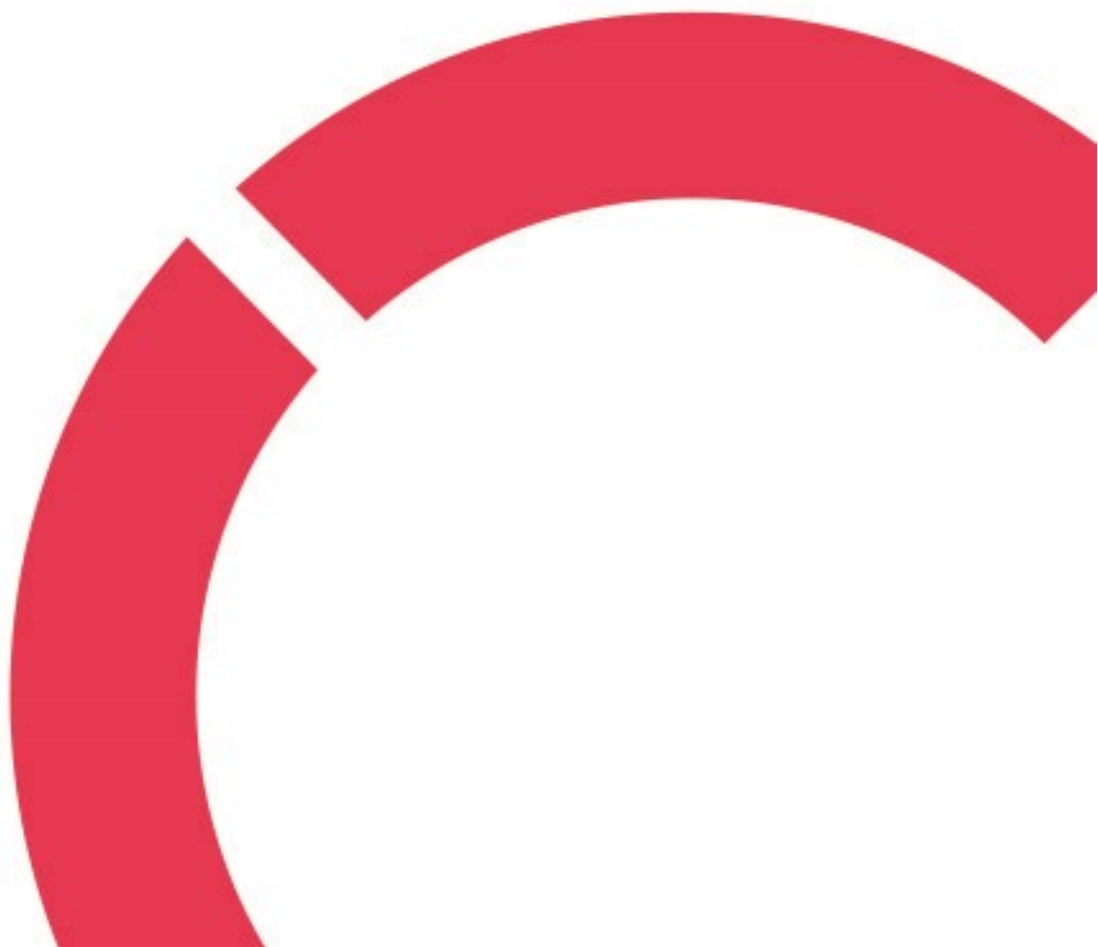


Md Anik Mollik
Afroja Khatun Ananna

**THE IMPACT OF GLOBALIZATION ON TECHNOLOGY-
ORIENTED SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)
IN THE BANGLADESHI MARKET**

