions into their operations (ADB, 2023).

2.4 Overcoming Digital Transformation Barriers in the MSME Sector

A combination of financial, technological, regulatory, and educational strategies is required to address these challenges and foster a more digitally inclusive MSME sector. One of the most effective solutions is the introduction of financial support programs, such as low-interest loans and grants, which can help MSMEs invest in digital infrastructure and training programs (UNCTAD, 2023). Additionally, expanding digital literacy initiatives will play a crucial role in equipping MSME owners and employees with the necessary skills to operate in a digital economy (ADB, 2023).

Improving cybersecurity awareness and regulations is another critical step toward building trust in digital platforms. Strengthening data protection laws and promoting best practices for secure digital transactions will encourage more businesses

to adopt online financial solutions (Kshetri, 2021). Furthermore, expanding digital infrastructure, such as nationwide broadband access and mobile banking services, will significantly reduce technological barriers and improve accessibility for MSMEs in rural and underserved areas (World Bank, 2022).

Overcoming these barriers requires collaboration among government agencies, financial institutions, private sector stakeholders, and digital service providers. By implementing targeted interventions that address structural and behavioral obstacles, Myanmar can create an environment enabling MSMEs to leverage digital transformation for sustainable growth and competitiveness in the evolving global economy.

As Myanmar's MSMEs struggle with digital transformation due to financial, technological, regulatory, and sociocultural barriers, it is essential to look at successful strategies from other ASEAN countries that have effectively facilitated MSME digital adoption. Learning from these experiences can help Myanmar develop practical policies and business strategies to accelerate the digitalization of its MSMEs. Several ASEAN nations, such as Singapore, Malaysia, Indonesia, and Vietnam, have implemented policies and programs focused on financial support, digital infrastructure development, regulatory reforms, and capacity-building programs to overcome MSME digitalization challenges.

2.5 Review of Previous Studies

Recent empirical studies have explored various barriers that hinder the digital transformation of Micro, Small, and Medium Enterprises (MSMEs) across different regional and economic contexts. These studies shed light on the key constraints MSMEs face, namely financial, technological, regulatory, and socio-cultural obstacles, which are frequently interrelated and context-dependent.

Financial barriers are widely acknowledged as a major limitation for MSMEs seeking to adopt digital technologies. Alshamaila et al. (2013), in their study of small enterprises in the United Kingdom, found that cost uncertainty discouraged businesses from investing in cloud-based solutions. Similarly, the World Bank (2020) reported that MSMEs across the ASEAN region often experience financial exclusion, lacking access to affordable credit or financial tools necessary to support digital transformation.

In terms of technological barriers, access to infrastructure and internal digital capabilities plays a decisive role in adoption outcomes. Zhu and Kraemer (2005) observed that while technological infrastructure and awareness can encourage adoption, many businesses lack the internal capacity to fully utilize digital tools. This is reinforced by Alshamaila et al. (2013), who noted that small firms struggled with IT knowledge and technological readiness, which limited their ability to adopt and manage digital systems effectively.

Regulatory barriers also present significant challenges to digital integration among MSMEs. Matar and Sridhar (2020) emphasized the importance of policy support, showing that inconsistent or weak governmental backing can either enable or obstruct digital adoption. The World Bank (2020) further highlighted the presence of gaps in digital finance regulations and institutional frameworks across Southeast Asia, which can slow down the diffusion of digital services among small enterprises.

Lastly, socio-cultural barriers affect how MSME owners perceive and engage with digital tools. Pal et al. (2021) found that many MSMEs turned to digital platforms during the COVID-19 pandemic, but most lacked long-term strategies or confidence to maintain their digital operations. Alshamaila et al. (2013) similarly identified that trust-related concerns, particularly fear of reliance on third-party digital service providers, discouraged small businesses from adopting cloud and other digital technologies.

A survey by Hansen (2021) found that only 8-9% of Myanmar MSMEs have formal credit, with most refraining from applying due to barriers to access to credit, highlighting that limited access to formal finance is a major barrier to digital investment. Recent research by U Kyaw Thura (YUEco, 2023-2024) highlights that Myanmar's MSMEs face many challenges in adopting digital technologies due to financial and infrastructure constraints. "Limited access to formal credit and high costs of digital tools prevent businesses from investing in e-commerce and cloud solutions," Aung & Htay (2021) research findings. Additionally, a 2022 survey of 210 SMEs in Pathein found that "financial capital shortages and technology gaps pose significant barriers to the adoption of digital payment systems," exacerbated by Myanmar's cash-dominated economy and low digital literacy, according to Phyo Pyae Sone Win's 2022 survey.

Overall, these studies confirm that MSME digital transformation is a complex process influenced by interlocking constraints.

CHAPTER III

DIGITAL TRANSFORMATION OF MSMEs IN MYANMAR

3.1 Definition and Classification of MSMEs in Myanmar

The evolution of Micro, Small, and Medium Enterprises (MSMEs) in Myanmar has been closely intertwined with the country's political and economic transitions. Following Myanmar's independence in 1948, the state-led socialist policies adopted after 1962 significantly restricted private sector growth, allowing only limited small-scale enterprises to operate under centralized planning. This resulted in technological stagnation and limited integration with global markets. The transition toward a more liberalized economy began in 1988, culminating in the issuance of the Private Industrial Enterprise Law in 1990, which was one of the earliest legal recognitions of small and medium enterprises (SMEs) in Myanmar. However, this early definition was narrow, focusing primarily on investment levels and omitting micro-enterprises.Since then, successive policy reforms have attempted to broaden the scope and support mechanisms for MSMEs. The 2015 Small and Medium Enterprises Development Law marked a significant shift by including micro-enterprises in the official classification and outlining institutional support for SME development. Despite these advancements, inconsistent implementation and limited access to finance and technology continue to pose challenges for the sector's growth.

Substantial progress in MSME development occurred with the enactment of the Small and Medium Enterprises Development Law in 2015 (Pyidaungsu Hluttaw Law No. 23/2015). This legislation formally defined SMEs based on three core criteria: number of employees, amount of capital investment, and annual turnover. To operationalize this law, the Ministry of Industry issued Notification No. 17/2016, which outlined specific thresholds across various sectors such as manufacturing, services, wholesale, and retail. Notably, the law distinguished between capital-intensive and labor-intensive manufacturing enterprises, allowing more inclusive classification

tailored to the nature of business operations. Table 3.1 below presents the official sector-wise definitions as outlined under the 2015 SME Development Law.

Table 3.1: Legal definition of the 2015 SME Development Law

Classification	Sector	Number of Employees	Capital (mil. Kyats)
SMALL	Manufacturing	Up to 50	Up to 500
	Labour-intensive manufacturing	Up to 300	Up to 500
	Wholesale	Up to 30	Up to 100
	Retail	Up to 30	Up to 50
	Service	Up to 30	Up to 100
	Other	Up to 30	Up to 50
MEDIUM	Manufacturing	51–300	500–1,000
	Labour-intensive manufacturing	301–600	500–1,000
	Wholesale	31–60	100–300
	Retail	31–60	50–100
	Service	31–100	100–200
	Other	31–60	50–100

Source: SME Development Law (2015), Ministry of Industry Notification No. 17/2016

Compared to earlier definitions under the 1990 Private Enterprise Law, the 2015 classification significantly expanded the scope of enterprise categories by differentiating between labour-intensive and capital-intensive sectors. Although the 2015 law did not yet include a formal category for "micro-enterprises", it laid the legal groundwork for comprehensive MSME development across all major economic sectors.

In response to international standards and alignment with ASEAN models (e.g., India and Vietnam), Myanmar officially incorporated the "micro" category into its national classification system in 2018. This addition followed the guidance of

international development organizations such as the ILO and the World Bank and was announced by the Central Committee for the Development of Micro, Small, and Medium Enterprises. The revised MSME classification introduced in 2018 differentiates enterprises according to their number of employees, annual revenue, and fixed capital investment, as shown in Table 3.2.

Table 3.2: Myanmar MSME Classification 2018

Category	Employees	Annual Revenue (MMK)	Investment (MMK)
Micro	≤ 10	≤ 10 million	≤ 5 million
Small	11–30	10–100 million	5–20 million
Medium	31–60	100–300 million	20–100 million

Source: Myanmar MSME Survey Report (2018), Ministry of Planning and Finance / UNESCAP.

The primary objective of incorporating the "micro" category is to enhance financial inclusion and provide targeted support to rural-based enterprises. As nearly 70% of Myanmar's population resides in rural areas, micro-enterprises, including agricultural and home-based industries, represent a vital segment of the economy. These businesses are now eligible for tailored assistance programs such as subsidized loans (e.g., 8% interest SME loans) and microfinance schemes, contributing to both poverty reduction and employment generation in line with the Sustainable Development Goals (SDGs).

Despite the formal classification framework, enterprise registration remains a complex process in Myanmar due to overlapping jurisdictions and a lack of institutional coordination. SMEs may register with various authorities depending on their activity type and location. The primary entities involved include:

- The Directorate of Investment and Company Administration (DICA),
- The Small Scale Industrial Department (SSID), and
- The Directorate of Industrial Supervision and Inspection (DISI).

In practice, many industrial enterprises complete their registration through municipal offices or regional departments, particularly for certifications such as boiler permits, electrical inspection licenses, and good manufacturing practice (GMP)

approvals. Inconsistencies often lead to multiple registrations across agencies, especially when applying for government loans or programs that require DISI certification, even if the business is already registered under another body like DICA.

The legal framework further defines business ownership types through several legislative instruments. The 1990 *Private Industrial Enterprise Law* identifies private enterprises as any individual, partnership, or company engaged in transforming raw materials into finished products using mechanical or other forms of power. The 1991 *Promotion of Cottage Industries Law* recognizes small-scale, family-based production or service activities employing up to nine workers, without a cap for handicraft production. Meanwhile, the *Myanmar Companies Act of 1914* provides for the incorporation of sole proprietorships, partnerships, cooperatives, and joint ventures, including those with foreign stakeholders or public entities.

Myanmar's MSME classification framework has become increasingly comprehensive over the past decade. With a clearer legal basis, sector-specific definitions, and supportive institutional mechanisms, the system now provides a more inclusive foundation for promoting entrepreneurship, especially among micro and small businesses.

3.2 Current Situation of MSMEs in Myanmar

Micro, Small, and Medium Enterprises (MSMEs) constitute a vital segment of Myanmar's private sector economy, accounting for more than 98% of all officially registered enterprises. According to the Central Statistical Organization (CSO) Business Register (2022–2023) and the Myanmar Statistical Yearbook, there are 486,085 registered businesses nationwide. This figure reflects those formally recognized under Development Affairs Organizations and City Development Committees, distinguishing them from informal or inflated estimates often cited in non-official reports.

Sectorally, MSMEs are distributed across a range of industries. Based on data from the Myanmar Standard Industrial Classification (MSIC) and the Asia SME Monitor (ADB, 2024), the largest concentration is in the wholesale and retail trade sector, accounting for 52% of registered businesses. This is followed by manufacturing (19%), accommodation and food services (17%), and other service sectors such as education, healthcare, and repair services. The agriculture sector, although economically significant in rural areas, represents less than 1% of registered businesses due to its predominantly informal nature see table (3.3).