Thesis
CENTRIA UNIVERSITY OF APPLIED SCIENCES
International Business
April 2024



ABSTRACT

Centria University of Applied Sciences	Date June 2024	Author Md Anik Mollik Afroja Khatun Ananna
Degree programme International Business		
Name of thesis THE IMPACT OF GLOBALIZATION ON TECHNOLOGY-ORIENTED SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs) IN THE BANGLADESHI MARKET		
Centria supervisor Peter Finell		Pages 71 + 4
<p>As the globalized landscape continues to evolve, Small and Medium-sized Enterprises (SMEs) find themselves at the nexus of profound transformations, navigating the intricate web of cross-border interactions, economic integration, and technological advancements. This thesis delves into the multifaceted impact of globalization on SMEs, seeking to unravel the challenges and opportunities that emerge in this dynamic milieu. This research examines the economic repercussions of globalization on SMEs, analyzing factors such as market access, financial performance, and competitive dynamics. Furthermore, it explores the role of technology in facilitating or hindering SMEs' integration into the global market, emphasizing the importance of technological adoption in enhancing their competitiveness. The cultural implications of globalization on SMEs are also scrutinized, addressing how diversity and cross-cultural interactions influence organizational dynamics and international business relationships. To provide a comprehensive understanding, the study encompasses diverse industries and regions, acknowledging the varied experiences and challenges faced by SMEs. Through the exploration of case studies, empirical research, and theoretical frameworks, this thesis aims to contribute valuable insights to academics, policymakers, and business practitioners. The ultimate goal is to offer practical recommendations that empower SMEs to not only withstand the challenges posed by globalization but also to capitalize on the myriad opportunities presented in an interconnected world. In doing so, this research aspires to foster sustainable growth and resilience among SMEs, positioning them as vital contributors to the evolving global economic landscape.</p>		

<p>Key words Cross-cultural Interactions, Economic Impact, Economic Integration Technology and SMEs, Globalization, Global Economic Landscape, Global Marketplace, International Business, Market Access, Resilience Strategies, Small and Medium-sized Enterprises (SMEs), Technological Adoption</p>

ABSTRACT

CONTENTS

1 INTRODUCTION.....	1
1.1 Globalization and Its Aspects.....	2
1.2 Motivations	2
1.3 Objectives.....	3
1.4 Technology Adoption by SMEs.....	4
2 MARKETING	6
2.1 Marketing Strategies.....	6
2.2 The 4 Ps of Technology-oriented SMEs in the Bangladeshi Market.....	9
2.3 Marketing plan	12
2.4 Marketing analysis	14
2.5 Marketing channels and platforms.....	16
3 ANALYSIS ON TECHNOLOGY BASED SMES IN BANGLADESHI MARKET	18
3.1 Business Plan	18
3.2 Operational Plan	20
3.3 Risk Management.....	21
3.4 SWOT Analysis	23
3.4.1 Strengths	24
3.4.2 Weaknesses	24
3.4.3 Opportunities.....	25
3.4.4 Threats	26
3.5 PESTEL Analysis	27
3.5.1 Political Factors.....	27
3.5.2 Economic Factors	27
3.5.3 Social Factors.....	28
3.5.4 Technological Factors	28
3.5.5 Environmental Factors	28
3.5.6 Legal Factors	29
4 SURVEY ANALYSIS	31
4.1 Respondents of the Survey	31
4.2 Connection to the Thesis Theme:.....	31
4.3 Relevance of the Survey:	31
5 DISCUSSION	67
5.1 Significance of this Thesis.....	67
5.2 Drawbacks of this Thesis	68
6 CONCLUSION	69
REFERENCES.....	66

FIGURES

FIGURE 1: Technology Adoption by SMEs in Bangladesh (Inspirar, B., 2023).....5

FIGURE 2: 4Ps of Technology Based SMEs in Bangladesh..... 11

FIGURE 3: SWOT Analysis of Technology-oriented SMEs in the Bangladeshi Market.....25

FIGURE 4: PESTEL Analysis of Technology-oriented SMEs in the Bangladeshi Market.....28