Table 3.3: Sectoral Distribution of Registered MSMEs in Myanmar (2022–2023)

Sector	Number of Businesses	Share percentage
Wholesale & Retail Trade	137,405	51.82%
Manufacturing	47,921	18.07%
Accommodation & Food Service Activities	45,000	16.97%
Other Services (Education, Health, etc.)	19,344	7.30%
Transportation and Storage	4,929	1.86%
Agriculture, Forestry, and Fishing	627	0.24%
Others (ICT, Real Estate, Admin Services)	10,998	4.21%
Total	**265,224**	**100%**

Source: CSO, Myanmar Statistical Yearbook 2022–2023

Geographically, registered MSMEs are primarily concentrated in urban and economically active regions. Yangon Region has the highest share, with over 54,000 enterprises (21.45%), followed by Mandalay (19.53%), Ayeyarwady (9.30%), and Shan State (8.79%), see table (3.4). These regions benefit from more developed infrastructure, market connectivity, and administrative capacity, which facilitates business operations and formalization. This regional concentration indicates a disparity in MSME development between urban centers and more remote or conflict-affected areas. Regions with lower shares, such as Chin, Kayah, and Rakhine, often face significant challenges, including limited infrastructure, weaker institutional presence, and reduced access to finance or digital tools. These structural inequalities contribute to the informal nature of many enterprises operating in less-developed states. Moreover, the administrative reach and business registration mechanisms tend to be more accessible in major cities, encouraging formalization. Addressing these geographic imbalances remains a key policy priority for promoting inclusive and balanced MSME growth nationwide.

Table 3.4: Number of Registered MSMEs by Region (2022–2023)

Region/State	Number of MSMEs	Share percentage (%)
Yangon Region	54,121	21.45%
Mandalay Region	49,244	19.53%
Sagaing Region	25,874	10.26%
Ayeyarwady Region	23,441	9.30%
Shan State	22,168	8.79%
Bago Region	19,304	7.66%
Magway Region	18,330	7.27%
Mon State	11,802	4.68%
Others	27951	11.08%
Total	**252,235**	**100%**

Source: CSO Business Register (2022–2023)

Structurally, MSMEs in Myanmar are categorized based on the number of employees, capital investment, and turnover, per the SME Development Law (2015) and its 2018 amendment. Micro enterprises generally have fewer than five employees and minimal capital, often operating informally or as family-run businesses. Small enterprises typically employ 6 to 30 workers and possess moderate capital, while medium enterprises employ 31 to 60 employees and operate with more organized business systems and higher revenues.

According to the Myanmar Enterprise Monitoring Survey Data, there were 46,014 officially registered SMEs. Among these, micro enterprises made up about 85%, small enterprises 12%, and medium enterprises only 3%. This structural composition highlights the dominance of micro-enterprises and underscores the need for capacity building and policy support to scale up small and medium segments.This overwhelming prevalence of micro-enterprises suggests that the majority of businesses remain vulnerable to market fluctuations and lack resilience.

Table 3.5: Structure of Registered MSMEs in Myanmar (2024)

Enterprise Type	Approximate Share (%)	Employment Contribution (%)
Micro	85%	60%
Small	12%	30%
Medium	3%	10%
Total	**100%**	**100%**

Source: MEMS 2019; ASEAN SME Policy Index 2024

Over the past decade, Myanmar has witnessed a gradual rise in the number of formally registered businesses, with notable fluctuations influenced by economic reform efforts, political transitions, and external shocks such as the COVID-19 pandemic. From 2015 to 2019, the number of enterprises grew steadily, reaching a peak of 276,044 in 2018–2019. However, the subsequent years saw a decline due to widespread disruptions.

Table 3.6: Registered MSMEs Businesses in Myanmar (2015–2024)

No.	Year	Registered MSMEs	Change (%)
1	2015–2016	196,313	-
2	2016–2017	210,364	7.16%
3	2017–2018	227,903	8.34%
4	2018–2019	276,044	21.13%
5	2019–2020	273,071	-1.08%
6	2020–2021	265,224	-2.87%
7	2021–2022	258,453	-2.55%
8	2022–2023	252,235	-2.41%
9	2023–2024	258,790	2.60%

Source: CSO, Myanmar Statistical Yearbook 2023, Asian Development Bank (ADB), Asia SME Monitor 2024

This ten-year trend underscores the resilience of Myanmar's business sector, particularly MSMEs, which dominate formal registrations. As shown in Table 3.6, the

number of registered MSMEs in Myanmar demonstrated steady growth between 2015 and 2019. Particularly notable was the sharp increase of 21.13% in 2018–2019, indicating a period of strong business registration and expansion, likely supported by economic liberalization efforts and regulatory reforms. However, from 2019–2020 onwards, the trend reversed, with consecutive annual declines in MSME registration—most sharply from 2019 to 2023. These declines are plausibly linked to the combined effects of the COVID-19 pandemic, political instability, and broader economic disruptions, which have constrained both formalization and business continuity.

Despite these challenges, a modest recovery is observed in 2023–2024, with a 2.60% increase in registered MSMEs, potentially signaling early signs of economic stabilization and renewed entrepreneurial activity. This rebound may reflect targeted government initiatives, digital adoption, and adaptive responses by local enterprises.

While generalized assumptions often exaggerate the scale of Myanmar's MSME sector, a more accurate picture emerges through reliance on official data sources. Although smaller in number than commonly perceived, registered MSMEs play a vital role in employment generation, regional economic development, and grassroots innovation.

3.3 Importance of Digital Transformation in MSMEs

Digital transformation refers to the integration of digital technologies into business operations to improve efficiency, productivity, and market reach. In Myanmar, digital transformation is becoming increasingly critical, as businesses must adapt to e-commerce, digital payments, and cloud-based solutions to remain competitive in both domestic and international markets.

Digital transformation plays a pivotal role in enhancing the resilience, productivity, and competitiveness of Micro, Small, and Medium Enterprises (MSMEs). In a rapidly changing global economy where consumer behavior, supply chains, and business models are increasingly driven by technology, MSMEs must adapt or risk falling behind. For developing countries like Myanmar, where MSMEs constitute a significant portion of the economy, the successful integration of digital technologies can have far-reaching effects on overall economic development and poverty reduction.

Digital transformation allows MSMEs to streamline operations, automate repetitive tasks, and improve service delivery. With tools such as cloud computing, mobile applications, e-commerce platforms, and digital payment systems, businesses

can reduce overhead costs, reach wider customer bases, and make data-driven decisions. In markets where access to traditional financial services is limited, digital tools also facilitate inclusion by enabling mobile banking and access to digital finance.

In the context of Myanmar, the COVID-19 pandemic has further underscored the importance of digital transformation. Businesses that had already adopted digital tools before the crisis were better equipped to continue operations, reach customers online, and adapt to lockdown restrictions.

MSMEs are distributed in various sectors, but the majority of production is in the manufacturing sector. Most of the majority of retail and trade. According to the MSME Development Report (2024), the breakdown of MSMEs is as follows:

Table 3.7: Distribution of MSMEs in Myanmar by Sector

Sector	Percentage	Key Characteristics
Agriculture	45%	Dominates rural economy; includes crop farming, fisheries, and livestock
Manufacturing	25%	Includes textiles (13%), food processing (10%), and wood products (2%)
Retail & Wholesale	20%	Major urban sector; includes family-run shops and local markets
Services	10%	Tourism, transport, and repair services (growing in urban areas)

Source: Authors' illustration based on Myanmar MSME 2024 data. (THE REPUBLIC OF THE UNION OF MYANMAR -Central Statistical Organization)

Table 3.7 summarizes the distribution of MSMEs across four main sectors in Myanmar: agriculture (45%), manufacturing (25%), retail & wholesale trade (20%), and services (10%). Agriculture dominates due to the rural nature of the economy, though many enterprises remain informal. Manufacturing, particularly in textiles and food processing, shows strong potential but requires significant investment. Retail and wholesale MSMEs are widespread in urban areas, supporting daily consumer demand. Services, though currently the smallest segment, are gradually expanding in urban centers through tourism, transportation, and repair-related businesses. This distribution highlights the structural imbalance of MSMEs and underscores the need for inclusive policies that address sector-specific barriers to modernization and digital adoption.

Understanding these sectoral differences is essential for tailoring digital transformation policies.

However, the benefits of digital transformation extend beyond short-term efficiency gains. Long-term transformation empowers MSMEs to build innovative business models, create new employment opportunities, and contribute more effectively to national economic resilience. For example, small-scale manufacturers that adopt digital production systems or logistics firms that use digital tracking can vastly improve quality control and customer satisfaction.

Furthermore, as Myanmar continues to integrate with regional and global economies, MSMEs that successfully adopt digital technologies will be better positioned to access cross-border markets, collaborate with international partners, and compete in global value chains. In this sense, digital transformation is not just a technical upgrade it is a strategic necessity for survival, competitive- ness, and inclusive growth.

Its importance, the digital readiness of MSMEs in Myanmar remains uneven, with disparities in access to technology, skills, and resources. Therefore, understanding the obstacles and addressing the gaps in digital adoption is crucial for unlocking the full potential of MSMEs in the country.

Despite government efforts to encourage digitalization, MSMEs face a variety of challenges that hinder their ability to transition into the digital economy. Studies indicate that limited financial resources, inadequate digital infrastructure, unclear regulatory policies, and resistance to technological change are among the most pressing concerns for MSMEs in Myanmar (Kapteyn, A. & Wah, S.H. 2016). These challenges create significant roadblocks, making it difficult for businesses to leverage the advantages of digital platforms, e-commerce, cloud computing, and digital payment systems.

The government's digital economy initiatives, MSMEs in Myanmar struggle to integrate digital solutions into their operations. Recent national policy dialogues and MSME development forums (2024) highlight that an estimated 35% of MSMEs in Myanmar actively use digital payment systems, while less than 25% leverage cloud-based business tools, reflecting broader challenges in Myanmar’s MSME digitalization efforts. Understanding sectoral variations is critical: retail businesses are more likely to embrace e-commerce platforms, whereas manufacturing firms face infrastructure-

related challenges, and service-based MSMEs encounter digital payment adoption issues.

3.4 Barriers to Digital Transformation in Myanmar

Digital transformation among MSMEs is not determined solely by the presence of technology but is shaped by a complex mix of interrelated barriers. According to the Technology-Organisation-Environment (TOE) framework and Innovation Resistance Theory, these barriers can be categorized into financial, technological, regulatory, and socio-cultural domains. Institutional environments (Scott, 2001) and social norms (Rogers, 2003) further influence how MSMEs perceive and adopt digital innovations. In the context of Myanmar, these intertwined factors have significantly slowed down digital adoption among MSMEs. Despite the growing recognition of digital transformation as a driver of economic growth, MSMEs in Myanmar face significant barriers that hinder their ability to integrate and effectively utilize digital technologies. These challenges span financial, technological, regulatory, and socio-cultural factors, creating a complex environment that slows digital adoption and innovation.

Financial constraints remain one of the most pressing challenges for MSMEs in Myanmar. Many businesses face difficulties in securing capital investment to adopt digital tools, as financial institutions are often reluctant to provide loans to MSMEs with limited credit histories (Central Committee for MSME Development, 2022). Additionally, the high cost of digital infrastructure including internet services, enterprise software, and modern hardware poses a significant burden for small businesses (World Bank, 2022). Myanmar also lacks government-backed financial incentives for MSMEs, putting local enterprises at a disadvantage compared to their ASEAN counterparts, where digital funding initiatives are more prevalent (ASEAN MSME Policy Framework, 2023).

In addition to financial limitations, technological barriers significantly impact MSME digitalization efforts. Myanmar's internet infrastructure remains inadequate, with slow and unreliable connectivity restricting businesses from leveraging cloud computing, e-commerce, and digital payment solutions (Dotzauer & Haiss, 2020). Moreover, cybersecurity risks deter many MSMEs from adopting digital technologies, as concerns over data breaches and fraudulent activities remain widespread due to the absence of strong cybersecurity policies (Kshetri, 2021). Compounding these issues is

the lack of IT expertise within MSMEs, as many businesses struggle to recruit or train employees with the necessary technical skills to manage and operate digital solutions (Myanmar Digital Economy Roadmap, 2023).

Beyond financial and technological constraints, regulatory and policy challenges further hinder digital adoption. The absence of clear e-commerce and data protection regulations creates uncertainty, discouraging businesses from fully embracing online platforms and digital transactions (Ministry of Commerce, 2024). Additionally, compliance costs related to taxation, licensing, and regulatory frameworks place a heavy burden on MSMEs, particularly those operating in the informal sector (ADB, 2023). Myanmar also lags behind other ASEAN nations in providing supportive policies and incentives that facilitate digital transformation, limiting opportunities for businesses to scale their digital capabilities (ASEAN MSME Policy Framework, 2023).

Socio-cultural factors present another layer of obstacles to digital transformation. Myanmar's cash-based economy slows the adoption of digital payment systems, as both businesses and consumers are accustomed to traditional cash transactions (Myanmar Digital Payments Report, 2023). Additionally, mistrust in digital systems remains a significant barrier, with many MSME owners fearing fraud and questioning the reliability of online financial services (Ram & Sheth, 1989). Resistance to digital adoption is also evident among older business owners and employees, who may lack awareness of digital opportunities and hesitate to transition away from conventional business practices (UNESCAP, 2023).

3.3.1 Financial Barriers to Digital Transformation

Financial limitations represent a significant barrier to digital transformation among Micro, Small, and Medium Enterprises (MSMEs) in Myanmar. Despite increasing awareness of the benefits of digital tools, many enterprises are unable to invest due to budget constraints, limited access to financing, and the high cost of technology. The information presented in this table highlights that financial barriers remain a primary constraint preventing MSMEs in Myanmar from adopting cost-effective and efficient digital solutions. Financial Barriers to MSME are as follows:

Table 3.8: Financial Barriers to MSMEs' Digital Transformation

Financial Barrier	Description
High Cost of Technology	Recurring costs for software, hardware, cybersecurity, and internet
Limited Access to Credit	Difficulty obtaining loans due to collateral and high interest
Lack of Subsidy or Incentive	Absence of government-backed financial assistance for digital investment
Awareness Gaps	Limited knowledge of affordable or appropriate digital solutions

Source: Compiled by the author based on data from Flexera (2023), CyberEdge (2023), OECD (2022), ADB (2023), World Bank (2023), and GEM (2023).

According to Table 3.8, High Cost of Digital Technologies: Adopting digital tools requires considerable investment, which many MSMEs in Myanmar find unaffordable. These costs include: Software subscription fees (e.g., for accounting or customer relationship management systems), Hardware upgrades (e.g., computers, point-of-sale (POS) systems), Cybersecurity tools (e.g., firewalls, antivirus protection), Internet and data costs, and Employee training programs to build digital literacy.

For MSMEs with limited cash flow, these upfront and ongoing expenses create substantial financial pressure, discouraging technology adoption. Studies (Flexera, 2023; CyberEdge, 2023) show that even basic digital infrastructure, such as cloud storage or cybersecurity services, can be cost-prohibitive without government or donor support.

Limited Access to Credit: Securing external financing for digital investment remains difficult for many MSMEs in Myanmar. Traditional banks often require collateral and have complex loan application processes. Microfinance institutions, though more accessible, usually offer small loans at high interest rates, limiting their usefulness for technology-related investment. Key financing challenges include: Collateral requirements from formal banks, Small loan sizes and high interest rates from microfinance providers, Limited government grant availability, and Investor hesitancy due to perceived risks in small-scale digital ventures. As a result, most

MSMEs operate within tight financial constraints, relying on self-funding, which is often insufficient to support digital initiatives.

Lack of Financial Support Mechanisms: In Myanmar, while MSME development plans exist, specific financial support for digital transformation remains limited. Few subsidiessed programs are tailored to small enterp-rises, and awareness of existing schemes is low. Without coordinated public-private partnerships or incentive mechanisms, many MSMEs are unable to shoulder the burden of transitioning to digital platforms.

3.3.2 Technological Barriers

Technological limitations present one of the most critical challenges to digital transformation among Micro, Small, and Medium Enterprises (MSMEs) in Myanmar. These barriers are closely linked to both human capacity and infrastructure gaps, restricting the effective adoption and sustained use of digital technologies. Technological Barriers to Digital Adoption in MSMEs are as follows:

Table 3.9: Technological Barriers to Digital Adoption in MSMEs

Technological Barrier	Impact on MSMEs	Possible Solutions
Limited Digital Skills	Inability to operate digital tools or software	Digital literacy and training programs
Lack of IT Support	No in-house technical problem solving or system maintenance	Outsourced IT services or pooled resources
Outdated Equipment	Reduced performance and compatibility issues	Government-subsidized tech upgrade programs
Poor Internet Connectivity	Disrupted operations, slow communication, and limited online access	Infrastructure investment and broadband expansion

Source: Adapted from World Bank (2023); UNESCO (2022); McKinsey & Co. (2022); ADB (2023).

According to Table 3.9, Digital Literacy and IT Skill Gaps: A significant number of MSME owners and employees in Myanmar lack the necessary digital skills to adopt and manage digital tools effectively. Many micro and small enterprises operate without structured training, making it difficult to use even basic software for

accounting, communication, or online marketing. The lack of internal IT support further worsens the problem, as most businesses cannot afford to hire dedicated technical staff. As a result, digital tools are underutilized or avoided altogether. Key issues include: Insufficient digital literacy and lack of formal IT training, Inability to troubleshoot or maintain digital systems internally, Dependence on expensive external service providers for basic IT support.

Outdated and Inadequate Hardware and Software: Many MSMEs rely on outdated equipment and legacy systems that cannot support modern software applications. The high cost of upgrading computers, purchasing licensed software, and maintaining secure systems discourages investment in technology. As a result, operational inefficiencies persist, and businesses struggle to compete in digital markets. Common challenges: Inability to upgrade ageing hardware, Use of pirated or unlicensed software, Lack of cybersecurity protection for business data.

Poor Digital Infrastructure: Reliable internet access and stable electricity supply are foundational for digital engagement. However, MSMEs across Myanmar face infrastructural limitations such as: Slow internet speeds and high data costs, Unstable network connections and power outages, Limited access to broadband or 4G coverage, particularly outside urban centres. These constraints limit MSMEs' ability to conduct online transactions, access cloud platforms, or manage e-commerce channels effectively.

3.3.3 Regulatory and Policy Barriers

Despite the growing emphasis on digital transformation at the policy level, MSMEs in Myanmar continue to face various regulatory and institutional challenges that inhibit their digital progress. These include legal ambiguities, complex compliance requirements, and limited awareness of government programs. Table 3.10 summarizes the main regulatory and policy barriers affecting MSMEs in Myanmar, based on data from the OECD (2022), ADB (2023), Digital Myanmar Report (2022) and World Bank (2023).Such barriers not only hinder digital adoption but also discourage formalization and long-term investment among MSMEs. Addressing these regulatory gaps is essential to creating an enabling environment that supports inclusive and sustainable digital transformation for MSMEs.

Table 3.10: Regulatory and Policy Barriers to MSMEs' Digital Transformation

Barrier Type	Impact on MSMEs
Unclear Digital Taxation	Confusion over tax rules for online sales and digital payments
E-commerce Licensing Process	Complex and bureaucratic registration discourages online business setup
Data Protection Uncertainty	Fear of mishandling personal data and regulatory consequences
Limited Awareness of Policies	Low participation in government digital programs due to information gaps
Cybersecurity Concerns	Fear of hacking and online fraud deters digital payment adoption

Source: OECD (2022); ADB (2023); World Bank (2023); Digital Myanmar Report (2022); GEM (2023).

According to Table 3.10, unclear Legal and Regulatory Frameworks: Many MSMEs struggle to interpret digital tax regulations, data privacy obligations, and foreign exchange directives. The lack of standardized policies creates legal uncertainty, especially for small businesses without legal advisors. This discourages adoption of digital business models such as e-commerce and mobile payments.

Complex Compliance and Licensing Procedures: The process of registering online businesses or obtaining e-commerce licenses is often seen as bureaucratic and time-consuming. This limits the formalization of digital enterprises and delays entry into the digital market, especially for startups and microenterprises.

Limited Access to Digital Policy Information: While digital support programs and incentives exist, many MSMEs are unaware of them due to ineffective communication and lack of outreach. As a result, participation in training, grants, or digital literacy programs remains low.

Weak Cybersecurity and Consumer Protection Measures: Concerns over data breaches, digital fraud, and weak enforcement of cybersecurity standards make MSMEs hesitant to engage with digital platforms. Businesses dealing with online

transactions often fear the risk of financial loss or reputational damage due to a lack of protection.

3.3.4 Socio-Cultural Barriers

Social and cultural factors significantly influence MSMEs' willingness to adopt digital technologies. In Myanmar, long-standing traditional business practices, generational attitudes toward technology, and cultural preferences for face-to-face and cash-based interactions remain dominant. These behaviours often lead to hesitation or resistance toward digital transformation.

Table 3.11: Socio-Cultural Barriers to Digital Transformation in MSMEs

Barrier Type	Impact on MSMEs
Preference for Cash	Limited adoption of digital payment systems
Fear of Fraud & Scams	Distrust in online transactions delays digital adoption
Resistance to Change	Business owners reluctant to modify traditional models
Generation Gap	Older management resists tools familiar to younger staff
Low Strategic Orientation	Lack of long-term vision and planning in small firms

Source: MSME Development Report Myanmar (2024), World Bank (2023), CBM (2022), OECD (2021).

According to Table 3.11, Preference for Traditional Practices and Cash-Based Transactions: A major cultural barrier is the widespread reliance on cash payments. According to the MSME Development Report (2024), nearly 70% of MSMEs in Myanmar continue to rely solely on cash, even when digital payment options are available. This reflects both consumer and merchant preferences rooted in perceived trust, ease of use, and habit.

Fear of Fraud, Data Breaches, and Online Scams: Many business owners express concern about digital fraud, phishing, or unauthorized access to financial data.

In the absence of strong digital consumer protection and cybersecurity frameworks, these fears deter businesses from transitioning to online payments or digital marketplaces.

Resistance to Change and Lack of Digital Mindset: Entrepreneurs often show reluctance to shift away from conventional methods unless there are immediate and visible benefits. MSMEs with low awareness of digital benefits or lacking exposure to modern business models are less likely to initiate digital adoption. This resistance is sometimes compounded by age-based differences between business owners and younger, tech-savvy staff.

Limited Strategic Planning and Long-Term Thinking: Many MSMEs in Myanmar operate reactively and lack structured business planning. Without a digital roadmap or a forward-thinking mindset, small businesses struggle to prioritise digital investments or see their relevance to long-term competitiveness.

MSME Owners' Resistance to Change (Traditional Business Mindset): One of the significant socio-cultural barriers to digital transformation among MSMEs in Myanmar is the resistance to change rooted in traditional business mindsets. Many MSME owners, particularly in micro and small enterprises, continue to rely on conventional business practices such as manual bookkeeping, face-to-face transactions, and informal customer engagement. These practices are often perceived as more trustworthy, familiar, and manageable compared to digital alternatives.