FIGURE 5: Familiarity With the Concept of Globalization30

FIGURE 6: Influence of Globalization in Technology-based SME31

FIGURE 7: Significant Technological Advancement on SME Operations.....33

FIGURE 8: Impact of Globalization in SMEs Access to International Market.....34

FIGURE 9: Influence of Globalization to Attract Foreign Investment36

FIGURE 10: Increased Competition for Globalization37

FIGURE 11: SMEs Adapted to Compete in the Global Market.....38

FIGURE 12: Impact of Globalization in Supply Chain Management 40

FIGURE 13: Influence of Globalization in Pricing Strategy41

FIGURE 14: Importance of International Collaboration for the Success of SME43

FIGURE 15: Challenges of Globalization in SME44

FIGURE 16: Impact of Globalization in the Regulatory Environment for SME.....46

FIGURE 17: Utilization of SMEs in Ecommerce Platforms 47

FIGURE 18: Impact of Globalization to Access Financing Options.....49

FIGURE 19: Significance of Digital Marketing for Promoting SME Products50

FIGURE 20: Cultural Barriers Faced by SMEs in Global Market52

FIGURE 21: Influence of SMEs to Sustainability and Corporate Social Responsibility.....53

FIGURE 22: Role of Government Policies for Facilitating SME’s Globalization Efforts.....55

FIGURE 23: Influence of Globalization in Customer Behaviour by SME56

FIGURE 24: Future Prospects of Technology-based SMEs in Bangladesh58

FIGURE 25: Significant Segment of Technology in the SME of Bangladesh 60

1 INTRODUCTION

Small and medium enterprises (SMEs) are crucial drivers of economic development, particularly in developing and emerging nations (Botezatu, M. A., & Hosszu, A. 2020, 1). Representing 99% of all businesses in the European Union, SMEs have significantly contributed to job creation, providing about 85% of new jobs over the last five years and ensuring two-thirds of the total private sector employment. In 2015, approximately 23 million SMEs generated 90 million jobs and a high added value of 3.9 billion EUR (Botezatu, M. A., & Hosszu, A. 2020, 1). Unlike large corporations, SMEs exhibit superior flexibility to technical changes, promote better income distribution, and adapt more swiftly to market fluctuations and new customer demands, with their organizational structures allowing for quicker decision-making (Botezatu, M. A., & Hosszu, A. 2020, 1). However, to realize their full potential, SMEs require continuous long-term funding to invest in growth opportunities (Botezatu, M. A., & Hosszu, A. 2020, 1).

Globalization, characterized by the increased flow of goods, services, capital, and information across borders, has ushered in a new era of possibilities for businesses of all sizes. The relationship between globalization and the state has evolved, enhancing the state's power over border control. The state's authority is evident in its regulation of the movement of people, goods, technology, and intellectual property. Globalization can be conceptualized as a series of flows, including capital, technology, ideas, and population, which is particularly relevant to discussions of mobility. Since the advent of state systems, migrants have been categorized as either internal or international. Today, the majority of migrants are internal, highlighting uneven development within countries, while international migration reflects global development disparities. Together, internal and international migrants account for nearly one billion migrant workers worldwide (Steger, M. B., Benedikter, R., Pechlaner, H., & Kofler, I. 2023, 64). However, the impact of globalization on SMEs is nuanced, presenting both transformative prospects and formidable challenges. As these enterprises grapple with the forces of global integration, factors such as market access, competition, technology adoption, and cultural diversity come to the forefront, influencing their strategies, performance, and overall resilience.

This thesis conducts a thorough analysis of how globalization impacts Bangladeshi SMEs in the field of technology, considering economic, social, and cultural factors. Employing case studies, empirical research, and theoretical frameworks, it aims to elucidate the intricate interplay between global forces and SME operations. The research endeavours to uncover innovative strategies and best practices that

empower SMEs to excel in the global arena. By examining both challenges and opportunities, this study aims to provide valuable insights for academics, policymakers, and industry practitioners, enabling them to make informed decisions supporting the growth and sustainability of Bangladeshi SMEs amidst the complexities of globalization, particularly within the technology sector.

1.1 Globalization and Its Aspects

In the technology field, globalization signifies the interconnectedness and interdependence of nations and economies through trade in products, services, information, and technology. This integration is propelled by advancements in technology, communication, and transportation, enabling easier cross-border trade and collaboration. Globalization in technology encompasses international investment and commerce, leading to economic interdependence and the exchange of goods, services, and investment opportunities between nations. Additionally, it involves the rapid dissemination of ideas, inventions, and knowledge through the cross-border exchange of information and technology, facilitated by innovations like the internet. Moreover, globalization in technology includes the interchange of cultures and the spread of ideas, customs, and values across countries, fostering cultural diversity and interconnectedness.