A major contributor to this resistance is the lack of digital literacy among both business owners and employees. Without adequate knowledge or confidence in using digital platforms, many fear operational disruptions, errors, or loss of control during the transition to new systems. This uncertainty fosters reluctance to integrate technologies such as mobile banking, cloud software, or online sales tools.

The next chapter will present survey findings, providing quantitative insights into the key barriers and potential strategies for accelerating digital transformation among MSMEs in Myanmar.

CHAPTER IV

SURVEY ANALYSIS

4.1 Profile of Survey Area

This study focuses on examining the obstacles of financial, technology, regulatory, and socio-cultural factors. The survey was conducted in Chanmyathazi, which is located in the heart of Mandalay, Myanmar's second largest commercial capital. Chanmyathazi Township is one of the most economically active and densely populated urban areas in Myanmar. Among the six main townships of Mandalay, Chanmyathazi is a hub for trade, services and urban employment.

Table 4.1: Sector-wise Distribution of MSMEs (National, Regional, Township Levels)

Location	Total MSMEs	Services	Trade & Retail	Manufacturing
Myanmar (Nationwide)	1,110,000+	65% (721,500)	20% (222,000)	15% (166,500)
Mandalay Region	30,000+	70% (21,000)	15% (4,500)	15% (4,500)
Chanmyathazi Township	1,386	75% (972)	13% (213)	12% (201)

Source: Ministry of Industry, MSME Development Report (2024), DICA & UNESCAP MSME Regional Profiles (2024), GAD Local Facts for Chanmyathazi (2024)

Chanmyathazi Township hosts 1,386 MSMEs, representing approximately 0.11% of all MSMEs nationwide and about 4% of MSMEs in Mandalay Region. Service-sector MSMEs dominate across all levels, especially at the township level (75%), which aligns with urbanization and consumption-driven business patterns. Manufacturing sector share is higher in Mandalay Region (15%) compared to the national (15%) and township (12%), indicating its industrial importance. Table 4.1 provides a multi-level comparative snapshot that demonstrates how Chanmyathazi

Township fits within the broader national and regional MSME ecosystem. Most of them are micro and small enterprises operating in informal or formal trade and services. These enterprises are the backbone of employment and the economy in the township.

The economy of the township is dominated by trade and services. Nearly 22.2% of the employed population works in retail trade, 30.5% in manufacturing, 34.7% in service-related industries and another 12.6% in construction. Most of the small, medium and medium-sized enterprises (MSMEs) in Chanmyathazi are in the service sector, including beauty salons, private clinics, training centers, restaurants, home delivery services and mobile phone repair shops. Retail businesses such as grocery stores and clothing stores are common, while small-scale manufacturing and processing units are few.

The adoption of digital technology, which is a driving force for marketing and customer communication, is gradually growing due to the widespread use of mobile internet, smartphones, and platforms such as Facebook, Viber, and YouTube. Popular mobile wallet systems such as KBZPay, WavePay, and OnePay are seeing increased usage, especially for their convenience in making payments. However, challenges such as unstable internet connectivity, high mobile data costs, inconsistent electricity supply, and lack of digital training or government support programs, are hampering the growth of the sector.

Digital readiness is uneven across the township. While some areas have benefited from fiber internet, most MSMEs still rely on mobile data, which often has slow speeds and unreliable services. The digital divide persists, especially between young tech-savvy entrepreneurs and older or less educated business owners who rely on traditional practices. This generational and technological gap continues to influence the readiness for digital transformation across the township. Chanmyathazi is a densely populated and economically vibrant township with a strong service sector MSMEs, high digital potential, and a young and highly literate population. These circumstances support the relevance and importance of studying the digital transformation journey of MSMEs.

4.2 Survey Design

This research adopts a quantitative approach, grounded in the Innovation Resistance Theory, which highlights key barriers that influence the adoption and non-adoption of digital technology among MSMEs. The theory provides a robust

conceptual foundation for identifying and analyzing factors such as functional barriers (usage, value, risk) and psychological barriers (tradition, image) that inhibit MSME owners and managers from embracing digital transformation.

The study employs both primary and secondary data sources. Primary data was collected through a structured questionnaire administered via phone calls, online surveys, and interviews. Secondary data was obtained from relevant literature, government publications, and reports on MSMEs and digital transformation in Myanmar.

According to the 2023 General Administration Department (GAD) census, there are approximately 1,386 registered businesses in Chan Myat Thazi Township, Mandalay Region, covering all business types in all sectors.

The appropriate sample size was determined using the Taro Yamane formula:

$$n = \frac{N}{k + Ne^2}$$

= 1386/(1+1386(0.05)^2)

= **310.52**

Since sample size must be a whole number, we round **310.52** to **311**.

Where:

- n = Sample size
- N = Population (1386 MSMEs)
- e = Level of precision (5%)
- K = Constant (1)

A total of 311 MSMEs were selected using a simple random sampling technique, ensuring each enterprise had an equal chance of being included in the survey. Thus, the minimum required sample size was determined to be approximately 311 respondents.

The questionnaire was designed with five sections (demographics, digital tool usage, technological barriers, financial constraints, and suggestions) and used 5-point Likert-scale items to gauge perceptions of digital transformation issues. A stratified random sampling approach was employed, and the Taro Yamane formula determined the sample size (initially targeting about 311 respondents).

In terms of sample composition, responses were collected from MSMEs across all parts of Chanmyathazi, reflecting the township's diverse service and retail sectors.

(For example, the distribution of business types in the sample matches the township's economy.) In short, our survey design ensured a representative sample of active MSME businesses in Chanmyathazi, using quantitative methods suitable for measuring perceived obstacles and benefits of digitalization.

4.3 Analysis of Survey Data

A total of 315 MSME business owners were contacted via structured questionnaires distributed both online and in person. Out of these, 298 responses were successfully received and completed, resulting in a high response rate of 94.6%. Only 17 businesses (5.4%) did not respond.

This section presents the demographic characteristics and digital adoption patterns of the surveyed MSMEs. The analysis begins by profiling the respondents to establish a contextual understanding of the sample, followed by an examination of digital tool usage and perceived barriers. These insights provide a foundation for interpreting the obstacles to digital transformation in Chanmyathazi Township.

Table 4.2: Type of Respondent by (Business Owner vs. Manager)

Variable	Category	Frequency	Percentage
Type of response	Business Owner	212	71.14%
	Manager	86	28.86%
Total		298	100%

Source: Survey Data, 2025

Table 4.2 presents the classification of respondents based on their role within the MSME. A total of **298** valid responses were collected, of which the majority (71.14%) were business owners, while 28.86% were managers. This indicates that the perspectives captured in this survey predominantly reflect the views of owners, who are often the primary decision-makers in digital transformation matters.

4.3.1 Demographic Profile

This section provides a consolidated overview of the demographic profile of **298** MSME respondents from Chanmyathazi Township. It includes variables such as gender, age, education level, sector of operation, firm age, employee size, and investment capital.

Table 4.3: Respondents by Demographic Profile

Variable	Category	Frequency	Percentage (%)
Gender	Male	161	54%
	Female	137	46%
Age Group	35–44 years	122	40.90%
	45–54 years	136	45.70%
	55 years and above	40	13.40%
Education Level	High School	5	1.70%
	Vocational/Diploma	58	19.50%
	Bachelor's Degree	205	68.80%
	Master's or Above	29	9.70%
Business Sector	Services	280	94%
	Manufacturing&Service	11	3.55%
	Retail&Service	7	2.35%
Years in Operation	1–3 years	27	9.00%
	4–6 years	102	34.20%
	>6 years	169	56.70%
Number of Employees	1–5 (Micro)	86	28.90%
	6–10 (Small)	63	21.10%
	11–20 (Medium)	65	21.80%
	21–50	54	18.10%
	>50	30	10.10%
Investment Capital (MMK)	< 5 million	22	7.40%
	5–10 million	53	17.70%
	10–30 million	96	32.30%
	30–50 million	61	20.50%
	50 million–1 billion	32	10.70%
	>1 billion	34	11.40%

Source: Survey Data, 2025

As shown in Table 4.2 of the demographic and enterprise profile of MSME respondents in Chanmyathazi Township, reveals key characteristics about their structure and capacity. Out of 298 surveyed participants, 54% were male and 46% female, indicating a relatively balanced gender distribution. Age-wise, 86.6% of respondents were between 35 and 54 years, reflecting a mature and active business demographic.

In terms of education, the majority (68.8%) held a Bachelor's degree, while 19.5% completed vocational or diploma programs. Only 1.7% had a high school

education, and 9.7% had attained a Master's degree or above, indicating a generally well-educated group of MSME owners or managers.

The service sector dominated the local business landscape, with 94% of MSMEs engaged in service activities. A small proportion operated in combined sectors: 3.55% in manufacturing and service, and 2.35% in retail and service.

With regard to business longevity, most enterprises were well established, 56.7% had been in operation for over six years, and another 34.2% had operated for four to six years. Only 9% had been active for less than three years, showing low turnover and relative business stability.

Employee size distribution indicated that 28.9% of businesses were micro-enterprises (1–5 employees), while 42.9% fell into small to medium categories (6–20 employees). An additional 28.2% employed more than 20 people, with 10.1% employing over 50, showing diversity in business scale.

Investment capital levels varied, with 32.3% investing between 10 to 30 million MMK and 20.5% between 30 to 50 million MMK. While 25.1% reported investments below 10 million MMK, a significant 22.1% had invested over 50 million MMK—of which 11.4% exceeded 1 billion MMK—highlighting the presence of both small and relatively large-scale MSMEs in the area.

These findings indicate that most MSMEs in Chanmyathazi are service-based, led by experienced and educated individuals, and span from micro to mid-sized enterprises with varying levels of capital investment.

4.3.2 Digital Adoption & Technology Usages Summary

The extent of digital adoption among MSMEs in Chanmyathazi Township was assessed using structured survey questions designed to capture both quantitative and categorical responses.

This table 4.4 measures the degree of digital tool usage by businesses, based on self-reported percentages of technology integration across operations. Respondents were asked to indicate the approximate proportion of digital tools used in their business processes, categorized into five usage levels ranging from "Not used (0%)" to "Digital uses lots (76–100%)". The results reflect the varying extent of digital adoption among the surveyed firms.

Table 4.4: Extent of Digital Tools Usage

Variable	Category	Frequency	Percentage
Digital Tools Usage (%)	Digital uses lots (76–100%)	174	49.48%
	Used (51–75%)	65	21.65%
	Only one half (26–50%)	28	9.28%
	A few use (1–25%)	6	2.06%
	Not used (0%)	52	17.53%
Total		**298**	**100.00%**

Source: Survey Data, 2025

Table 4.4 shows the availability of fibre broadband among MSMEs in Chanmyathazi Township. Among the surveyed businesses, nearly half reported extensive use of digital tools, utilizing between 76% and 100% of available technologies. Around one-fifth used digital tools moderately, engaging with 51% to 75% of options. A smaller segment used digital tools partially, covering 26% to 50%, while very few reported minimal use, between 1% and 25%. Notably, approximately 18% of respondents did not use any digital tools. Overall, the data indicates a majority of businesses have embraced digital technology to varying degrees, although a significant minority remains without digital engagement.