1.2 Motivations

SMEs exhibit diverse characteristics and operate in varied industries, leading to distinct experiences in the face of globalization. Exploring this diversity enables a nuanced understanding of the challenges and opportunities faced by different SMEs.

Globalization has become an omnipresent force shaping economic landscapes. Understanding its impact on SMEs is crucial for comprehending the broader dynamics of the global marketplace. Globalization has enabled various international companies to enter Africa's commercial space, bringing advanced technological innovations to many countries (Steger et al. 2023, 257). Africa has adopted educational models to enhance its learning processes, offering quality education to its students and giving them an edge in the global market. Proper integration into the world economy will allow Africa to develop and own technological innovations (Steger et al. 2023, 257). The global vision for Africa includes platforms for fostering technological advancement and innovative ideas. Increased investment in science and

technology is crucial to provide facilities that help citizens overcome current limitations. Africa should not remain the rural segment of the "global village" but should strive to match the progress of other regions, ensuring inclusivity for all its members (Steger et al. 2023, 257). SMEs represent a significant share of global businesses and play a vital role in national economies.

1.3 Objectives

In this study, our main objective is to focus on the globalization of technology sectors for SMEs. SMEs in the tech sector range from software development firms to hardware manufacturers and IT service providers. They often specialize in niche areas like mobile app development, cybersecurity, or cloud computing.

In the technology sector, SMEs confront fierce competition from larger firms, struggling to differentiate themselves in a saturated market. Rapid technological advancements demand constant adaptation, challenging SMEs to allocate resources for research and development. Cybersecurity threats add complexity, requiring substantial investments and compliance efforts. Talent acquisition is difficult, as SMEs compete with big players for skilled professionals, exacerbated by the demand for specialized skills. Access to funding is a hurdle, especially for startups, prompting reliance on alternative sources like venture capital. To thrive, SMEs must strategize, innovate, prioritize investments in talent and technology, and foster a culture of agility and continuous learning.

Expanding globally in the tech sector presents challenges such as regulatory hurdles, language barriers, and unfamiliar business practices, often leading to entry delays. SMEs face fierce competition from industry giants, requiring innovative strategies and unique offerings to gain traction. Intellectual property protection is crucial, yet navigating international IP laws is complex and costly. Accessing skilled talent and resources poses difficulties, as does securing funding for Research and Development (R&D) and infrastructure. Infrastructure limitations and connectivity issues hinder market penetration, necessitating investments in technology infrastructure. Compliance with diverse data privacy regulations is essential but resource-intensive, risking fines and reputational damage if neglected.

Addressing and overcoming these challenges demands a strategic blend of market research, partnerships, talent acquisition, and regulatory compliance, leveraging SMEs' agility and innovation for sustainable global growth. Collaboration with peers and stakeholders can facilitate knowledge sharing and resource

optimization for overcoming common obstacles. The main goals or key objectives of this thesis are listed below. To analyze how globalization influences operations, growth, and competitiveness of technology-oriented SMEs in Bangladesh investigating specific opportunities and challenges globalization presents to technology-oriented SMEs in Bangladesh. To evaluate the role of technological advancements in shaping the business landscape for Bangladeshi SMEs within globalization.

To develop actionable policy recommendations to support the growth and development of technology-oriented SMEs facing globalization by exploring ways to foster collaboration between academia, industry, and policymakers for supporting technology-oriented SMEs in Bangladesh.

To provide strategic insights and practical guidance for entrepreneurs to navigate and leverage opportunities in a globalized market.