This variation in digital tool usage reflects differing levels of digital readiness and resource availability among MSMEs. Businesses with high digital engagement are likely benefiting from increased efficiency, broader market access, and improved customer service. In contrast, those with little or no digital adoption may face barriers such as limited skills, infrastructure gaps, or financial constraints. The presence of nearly one-fifth of businesses not using any digital tools suggests persistent digital exclusion within the sector. These findings highlight the need for targeted support to bridge the digital divide and promote inclusive digital transformation among MSMEs in the region. Encouragingly, the high percentage of digital tool usage among many MSMEs demonstrates a growing recognition of the value of technology in business operations. However, without adequate training and support mechanisms, the digital divide may continue to widen, disadvantaging smaller or less-resourced enterprises.

Table 4.5: Internet Connection and Technology Usage among MSMEs in Chanmyathazi Township

Variable	Yes		No	
	(N)	(%)	(N)	(%)
1. What type of internet connection does your business use?				
a. Fibre Broadband	123	41.24%	175	58.76%
b. Mobile Data (4G)	273	91.75%	25	8.25%
c. Public Wi-Fi	43	14.43%	255	85.57%
d. No Internet Access	0	0.00%	298	100.00%
2. What technologies do you use in your business?				
a. Social Media for Marketing	286	95.88%	12	4.12%
b. Real-Time Video Communication	92	30.93%	206	69.07%
c. Digital Payment Systems	255	85.57%	43	14.43%
d. Cloud Storage & Collaboration Tools	215	72.16%	83	27.84%
e. Business Management Software	120	40.21%	178	59.79%
3. Technologies used in business				
a. Supply Chain & Logistics Software	37	12.37%	261	87.63%
b. AI-Based Applications/Platforms	34	11.34%	264	88.66%
c. Accounting Software	98	32.99%	200	67.01%
d. E-commerce Platforms	89	29.90%	209	70.10%
e. Cybersecurity Solutions	49	16.49%	249	83.51%
f. None of the Above	0	0.00%	298	100.00%

Source: Survey Data, 2025

Table 4.5 presents data on the findings, indicating that the majority of MSMEs in Chanmyathazi Township primarily rely on mobile internet connectivity, with 91.75% of businesses using mobile data (4G). In contrast, only 41.24% of enterprises use fibre broadband, and public Wi-Fi usage is relatively low at 14.43%. Notably, none of the surveyed companies reported having no internet access, demonstrating a universal level of basic connectivity.

Regarding the adoption of digital technologies, social media is the most widely used tool, with 95.88% of MSMEs leveraging it for marketing purposes. Digital payment systems are also widely implemented, with 85.57% of businesses accepting mobile or digital payments. Cloud storage and collaboration tools are used by 72.16%

of respondents, while 40.21% utilize business management software and 32.99% adopt accounting software.

Table 4.6: Digital Payment Methods, Tool Usage, and Barriers among MSMEs in Chanmyathazi Township

Variable	Yes		No	
	(N)	(%)	(N)	(%)
1. Payment Methods				
a. Mobile Wallets (KBZPay, AYA Pay, etc.)	273	91.75%	25	8.25%
b. Cash	261	87.63%	37	12.37%
c. Mobile Banking	138	46.39%	160	53.61%
d. Card Payments (Visa/MasterCard)	55	18.46%	243	81.54%
2. Digital Tools Used				
a. Customer Relationship Management (CRM)	129	43.30%	169	56.70%
b. Accounting Software	120	40.21%	178	59.79%
c. Digital Marketing Tools	117	39.18%	181	60.82%
d. E-commerce Platforms	89	29.90%	209	70.10%
e. Communication Digital Tools	86	28.87%	212	71.13%
3. Frequency of Use				
a. Daily	209	70.10%	89	29.90%
b. One or more times per week	55	18.46%	243	81.54%
c. Occasionally	34	11.34%	264	88.66%
4. Barriers to Adoption				
a. Low technical use knowledge	172	57.73%	126	42.27%
b. Security issues	169	56.70%	129	43.30%
c. Inadequate funding	147	49.48%	151	50.67%
d. Believe it is not necessary	31	10.31%	267	89.69%

Source: Survey Data, 2025

Table 4.6 presents a summary of the digital payment methods, digital tools used, frequency of digital tool usage, and key barriers to digital adoption among MSMEs in Chanmyathazi Township, based on responses from 298 enterprises.

As shown in the table, mobile wallets such as KBZPay and AYA Pay are the most commonly used payment method, adopted by 91.75% of respondents, followed closely by cash (87.63%). However, more advanced payment methods like mobile banking (46.39%) and card payments (18.46%) remain less widely used.

In terms of digital tool adoption, Customer Relationship Management (CRM) systems (43.30%) and accounting software (40.21%) are moderately used, while digital marketing tools (39.18%) and e-commerce platforms (29.90%) also show some uptake. Communication tools are used by 28.87% of MSMEs, indicating moderate integration of digital communication systems.

The frequency of digital tool usage is promising, with 70.10% of businesses using at least one digital tool daily. However, 18.46% only use them weekly, and 11.34% occasionally, suggesting room for greater digital integration in day-to-day operations.

Barriers to digital adoption remain significant. The most commonly cited barriers include low technical knowledge (57.73%), security concerns (56.70%), and inadequate funding (49.48%). Additionally, 10.31% of businesses expressed a belief that digital tools are not necessary, indicating a need for awareness programs to promote digital literacy and the benefits of digital transformation.

Overall, Table 4.5 highlights both the progress and persistent challenges in MSME digitalization in Chanmyathazi Township. Addressing these barriers through targeted support, digital training, and infrastructure development could accelerate the adoption of digital technologies and improve business competitiveness.

4.3.3 Digital Engagement and Government Facilitation

This section evaluates the level of digital engagement among MSMEs and their perceived access to government support services based on structured survey responses. Digital engagement was measured by asking respondents to self-assess the extent of their digital technology use in business operations, categorised into four usage levels ranging from “Minimal use (1–25%)” to “Extensive use (76–100%).”

To assess government facilitation, respondents were presented with a list of five common support measures—tax incentives, low-interest loans, technology subsidies, high-speed internet provision, and digital skills development. They were asked to indicate whether they had received or were aware of each measure. Each response was recorded using a binary scale (Yes = 1, No = 0), and results were summarized using frequency and percentage distributions.

This approach enables a clear understanding of both the internal adoption behaviors of MSMEs and their external support environment, highlighting critical gaps in capacity-building efforts.

Table 4.7: Business Digitization Levels and Government Support Measures among MSMEs in Chanmyathazi Township

Category	Variable	Frequency (n)	Percentage (%)
Business Digitization Level	Digital use is extensive (76–100%)	224	75.17%
	Moderate use (51–75%)	45	15.10%
	Limited use (26–50%)	21	7.05%
	Minimal use (1–25%)	8	2.68%
Government Support Measures	Tax incentives for digital businesses	194	65.10%
	Low-interest loans for digital transformation	179	60.07%
	Subsidies for technology use	223	74.83%
	Provision of high-speed internet services	209	70.13%
	Digital skills development courses	60	20.13%

Source: Survey Data, 2025

Table 4.6 highlights the level of digital engagement among MSMEs and the perceived availability of government support in Chanmyathazi Township. A significant majority of MSMEs (75.17%) reported that they use digital technologies extensively in their operations, while 15.10% stated moderate use. Only a small proportion (less than 10%) reported limited digital engagement, indicating a growing awareness of digital tools' importance.

In terms of government support, 74.83% of respondents acknowledged receiving or being aware of subsidies for technology use, while 70.13% benefited from high-speed internet services. Tax incentives (65.10%) and low-interest loans (60.07%) were also recognized as common support measures. However, only 20.13% of MSMEs noted access to digital skills development programs, suggesting a gap in technical training and capacity-building support.

These findings demonstrate that while infrastructure and financial incentives are increasingly accessible, a more significant effort is needed in providing digital education and training to ensure inclusive digital transformation among MSMEs in the region.

4.3.4 Barriers to Digital Transformation

This section assesses the perceived barriers to digital transformation among MSMEs using a structured Likert-scale approach. Respondents were presented with a series of statements across four major barrier categories—financial, technological, regulatory & policy, and socio-cultural, and asked to rate their level of agreement on a 5-point scale, where 1 = Strongly Disagree and 5 = Strongly Agree. Each category includes five items carefully designed to capture specific aspects of the respective barrier type.

For each item, the mean (average score) and standard deviation (SD) were calculated to summarize the overall sentiment and variation in responses. Higher mean values indicate greater agreement that the factor is a barrier, while lower standard deviation values reflect consensus among respondents.

This measurement approach allows for a quantifiable and comparative analysis of the challenges faced by MSMEs in their digital transformation journey, thereby supporting data-driven recommendations for policy and capacity-building interventions.

Financial Barriers to Digital Transformation, MSMEs in Chanmyathazi Township face notable financial challenges that obstruct their efforts to adopt digital technologies. As presented in Table 4.8, the primary financial obstacles include limited financial resources for technology investment, high costs associated with digital tools, uncertainties in estimating return on investment (ROI), reluctance of financial institutions to provide loans, and the increased cost burden due to rapid technological advancements. These financial constraints significantly limit MSMEs' ability to invest in and sustain digital initiatives, thereby slowing their overall digital progress. Addressing these challenges through targeted financial support and affordable technology solutions is essential to enable broader digital adoption within the sector. Without effective financial interventions, many MSMEs risk falling further behind in the competitive digital economy, limiting their growth and sustainability.

Table 4.8: Financial Barriers to Digital Transformation

Variable	Mean	SD
Our business does not have sufficient financial resources	3.9	1.12
The cost of digital technologies is too high for our business	4.08	0.98
It isn't easy to estimate the Return on Investment (ROI) from digital transformation	3.7	1.23
Banks and funding institutions are reluctant to provide loans	3.84	1.12
Rapid evolution of technologies increases upgrade costs	3.98	1.07
Overall Mean (Financial Barriers)	**3.9**	**1.1**

Source: Survey Data, 2025

Table 4.8 presents the difficulties faced by MSMEs in Chan Myat Thazi Township during the digital transformation process. Key financial challenges include insufficient capital for purchasing digital technologies, high costs of software and hardware, difficulties in estimating return on investment (ROI), reluctance of banks and funding institutions to provide loans, and the rapid evolution of technologies leading to frequent upgrade costs. The mean scores indicate that financial barriers are perceived as significant obstacles by the majority of respondents.

Technological Barriers to Digital Transformation, MSMEs in Chanmyathazi Township encounter multiple technological challenges that obstruct their digital transformation process. Table 4.9 presents key technological barriers reported by respondents, including difficulties integrating new technologies with existing systems, unstable and slow internet connectivity, cybersecurity risks, complexity of digital tools, and inadequate IT infrastructure. These technological barriers hinder MSMEs from fully leveraging digital opportunities and improving operational efficiency. The lack of reliable internet connectivity, in particular, restricts access to cloud services and online platforms essential for modern business practices. Additionally, concerns over cybersecurity deter businesses from adopting advanced digital solutions. Complexity and poor user-friendliness of some digital tools further discourage widespread usage among MSMEs with limited technical expertise. Addressing these challenges requires coordinated efforts to enhance infrastructure, provide technical support, and promote user-friendly technologies tailored to MSMEs' needs.

Table 4.9: Technological Barriers to Digital Transformation

Variable	Mean	SD
Integrating existing systems with new tech is very difficult	3.94	1.05
Internet connectivity in our area is unstable and slow	3.87	1.11
Our business faces data and cybersecurity risks	3.87	1.09
Complexity of technologies makes them unsuitable for us	3.73	1.19
We lack IT infrastructure for digital technologies	3.92	1.08
Overall Mean (Technological Barriers)	**3.87**	**1.1**

Source: Survey Data, 2025

Table 4.9 outlines the technological barriers encountered by MSMEs in adopting digital transformation. Items covered include difficulties integrating new technologies with existing systems, unstable and slow internet connectivity, cybersecurity risks, complexity of technologies, and inadequate IT infrastructure. The results show that technological factors notably impede the digital transformation efforts of MSMEs in the study area.