1.4 Technology Adoption by SMEs

In Bangladesh, as the nation strides towards embracing the Fourth Industrial Revolution (4IR), the economy witnesses significant growth across various sectors, particularly in IT services and healthcare (Inspirar, B., 2023). Despite the country boasting a substantial number of SME entrepreneurs contributing consistently to GDP growth, it ranks unfavorably in global assessments of support systems and digital environments for entrepreneurs. Moreover, its position in the Ease of Doing Business Index indicates the urgent need for enhanced technology governance and the transformation of outdated business practices (Inspirar, B., 2023). However, the advent of the COVID-19 pandemic has presented a silver lining by compelling the world to pivot extensively to online engagement, underscoring the critical importance of technology adoption for survival in the new landscape (Inspirar, B., 2023). SMEs, at the forefront of embracing technology, have reaped the rewards of sustainable business practices and more efficient capital management (Inspirar, B., 2023). Post-pandemic, SMEs have already begun embracing basic technology solutions to maintain customer engagement, such as personalized content engines and survey tools. Many have transitioned their business models online, capitalizing on home delivery and digital payment options (Inspirar, B., n.d.). However, to fully harness market potential, SMEs require more than traditional tier-one ICT solutions. In today's digital era, services like hosting, storage, website creation tools, cybersecurity, and Internet of Things (IoT) become indispensable for small businesses right from the outset (Inspirar, B., 2023).

Two compelling case studies illustrate the impact of 4IR adoption on SMEs in Bangladesh. Adiba Metal Industries, a small business, overcame challenges and expanded its operations by embracing cloud-based technology solutions, including surveillance cameras and accounting software (Inspirar, B., 2023). Shashya Prabartana, an agro and processed food industry business, significantly increased sales and customer reach by adopting its own e-commerce system and leveraging inventory management software (Inspirar, B., 2023).

The adoption of technology by SMEs in Bangladesh is gaining momentum, with several tech companies offering a range of solutions tailored to the SME sector, including ERP, digital marketing, and logistics solutions (Inspirar, B., 2023). Despite progress, many SMEs are yet to fully embrace technology to enhance their businesses (Inspirar, B., 2023). The 4IR presents both challenges and opportunities for employment in Bangladesh (Inspirar, B., 2023). While automation poses a risk to jobs in certain industries, it also creates new opportunities, particularly in sectors leveraging technology for innovation and sustainability. Initiatives like the Skill Development for Industry 4.0 program aim to ensure inclusive benefits from the 4IR revolution (Inspirar, B., 2023). The A2i Future of Work Lab is spearheading efforts to address the challenges posed by automation and 4IR through the development of a collective intelligence system (Inspirar, B., 2023). By leveraging data and insights from various stakeholders, including public and private skills service providers, industry associations, and government departments, this initiative aims to provide accurate insights into current facts and future trends, empowering workers, businesses, and the government to navigate the changing employment landscape effectively (Inspirar, B., 2023). A list of the technology adoption by SMEs in their units is illustrated below in FIGURE 1.

**A list of the Technology adoption by SMEs in their units:
Table is showing technology adaptation among Bangladeshi SMEs: [L=Low, B=Basic, M=Medium]**

Industry	Manufacturing	Operations/Order Management	Sales and Marketing
Light Engineering	L	B	B
Leather Goods	B	L	L
Electric Goods	L	B	B
Designer Goods	B	L	M
Furniture Goods	B	L	M
Plastics	L	M	M
Health	N/A	M	L
Logistics	N/A	M	L
Agro and Processed Food	B	L	M

Source : SME Report, FES Bangladesh

Figure 1: Technology Adoption by SMEs in Bangladesh (Inspirar, B., 2023).

2 MARKETING

Marketing is the process of attracting potential customers to your products or services through research, promotion, selling, and distribution. Understanding market and consumer behaviors is a key component of this thesis, which also examines commercial management strategies for luring in new clients and keeping existing ones by meeting their requirements and wants while fostering brand loyalty.