Regulatory and Policy Barriers to Digital Transformation, MSMEs in Chanmyathazi Township face several regulatory and policy challenges that hinder their digital transformation efforts. Table 4.10 summarizes key barriers such as unclear government policies regarding digital technologies, legal obstacles in using digital payment systems, complex and time-consuming registration and licensing processes, lack of comprehensive data protection and privacy laws, and tax policies that do not adequately support digital businesses. These regulatory and policy challenges create uncertainty and increase the cost and complexity of adopting digital solutions for MSMEs. The absence of clear guidelines and streamlined procedures discourages formalization and slows down digital integration. Strengthening legal frameworks and simplifying regulatory processes are essential to foster a supportive environment that encourages MSMEs to embrace digital transformation confidently.

Table 4.10: Regulatory and Policy Barriers to Digital Transformation

Variable	Mean	SD
Government policies on digital tech are unclear	3.71	1.16
Legal barriers exist for using digital payment systems	3.89	1.06
Registration and licensing are complex and time-consuming	3.85	1.12
Lack of data protection/privacy laws causes concern	4	1.05
Tax policies do not support digital businesses	3.73	1.2
Overall Mean (Regulatory & Policy Barriers)	**3.83**	**1.12**

Source: Survey Data, 2025

Table 4.10 illustrates regulatory and policy barriers impacting MSMEs' digital transformation. The barriers include unclear government policies on digital technologies, legal challenges related to digital payment systems, complex and time-consuming registration and licensing procedures, lack of comprehensive data protection and privacy laws, and tax policies that do not support digital business activities. The mean values suggest these regulatory issues pose considerable challenges to MSMEs.

Socio-Cultural Barriers to Digital Transformation, MSMEs in Chanmyathazi Township also experience significant socio-cultural barriers that slow down digital transformation. As shown in Table 4.11, these include a lack of staff skills to effectively use new digital technologies, customer distrust toward digital payment systems, a preference for maintaining traditional business practices, concerns about losing personal relationships due to digitalization, and perceptions that digital technologies are complex and difficult to understand. These socio-cultural factors contribute to resistance against adopting digital innovations and hinder the willingness of both employees and customers to engage with digital platforms. Overcoming these barriers requires targeted training programs, awareness campaigns, and efforts to build trust in digital systems. Promoting the benefits of digitalization while respecting cultural values is vital for successful transformation among MSMEs.

Table 4.11: Socio-Cultural Barriers to Digital Transformation

Variable	Mean	SD
Staff lack skills to use new digital technologies	3.79	1.22
Customers hesitate to trust digital payment systems	3.75	1.28
Preference to continue traditional practices	3.81	1.16
Fear of losing personal relationships due to digital transformation	3.87	1.13
Digital tech is too complex and hard to understand	3.85	1.15
Overall Mean (Socio-Cultural Barriers)	**3.81**	**1.19**

Source: Survey Data, 2025

Table 4.11 details socio-cultural barriers that affect MSMEs' adoption of digital technologies. These barriers consist of a lack of staff skills to use digital tools, customers' hesitation to trust digital payment methods, preference for traditional business practices, fear of losing personal relationships through digitalization, and the perceived complexity of digital technologies. The findings indicate that socio-cultural factors play an important role in slowing digital transformation.

Table 4.12: Barriers to Digital Transformation

Barrier Category	Overall Mean	Average SD
Financial Barriers	3.9	1.1
Technological Barriers	3.87	1.1
Regulatory & Policy Barriers	3.83	1.12
Socio-Cultural Barriers	3.81	1.19

Source: Survey Data, 2025

Table 4.12 provides a summarized overview of the overall mean and average standard deviation values for each major category of barriers affecting the digital transformation of MSMEs in Chanmyathazi Township.MSMEs in Chanmyathazi Township encounter multiple barriers that hinder their ability to fully adopt and implement digital technologies. Among these, financial constraints emerged as the most significant

challenge. The overall mean score of 3.90 indicates that most businesses face difficulties in allocating adequate financial resources to invest in digital tools, with concerns over high initial costs, limited access to financing options, and uncertainty in calculating potential returns on investment. The standard deviation of 1.10 suggests a moderate level of agreement among the surveyed businesses regarding these financial challenges.

Technological barriers were also perceived as a major impediment, with an overall mean of 3.87 and a standard deviation of 1.10. Many MSMEs reported struggling with integrating new digital systems into their existing operations, inadequate internet connectivity, cybersecurity concerns, and the lack of necessary IT infrastructure. These technological shortcomings present critical hurdles for businesses aiming to modernize their workflows and expand their digital capabilities.

Regulatory and policy-related barriers received an overall mean score of 3.83. These include issues such as unclear government policies on digital transformation, legal complications in digital payment systems, complex business registration procedures, and insufficient data privacy regulations. The standard deviation of 1.12 reflects some variation in how respondents experience these challenges, possibly depending on the specific nature of their businesses or sectors.

Socio-cultural factors also posed considerable barriers, although with a slightly lower overall mean of 3.81 and the highest standard deviation of 1.19 among all categories. Businesses reported that employees' lack of digital skills, customer hesitation to trust digital payments, and the tendency to adhere to traditional practices were key concerns. The wide spread in responses suggests that perceptions of socio-cultural barriers vary significantly between businesses, possibly based on workforce demographics or customer segments.

The statistics presented in Table 4.12 highlight that financial and technological barriers are most acutely felt by MSMEs in the region, followed by regulatory and socio-cultural challenges. These insights underscore the importance of coordinated efforts from policymakers, financial institutions, and technology providers to reduce these barriers and support the digital transformation journey of small businesses in Myanmar.

4.3.5 Government Policy and External Support Needed

This section evaluates the specific types of government policy interventions and external support required to enhance digital transformation among MSMEs. To

measure these needs, the questionnaire included a structured checklist where respondents selected the forms of support they considered most necessary, including funding mechanisms, training needs, and infrastructure improvements. Responses were recorded in binary format (Yes/No), and results are presented using frequencies and percentages to identify the most common demands.

Table 4.13: Types of Support Needed to Improve Digital Transformation

Variable Category	Item	Frequency (n=298)	Percent (%)
Needed Support Types	Government funding/low-interest loans	227	76.18%
	Free/subsidized digital training	215	72.15%
	Improved internet infrastructure	203	68.12%
	Cybersecurity support	186	62.42%
Required Training	Digital marketing & social media	201	67.45%
	Digital payments & financial management	189	63.42%
	Cybersecurity & data protection	178	59.73%
	Cloud computing & business software	165	55.37%
Sector-Specific Barriers	Retail: Payment system limitations	134	44.97%
	Manufacturing: Poor supply chain digitization	121	40.60%
	Services: High cloud service costs	112	37.58%
Policy Influence on Adoption	Very strong influence	89	29.87%
	Incentives encouraged adoption	107	35.91%
	Policy barriers hinder adoption	102	34.22%
Sufficiency of Financial Incentives	Not enough at all	167	56.04%
	A little sufficient	87	29.19%
	Fair enough	44	14.77%

Source: Survey Data, 2025

Table 4.12 provides the survey data that reveal critical insights into the types of government policy and external support needed to facilitate digital transformation among MSMEs in Chanmyathazi Township. A significant majority of respondents (76.18%) expressed the need for government funding and low-interest loans to alleviate the financial burden of adopting digital technologies. Similarly, 72.15% indicated a

demand for free or subsidized digital training programs to enhance workforce capabilities. Improved internet infrastructure was highlighted by 68.12% of participants as an essential external requirement, while 62.42% called for more robust cybersecurity support to protect their digital operations.

Regarding specific training needs, MSMEs prioritized areas that directly support day-to-day digital business functions. Digital marketing and social media training were most in demand (67.45%), followed by training in digital payments and financial management (63.42%). Additionally, 59.73% of respondents wanted education in cybersecurity and data protection, and over half (55.37%) emphasized the importance of learning cloud computing and business software tools.

Sector-specific barriers were also identified. Among retail businesses, 44.97% reported limitations in payment systems as a key obstacle. In the manufacturing sector, 40.60% cited poor supply chain digitization as a constraint. For the services sector, 37.58% indicated that the high cost of cloud services hindered their ability to go digital.

Policy-related factors were found to play a considerable role in influencing digital adoption. While 35.91% of respondents acknowledged that government incentives encouraged them to adopt digital tools, 34.22% noted that policy barriers actually hindered their efforts. Additionally, 29.87% reported that government policy had a very strong influence on their decision to adopt digital technology.

When asked about the adequacy of financial incentives, more than half of the respondents (56.04%) stated that the support provided was not enough at all. Another 29.19% indicated that available incentives were only slightly sufficient, while just 14.77% believed the support to be fair or reasonable. These findings suggest a strong need for enhanced policy interventions, particularly financial and infrastructural support, to foster an inclusive digital ecosystem for MSMEs. These survey results underscore the critical role of government and external support in enabling MSMEs to overcome digital transformation barriers. Enhanced funding, training, and infrastructure improvements are essential to empower businesses and increase adoption rates. Furthermore, tailored sector-specific interventions can address unique challenges faced by different industries. Overall, strengthening policy frameworks and incentive mechanisms is vital to create a more supportive environment for sustainable digital growth among MSMEs.

Table 4.14: Belief and Experience Regarding Digital Transformation among MSMEs

Variable	Yes		No	
	(N)	(%)	(N)	(%)
1.The belief that digital transformation increases competitiveness	255	85.57%	43	14.43%
2.Received government support for digital transformation	78	26.17%	220	73.82%
3.Difficulty in understanding and implementing digital transformation	209	70.13%	89	29.87%

Source: Survey Data, 2025

Table 4.14 illustrates MSMEs' perspectives and experiences related to digital transformation in Chanmyathazi Township. The findings show that a significant majority of respondents (85.57%) believe that adopting digital technologies can improve their business competitiveness. This strong positive belief underscores a general awareness of the strategic importance of digital transformation in enhancing productivity and market relevance.

However, when it comes to tangible government support, only 26.17% of respondents reported having received any form of assistance related to digital transformation. The remaining 73.82% indicated that they had not benefited from such support. This reveals a notable gap between policy intentions and actual outreach or implementation at the grassroots MSME level.

Furthermore, 70.13% of the surveyed MSMEs admitted to facing difficulties in understanding and implementing digital transformation. This suggests that despite a high level of belief in the potential of digital tools, a large portion of business owners and managers lack the technical knowledge or operational capacity to execute the transformation effectively. This result points to the need for targeted support, such as awareness campaigns, technical advisory services, and practical training programs tailored to MSMEs' capacities.

Overall, the data presented in Table 4.14 highlight a contrast between positive perception and practical challenges. It also underscores the urgent need for improved government support systems and capacity-building initiatives to bridge the knowledge-practice gap in the digital transformation of MSMEs.