2.1 Marketing Strategies

It is widely recognized that SMEs play a crucial role in local economies worldwide. The advent of new technology has transformed business operations globally, helping to bridge trade barriers by enhancing communication methods, expanding advertising platforms, and ensuring efficient delivery of goods and services. A recent study on the economic impact of Information Technology (IT) on small businesses, involving over 4,000 SMEs in the United States, Germany, China, India, and Brazil, found that tech-savvy SMEs outperformed those with minimal technology use in innovation, job growth, and revenue increases over the past three years. SME leaders who leveraged technology experienced business growth, cost reductions, and higher worker productivity. The study also revealed that if a fraction of SMEs with low and moderate technology adoption embraced the latest IT tools, they could collectively boost revenues by \$770 billion and create over 6 million new jobs in these five markets alone (Dzisi, S., & Ofosu, D. 2014, 104).

In the rapidly evolving landscape of technology-oriented SMEs in Bangladesh, digital marketing stands as a cornerstone for reaching and engaging with target audiences. Leveraging digital channels such as social media platforms, search engines, email, and content marketing, these SMEs can effectively showcase their value propositions. By creating engaging content that addresses the pain points of their audience and demonstrates how their products or services solve specific problems, SMEs can cultivate interest and drive engagement. Moreover, employing search engine optimization (SEO) techniques enhances their visibility in search engine results, driving organic traffic to their websites and online platforms.

Studies indicate that 87% of the global population uses mobile phones, with an 80% penetration rate in Ghana. SMEs can leverage this widespread mobile usage by adopting mobile marketing, using text,

photo, and video-based advertising content sent directly to mobile phone users to influence their purchase decisions. Recent research has found that mobile advertising significantly impacts consumer purchase decisions (Dzisi, S., & Ofosu, D. 2014, 109). Paid advertising campaigns on platforms like Google Ads, Facebook Ads, and LinkedIn Ads further amplify their reach and increase brand exposure to specific demographics, ensuring maximum impact in a competitive digital space.

To achieve optimal results, SMEs must integrate both traditional and non-traditional marketing strategies. Effective traditional methods for SMEs in Ghana include door-to-door marketing, word of mouth, discount sales, banners, branded paraphernalia, and radio or television advertisements, as they are cost-effective and help access niche markets often overlooked by larger firms (Dzisi, S., & Ofosu, D. 2014, 109). Additionally, SMEs should adopt modern technological marketing tools, such as using social media to create viral marketing for their products and services and linking social media platforms to their corporate websites to drive traffic (Dzisi, S., & Ofosu, D. 2014, 109). Establishing a business website with a live chatroom for customer interaction is also essential. By developing high-quality content such as blog posts, articles, videos, infographics, and case studies, SMEs can provide valuable insights and educate prospects about industry trends and best practices (Dzisi, S., & Ofosu, D. 2014, 109). In our opinion, implementing a content calendar ensures consistency in publishing and distribution, keeping audiences engaged and informed over time, and reinforcing the SME's position as a trusted authority in the industry.

Bangladeshi SMEs in the education services sector are highly structured and controlled, strictly following formal procedures (Islam, R. 2022, 216). Organizational leadership in this sector emphasizes organizing, coordinating, and efficiency, with a focus on conformity, employment security, stable relationships, and predictability, leading to a hierarchical culture (Islam, R. 2022, 216). However, despite the dominance of market culture, these SMEs have yet to adopt e-communication facilities (Islam, R. 2022, 216). In contrast, SMEs in the plastics and synthetics sector prioritize teamwork, participation, and consensus, with mutual trust and loyalty serving as key unifying factors, resulting in a clan culture (Islam, R. 2022, 214). These SMEs are also dynamic, entrepreneurial, and innovative, with leadership focusing on new challenges and resource acquisition, fostering an adhocracy culture among those that have not yet adopted e-communication facilities (Islam, R. 2022, 214).

The adhocracy culture is characterized by a dynamic and entrepreneurial environment where risk-taking and innovation are central to organizational leadership, with a focus on creating new challenges and acquiring resources (Islam, R. 2022, 203). In this model, market culture emphasizes results, competition, and achievement, with a strong focus on job accomplishment and setting ambitious targets (Islam, R.