4.4 Survey Results

The survey results from 298 MSMEs in Chan Myat Thazi Township provide a broad view of the main barriers hindering digital transformation. Among the various dimensions explored, four main categories of barriers stand out: financial, technological, regulatory and policy, and socio-cultural. These barriers are deeply interrelated and create significant resistance to the adoption and integration of digital technologies within MSMEs. The majority of respondents operate within the service sector and are led by individuals with relatively high levels of education and years of business experience, indicating a stable and knowledge-driven MSME base. Most enterprises are either micro or small in size, with varying levels of investment capital. Despite this diversity, there is a strong recognition among MSMEs of the value and necessity of digital adoption for competitiveness, with 85.57% agreeing that digital transformation enhances their business potential.

However, the extent of digital tool usage remains varied. While foundational tools such as mobile data, social media marketing, and digital payments are widely adopted, more advanced digital solutions like cloud computing, cybersecurity systems, AI, and e-commerce platforms are used far less frequently. This signals a digital maturity gap. Though 70.10% of businesses reported using digital tools daily, the limited adoption of higher-level technologies reflects both capacity constraints and structural barriers.

Financial, technological, regulatory-policy, and socio-cultural challenges significantly impede digital progress. Financial constraints are the most prominent, with the highest overall mean score (3.90), highlighting widespread concerns over cost, limited access to financing, and uncertainty around return on investment. Technological barriers closely follow, including difficulties with system integration, internet instability, and poor IT infrastructure. Regulatory and policy-related issues such as unclear digital policies, complex procedures, and insufficient legal frameworks also limit adoption. Socio-cultural challenges, particularly low digital literacy among staff and persistent reliance on traditional practices, further slow transformation, especially among smaller enterprises.

Support expectations from government and external institutions are clearly defined. MSMEs express a strong need for financial assistance such as low-interest loans, better internet infrastructure, and digital capacity-building programs. Specific

training in digital marketing, financial tools, and data protection is in high demand, along with sector-sensitive policies that reflect the unique challenges of retail, manufacturing, and service sectors. While some businesses acknowledged receiving government support, a large majority (73.82%) reported not receiving any, and many feel that existing incentives are insufficient.

Despite these challenges, the survey demonstrates a positive attitude toward digital transformation. The high belief in its competitiveness benefits, combined with growing awareness of technological tools, provides a promising foundation. Addressing the outlined barriers with well-targeted policies, capacity-building initiatives, and infrastructural improvements will be critical in advancing inclusive and sustainable digital transformation among MSMEs in Chanmyathazi Township.

To effectively address these issues, policy interventions must be targeted, integrated, and sensitive to the real-world constraints faced by MSMEs. Overcoming these barriers will require a combination of financial inclusion, digital skills, regulatory reform, and trust-building efforts, which will be discussed in more detail in the final chapter of this study.

CHAPTER V

CONCLUSION

5.1 Findings

The survey analysis reveals critical insights into the obstacles faced by MSMEs in Chanmyathazi Township during their digital transformation journey. Below is a structure of the key findings, supported by empirical data and statistical analysis.

This study aimed to investigate the key barriers and challenges that hinder digital transformation among Micro, Small, and Medium Enterprises (MSMEs) in Chanmyathazi Township, Mandalay. The findings are based on a structured survey conducted with 298 MSMEs, encompassing demographic information, technology adoption levels, types of digital tools used, barriers encountered, and perceptions about government support and future needs. The results revealed several significant findings across multiple dimensions.

Demographically, most MSMEs in Chanmyathazi Township are operated by individuals aged between 35 and 54 years, and the gender distribution is fairly balanced, with 54% male and 46% female respondents. The majority of business owners or managers hold at least a Bachelor's degree (68.8%), and many enterprises have been in operation for more than six years, indicating a mature and stable business environment. In terms of sector, service-based businesses dominate, making up 94% of the sample, while micro and small-sized firms form the majority based on employee count and capital investment.

About digital adoption, 75.17% of MSMEs reported high levels of digital usage (over 75%), especially for basic tools such as social media (95.88%), mobile internet (91.75%), and digital payment systems (85.57%). However, the use of more advanced technologies like AI-based applications (11.34%), logistics software (12.37%), and cybersecurity solutions (16.49%) remains very low, indicating a significant digital

maturity gap. Fiber broadband access is also limited, with only 41.24% of businesses having access, while most rely on mobile data (4G) for internet connectivity.

In terms of barriers, the study identified four primary categories: financial, technological, regulatory-policy, and socio-cultural. Among these, financial barriers were found to be the most significant, with an overall mean of 3.90 out of 5. The lack of sufficient financial resources to invest in digital technologies, high associated costs, difficulties estimating return on investment, and the reluctance of banks to offer digital transformation loans were commonly cited. Technological barriers, with a mean of 3.87, included poor internet infrastructure, difficulties in integrating new technologies into existing systems, and a lack of IT infrastructure. Regulatory and policy barriers (mean = 3.83) were also prevalent, with unclear digital policies, complex registration procedures, and insufficient legal frameworks, especially around digital payments and data protection. Socio-cultural barriers (mean = 3.81) involved low digital literacy among staff, distrust of digital tools by customers, and a preference for maintaining traditional business practices.

Another important finding is that while the majority of respondents (85.57%) believe digital transformation enhances competitiveness, only 26.17% reported receiving any form of government support, revealing a clear gap between policy intentions and practical outreach. Furthermore, 70.13% of MSMEs indicated that they experience difficulties understanding and implementing digital transformation, suggesting the need for accessible and practical digital literacy training and support systems.

Regarding support needs, most MSMEs expressed a strong demand for government funding or low-interest loans (76.18%), followed by free or subsidized digital training programs (72.15%) and improved internet infrastructure (68.12%). Cybersecurity support (62.42%) and practical training in digital marketing, digital payments, and cloud computing were also highlighted as critical areas for development. Sector-specific needs varied: retail businesses were concerned about digital payment system limitations, manufacturers cited poor supply chain digitization, and service providers faced high cloud service costs.

The analysis of responses related to government policy influence showed a divided picture. While 35.91% believed that incentives encouraged digital adoption, 34.22% pointed to policy barriers that hindered progress. Moreover, 56.04% of

businesses stated that the financial incentives currently available were not sufficient at all, highlighting dissatisfaction with existing support mechanisms.

The study found that MSMEs in Chanmyathazi Township are generally aware of the importance of digital transformation and show willingness to adopt basic digital technologies. However, this willingness is significantly constrained by financial difficulties, technological limitations, regulatory uncertainty, and socio-cultural resistance. Without targeted policy support, practical training, and infrastructure improvements, the digital transformation of MSMEs will remain uneven and incomplete. These findings underscore the urgent need for integrated and localized strategies to overcome the multilayered barriers faced by small businesses in Myanmar.

5.2 Suggestions

The results of this research show that digital transformation is not yet fully achieved in the micro, small and medium enterprises (MSMEs) in Chan Myat Thasi Township, Myanmar, due to complex barriers. Therefore, based on the survey findings, several strategic and actionable suggestions are presented to address the barriers hindering digital transformation among MSMEs in Chanmyathazi Township and to accelerate their digital readiness sustainably and inclusively.

Building on the study's findings and guided by established frameworks such as the Technology–Organization–Environment (TOE) framework (en.wikipedia.org), resource-based theory, and dynamic capabilities, Chanmyathazi Township's MSMEs need a holistic and practical support strategy. Financially, despite a clear demand, 76% seeking low-interest loans and over 56% regarding current incentives as insufficient, only 26% have received any support. To address this, the government should develop targeted, low-interest loan schemes and micro-grants explicitly for digital adoption (including secure internet, cybersecurity tools, and cloud services). Such initiatives directly align with the technological and environmental enablers of the TOE framework, removing critical barriers to adoption.

Observations show that over 70% of MSMEs face difficulties implementing digital tools, highlighting a significant skills deficit. Resource-based and dynamic capability theories emphasise that developing human capital is essential for building long-term digital capacity. Practical responses should include localized, hands-on training programs in areas like digital marketing, payments, cloud computing, and cybersecurity. Certification-linked, sector-

specific workshops, conducted through community centers or MSME hubs, will integrate knowledge acquisition with real-world application, strengthening organizational readiness.

Survey findings also point to policy and regulatory ambiguity, such as unclear digital payment guidelines and complex licensing, as moderate but significant impediments (overall mean 3.83). The government should streamline business registration processes for digital ventures, clarify e-payment policies, and ensure transparent data protection statutes. These changes would create a more navigable and supportive business environment, consistent with the environmental dimension of the TOE framework.

Sector analysis reveals specific pain points: retail faces payment system limitations, manufacturers endure supply chain inefficiencies, and service providers struggle with high cloud costs. Tailored incentives, like subsidized point-of-sale tools, supply chain digital platforms, and discounted cloud bundles, would directly meet these sectoral needs, increasing the perceived usefulness and relevance of digital technologies.

Furthermore, building collaborative digital ecosystems, such as MSME innovation hubs or ICT incubators, equipped with mentorship, shared cyber tools, and pilot deployment support, would foster dynamic capabilities. According to dynamic capability theory, not only do firms need resources, but also the capacity to reconfigure these in response to changing environments. An ecosystem approach enables smaller enterprises to leverage collective learning, reduce individual risk, and build a more resilient digital foundation.

The 2025 Cybersecurity Law, while essential for national security, also brings compliance complexity. To ensure MSMEs are not disproportionately burdened, targeted financial assistance, a clear compliance roadmap, and support in implementing best-practice cyber hygiene should accompany regulatory enforcement. This balanced approach would help integrate security with growth.

The effective transformation requires a multi-pronged strategy: accessible finance, clear policies, practical training, secure infrastructure, and collaborative ecosystems. These actions map directly onto the TOE framework's domains and deliver the foundational and adaptive resources MSMEs need. By responding to both internal constraints and external environmental factors, policymakers can foster sustainable and inclusive digital transformation in Chanmyathazi Township.

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APPENDIX I

SURVEY QUESTIONNAIRE FOR OBSTACLES OF MSMEs IN THE DIGITAL TRANSFORMATION PROCESS IN CHANGMYATHARZI TOWNSHIP

This questionnaire is designed to solicit information to undertake the Executive Master of Development Studies Thesis at the Yangon University of Economics on the title: **A study on barriers to MSMEs in the digital transformation process in Myanmar (Chan Myat Thazi Township, Mandalay, case study)**

Information generated from the questionnaire will be handled with confidentiality.

Part (I)

A. Reprondent's information

Type of response	Business Owner	
	Manager	

Part (I) Business Information

1	Gender	Male	
		Female	
2	Age Group	35–44 years	
		45–54 years	
		Other Age Groups	
3	Education Level	High School	
		Vocational/Diploma	
		Bachelor’s Degree	
		Master’s or Above	
4	Business Sector	Services	

		Manufacturing&Service	
		Retail&Service	
		Agriculture	
		Food & Beverage	
5	Years in Operation	<1 year	
		1–3 years	
		4–6 years	
		>6 years	
6	Number of Employees	1–5 (Micro)	
		6–10 (Small)	
		11–20 (Medium)	
		21–50	
		>50	
7	Investment Capital (MMK)	< 5 million	
		5–10 million	
		10–30 million	
		30–50 million	
		50 million–1 billion	
		>1 billion	

Part (II) Digital Adoption & Technology Usage

8	How many digital tools does your business use?	Digital uses lots(76–100%)	
		Used(51–75%)	
		Only one half(26–50%)	
		A few use(1–25%)	
		Not used(0%)	
9		Daily	
		One or more on a week	

	How much time do you use digital devices in your daily activities?	Occasionally	
		Never	

			Yes	No
10	What type of internet connection does your business use? (You can select more than one.)	Fiber broadband		
		Mobile data (4G)		
		Public Wi-Fi		
		No internet access		
11	What technologies do you use in your business? (You can select more than one.)	Social Media for Marketing		
		Digital Payment Systems		
		Real-Time Video Communication		
		Cloud Storage & Collaboration Tools		
		Business Management Software		
12	What technologies do you use in your business? (You can select more than one.)	Supply Chain & Logistics Software		
		AI-Based App/Platforms		
		Accounting Software		
		E-commerce Platforms		
		Cybersecurity Solutions		
		None of the above		

13	What type of payment acceptance do you use? (You can select more than one.)	Mobile Wallets (KBZ Pay, WavePay, etc.)	
		Cash	
		Mobile Banking	

		Card Payments (Visa/MPU)	
14	Which tools are difficult to use? (You can select more than one.)	Accounting Software	
		CRM	
		Digital Marketing Tools	
		E-commerce Platforms	
15	What is the main reason for not using digital tools in your business?(You can select more than one.)	Low technical knowledge	
		Security issues	
		Inadequate funding	
		Not necessary	

Part (III) Digital Engagement and Government Facilitation

16	How much of your business has been digitized? (0-100% Scale)	Digital uses lots(76–100%)	
		Used(51–75%)	
		Only one half(26–50%)	
		A few use(1–25%)	
		Not used(0%)	
17	How confident are you in using digital technologies effectively?	Very confident	
		Somewhat confident	
		Not confident	
		Not using at all	
18	What government support measures will encourage digital adoption in your business? (You can select more than one.)	Tax incentives for digital businesses	
		Low-interest loans for digital transformation	
		Government subsidies for technology use	
		High-speed internet services	

	Digital skills development courses	

Part (IV) Barriers to Digital Transformation

Financial Barriers

		1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
19	Our industry does not have adequate financial resources for technology.					
20	It is difficult to estimate ROI from digital transformation.					
21	Banks and funding institutions are reluctant to provide loans.					
22	Rapid evolution of technologies increases upgrade costs.					

Technological Barriers

	Item	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
23	Integrating existing systems with new tech is very difficult.					
24	Internet connectivity in our area is unstable and slow.					
25	Our business faces data and cybersecurity risks.					
26	Complexity of technologies makes them unsuitable for us.					
27	We lack IT infrastructure for digital technologies.					

Regulatory and Policy Barriers

	Item	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
28	Government policies on digital tech are unclear.					
29	Legal barriers exist for using digital payment systems.					

30	Registration and licensing are complex and time-consuming.					
31	Lack of data protection/privacy laws causes concern.					
32	Tax policies do not support digital businesses.					

Socio-Cultural Barriers

	Item	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
33	Staff lack skills to use new digital technologies.					
34	Customers hesitate to trust digital payment systems.					
35	Preference to continue traditional practices.					
36	Fear of losing personal relationships due to digital transformation.					
37	Our staff find digital technologies too complex to use.					

Part (V) Government Policy and External Support Needed

38	What kind of help do you need from the government to improve the use of technology in your business? (You can select more than one.)	Government funding/low-interest loans	
		Free/subsidized digital training	
		Improved internet infrastructure	
		Cybersecurity support	
39	What training (courses) do you need to improve the use of technology in your business? (You can select more than one.)	Digital marketing & social media	
		Digital payments & financial management	

		Cybersecurity & data protection	
		Cloud computing & business software	
40	Which digital barriers affect your business sector the MOST? (You can select more than one.)	Payment system limitations	
		Poor supply chain digitization	
		High cloud service costs	
41	How has government policy influenced your decision to adopt digital technology?	Very strong influence	
		Incentives encouraged adoption	
		Policy barriers hinder adoption	
42	Do you think financial incentives (loans, tax relief) from the government are sufficient for MSMEs to adopt digital technology?	Not enough at all	
		A little sufficient	
		Fair enough	

		Yes	No
43	Do you believe digital transformation will improve your business competitiveness?		
44	Does the government support MSMEs for digital transformation?		
45	Can you understand and embrace Digital Transformation?		

APPENDIX II

This section presents the actual data, responses, and statistical analyses of those who participated in the research.

Part (I) Business Information

Variable	Category	Frequency	Percent (%)
Type of response	Business Owner	212	71.14%
	Manager	86	28.86%
Gender	Male	161	54%
	Female	137	46%
Age Group	35–44 years	122	40.90%
	45–54 years	136	45.70%
	55 years and above	40	13.40%
Education Level	High School	5	1.70%
	Vocational/Diploma	58	19.50%
	Bachelor's Degree	205	68.80%
	Master's or Above	29	9.70%
Business Sector	Services	280	94.10%
	Manufacturing&Service	11	3.55%
	Retail&Service	7	2.35%
Years in Operation	<1 year		0.00%
	1–3 years	27	9.00%
	4–6 years	102	34.20%
	>6 years	169	56.70%
Number of Employees	1–5 (Micro)	86	28.90%
	6–10 (Small)	63	21.10%
	11–20 (Medium)	65	21.80%
	21–50	54	18.10%

	>50	30	10.10%
Investment Capital (MMK)	< 5 million	22	7.40%
	5–10 million	53	17.70%
	10–30 million	96	32.30%
	30–50 million	61	20.50%
	50 million–1 billion	32	10.70%
	>1 billion	34	11.40%

Part (II) Digital Adoption & Technology Usage

Variable	Category	Frequency	Per cent (%)
Digital tools usage (%)	Digital uses lots(76–100%)	174	49.48%
	Used(51–75%)	65	21.65%
	Only one half(26–50%)	28	9.28%
	A few use(1–25%)	6	2.06%
	Not used(0%)	52	17.53%

What type of internet connection does your business use?	Fiber broadband	No (0)	175	58.76%
		Yes (1)	123	41.24%
	Mobile data (4G)	Yes (1)	273	91.75%
		No (0)	25	8.25%
	Public Wi-Fi	No (0)	255	85.57%
		Yes (1)	43	14.43%
	No internet access	No (0)	298	100%
		Yes (1)	0	0%
What technologies do you use in your business?	Social Media for Marketing	Yes (1)	286	95.88%
		No (0)	12	4.12%
	Real-Time Video Communication	No (0)	206	69.07%
		Yes (1)	92	30.93%
		Yes (1)	255	85.57%

	Digital Payment Systems	No (0)	43	14.43%
	Cloud Storage & Collaboration Tools	Yes (1)	215	72.16%
		No (0)	83	27.84%
	Business Management Software	No (0)	178	59.79%
		Yes (1)	120	40.21%
Technologies used in businesstechnologies used in business	Supply Chain & Logistics Software	No (0)	261	87.63%
		Yes (1)	37	12.37%
	AI-Based App/Platforms	No (0)	264	88.66%
		Yes (1)	34	11.34%
	Accounting Software	No (0)	200	67.01%
		Yes (1)	98	32.99%
	E-commerce Platforms	No (0)	209	70.10%
		Yes (1)	89	29.90%
	Cybersecurity Solutions	No (0)	249	83.51%
		Yes (1)	49	16.49%
	None of the above	No (0)	298	100%
		Yes (1)	0	0%

Payment methods	Mobile Wallets (KBZPay, AYA Pay, etc.)	273	91.75%
	Cash	261	87.63%
	Mobile Banking	138	46.39%
	Card Payments (Visa/MasterCard)	55	18.56%
Digital tools used in business	CRM (Customer Relationship Management)	129	43.30%
	Accounting Software	120	40.21%
	Digital Marketing Tools	117	39.18%

	E-commerce Platforms	89	29.90%
	Communication Digital Tools	86	28.87%
Frequency of digital tool usage	Daily	209	70.10%
	One or more on week	55	18.56%
	Occasionally	34	11.34%
Barriers to digital adoption	Low technical use knowledge	172	57.73%
	Security issues	169	56.70%
	Inadequate funding	147	49.48%
	Imagine that it is not necessary	31	10.31%

Part (III) Digital Engagement and Government Facilitation

Variable	Category	Frequency	Percent (%)
Business Digitization Level (0–100%)	Digital uses lots(76–100%)	224	75.17%
	Used(51–75%)	45	15.10%
	Only one half(26–50%)	21	7.05%
	A few use(1–25%)	8	2.68%
	Not used(0%)	0	0.00%
How confident are you in using digital technologies effectively?	Very confident	66	22.15%
	Somewhat confident	139	46.64%
	Not confident	72	24.16%
	Not using at all	21	7.05%
Government Support Measures	Tax incentives for digital businesses	194	65.10%
	Low-interest loans for digital transformation	179	60.07%

	Government subsidies for technology use	223	74.83%
	High-speed internet services	209	70.13%
	Digital skills development courses	60	20.13%

Part (IV) Barriers to Digital Transformation

Barrier Category	Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
Financial Barriers	Our business does not have sufficient financial resources to purchase digital tech.	12	26	52	98	110
	The cost of digital technologies is too high for our business.	8	19	45	96	130
	It is difficult to estimate ROI from digital transformation.	20	30	70	78	100
	Banks and funding institutions are reluctant to provide loans.	15	24	60	94	105
	Rapid evolution of technologies increases upgrade costs.	9	21	57	91	120

Barrier Category	Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
Technological Barriers	Integrating existing systems with new tech is very difficult.	10	20	50	115	103
	Internet connectivity in our area is unstable and slow.	14	23	60	91	110
	Our business faces data and cybersecurity risks.	11	22	58	112	95

	Complexity of technologies makes them unsuitable for us.	18	25	61	108	86
	We lack IT infrastructure for digital technologies.	13	21	59	90	115

Barrier Category	Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
Regulatory-Policy	Government policies on digital tech are unclear.	9	18	120	55	96
	Legal barriers exist for using digital payment systems.	10	20	52	125	91
	Registration and licensing are complex and time-consuming.	12	22	56	115	93
	Lack of data protection/privacy laws causes concern.	10	19	50	101	118
	Tax policies do not support digital businesses.	8	20	116	54	100

Barrier Category	Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
Socio-Cultural Barriers	Staff lack skills to use new digital technologies.	14	26	58	110	90
	Customers hesitate to trust digital payment systems.	16	30	55	108	89
	Preference to continue traditional practices.	12	25	59	112	90
	Fear of losing personal relationships due to digital transformation.	10	21	60	115	92

	Digital tech is too complex and hard to understand.	13	22	57	110	96

Part (V) Government Policy and External Support Needed

Variable	Category	Frequency (n=298)	Percent (%)
Needed Support Types	Government funding/low-interest loans	227	76.18%
	Free/subsidized digital training	215	72.15%
	Improved internet infrastructure	203	68.12%
	Cybersecurity support	186	62.42%
Required Training	Digital marketing & social media	201	67.45%
	Digital payments & financial management	189	63.42%
	Cybersecurity & data protection	178	59.73%
	Cloud computing & business software	165	55.37%
Sector-Specific Barriers	Retail: Payment system limitations	134	44.97%
	Manufacturing: Poor supply chain digitization	121	40.60%
	Services: High cloud service costs	112	37.58%
Policy Influence on Adoption	Very strong influence	89	29.87%
	Incentives encouraged adoption	107	35.91%
	Policy barriers hinder adoption	102	34.22%
	Not enough at all	167	56.04%

Sufficiency of Financial Incentives	A little sufficient	87	29.19%
	Fair enough	44	14.77%

Belief in Digital Competitiveness	Yes(1)	255	85.57%
	No(0)	43	14.43%
Government Support to MSMEs for digital transformation	Yes(1)	78	26.17%
	No(0)	220	73.82%
Difficulty understanding and implementing digital transformation.	Yes(1)	209	70.13%
	No(0)	89	29.87%