2022, 203). Conversely, hierarchy culture involves a highly structured and controlled workplace with strict adherence to procedures, where organizing, coordinating, and efficiency are key leadership traits (Islam, R. 2022, 203). This culture values conformity, job security, stable relationships, and predictability, with organizational success relying on low-cost production, efficient scheduling, and dependable deliver (Islam, R. 2022, 203). The OCAI model has been used to specify the organizational cultural types of Bangladeshi SMEs and this leadership initiatives play a vital role in enhancing the credibility and reputation of technology-oriented SMEs in Bangladesh (Islam, R. 2022, 203).

Leaders of SMEs who leverage technology have expanded their businesses, cut costs, and enhanced worker productivity. Specifically, the study found that if 15% of SMEs with minimal technology use and 30% of those with moderate technology adoption embraced the latest IT tools, they could collectively increase their revenues by \$770 billion and generate over 6 million new jobs across the five markets analyzed (Dzisi, S., & Ofosu, D. 2014, 104). To develop an effective marketing strategy, incorporating a communication strategy that includes both traditional and non-traditional media is essential. Traditional media encompasses television, newspapers, magazines, cinemas, and billboards, categorized into seven main forms, while non-traditional media includes the internet, digital media, social media, websites, emails, mobile technologies, and video conferencing, categorized into three main forms (Dzisi, S., & Ofosu, D. 2014, 105). The growing importance of non-traditional media can enhance brand management, leading to increased sales and brand recognition (Dzisi, S., & Ofosu, D. 2014, 105). Neither strategy is inherently superior; however, finding the right mix of both can create the optimal communication and marketing strategy for a company and its products (Dzisi, S., & Ofosu, D. 2014, 105). Strategic marketing practices significantly impact performance variables, interacting with various components to facilitate performance, as confirmed by multiple studies (Dzisi, S., & Ofosu, D. 2014, 105).

In most developing and transition economies, SMEs commonly face challenges such as securing financing, overcoming institutional, legal, and administrative barriers, and accessing network support. A major bottleneck for SMEs is the inability to access credit, largely due to underdeveloped banking sectors in these economies (Moktan, S. 2007, 253). SMEs in the trade sector have raised concerns about the lack of transparent business policies, high taxes, excessive collateral requirements, bureaucratic delays, and corruption. In the service sector, main issues include insufficient capital, limited credit access, a small market, high competition, low-tech equipment, inadequate amenities, and problematic land-lease agreements (Moktan, S. 2007, 259). Entrepreneurs in the production and manufacturing sector highlighted the lack of skilled labor, technical expertise, dry-port facilities, high raw material costs, and

a limited market (Moktan, S. 2007, 259). Additional concerns include rising electricity tariffs, restrictive policies on wood products, the need for police or security clearance certificates, and uncertain rules on foreign labor. Similarly, the contract sector faces issues with hiring skilled foreign workers (Moktan, S. 2007, 259). Many SMEs also criticized inadequate government intervention in key areas, such as the practice of 'fronting' licenses and unnecessary requirements for establishing a permanent office, owning machinery and vehicles, and employing specific professionals, all of which increase overhead costs and reduce sustainability (Moktan, S. 2007, 259).

The strategic goal of open innovation primarily involves identifying applications for internally developed technology and finding customers, as well as co-creating offerings. This means that SMEs use open innovation more for commercialization than for research and development (R&D). Three modes of multi-firm collaboration in the commercialization phase were identified: networks with a lead partner, equal partnerships, and partnerships for external technology commercialization. The choice of collaboration mode in commercialization is influenced by the firm's core competence and its open innovation strategy. (Henttonen, K., & Lehtimäki, H. 2017, 330).

Effective customer relationship management (CRM) is essential for technology-oriented SMEs to nurture relationships with prospects and customers throughout the sales cycle (Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. 2015). The concept of absorptive capacity (ACAP) has become widely accepted in management (Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. 2015, 5). However, despite its widespread acceptance, there have been calls for more integrated approaches to ACAP and concerns about theoretical fragmentation in organizational studies (Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. 2015, 5). Consequently, there is growing recognition of the value in researching ACAP within the broader organizational context across various industries. Specifically, there is a strong emphasis on expanding our understanding of the antecedents of ACAP and its impact on performance, particularly in SMEs operating in technologically intensive industries (Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. 2015, 5). In our opinion, this proactive approach to CRM will foster loyalty and repeat business, driving sustainable growth and success in the competitive technology landscape of Bangladesh.

2.2 The 4 Ps of Technology-oriented SMEs in the Bangladeshi Market

In the vibrant landscape of Bangladeshi technology-oriented SMEs, the product offerings span a diverse spectrum, ranging from innovative software solutions to cutting-edge hardware devices. These are

keenly attuned to the specific needs of various industries, crafting bespoke products tailored to address nuanced business challenges (Karim, R. Al, & Habiba, W. 2021, 10). Whether it's streamlining financial operations, enhancing healthcare services, revolutionizing education, or optimizing e-commerce platforms, these SMEs pride themselves on their ability to deliver solutions that resonate with the local market's demands. At the core of marketing management is the classic 4Ps concept (product, price, promotion, and place), known as the Marketing Mix, which outlines key decision responsibilities for marketing managers. This framework is fundamental to strategic marketing planning (Goldsmith, R. E. 1999, 178). The 4Ps of technology-based SMEs are presented in FIGURE 2.

Digital technology significantly alters pricing dynamics. Products and services have very low or zero marginal costs for production and distribution, which can result in higher profits for digital formats compared to traditional ones (Kannan, P. K., and Hongshuang Alice Li., 2017). Additionally, pricing for online products and services is more dynamic than in brick-and-mortar businesses due to lower search costs for customers, reduced menu costs for retailers, rapid changes in the shopping environment, and retailers' quicker response to customer searches. For instance, customers often find lower prices in retail apps than in physical stores (Zhu, Z. 2022, 1516).

Promotion strategies form the lifeblood of these tech-savvy SMEs, serving as the conduit through which awareness is raised, interest is piqued, and sales are driven. In reality, small businesses often lack the capital for in-house production and promotion of new products, making them more inclined or compelled to partner with other organizations (Lingyan, M., Qamruzzaman, M., & Adow, A. H. E. 2021, 16). Open innovation activities allow companies to enhance their output in relevant sectors. Teamwork is a fundamental aspect of open innovation that has been widely implemented, with companies frequently collaborating with clients (Lingyan, M., Qamruzzaman, M., & Adow, A. H. E. 2021, 16). While partnerships with organizations like colleges may be less relevant to the business, they still value research and development. Inventing a new idea is never simple, and collaborating with others facing similar challenges can be very helpful (Lingyan, M., Qamruzzaman, M., & Adow, A. H. E. 2021, 16). Place, in the context of technology-oriented SMEs, encompasses the intricate web of distribution channels through which products and services are disseminated to consumers. Embracing both direct and indirect distribution channels, these SMEs leverage online platforms, e-commerce marketplaces, retail networks, and strategic partnerships to ensure accessibility and convenience for their target customers. A survey was conducted on forty-four small and medium-sized high-technology manufacturing firms in Scotland to examine their technology strategies and how regional- and site-specific infrastructure requirements influence their location decisions (Galbraith, C. S., Rodriguez, C.

L., & Denoble, A. F. 2008, 183). Through cluster analysis, a typology of technology content for high-technology firms was developed and used, along with selected technology and manufacturing strategy variables, to explore potential linkages with firms' location decisions (Galbraith, C. S., Rodriguez, C. L., & Denoble, A. F. 2008, 183). The findings indicate that firms' location decisions are closely tied to their competitive strategies and should be viewed as dynamic dimensions of strategy rather than static one-time choices (Galbraith, C. S., Rodriguez, C. L., & Denoble, A. F. 2008, 183). In our opinion, with a keen eye on market dynamics and consumer behavior, distribution strategies are crafted to ensure their offerings are readily available and easily accessible across the diverse geographical landscape of Bangladesh.

It is also possible to differentiate between sales-preparing and sales-executing activities over time. Sales-preparing activities encompass product policy, price policy, and promotion policy, while sales-executing activities involve place policy. Initially, prerequisites for successful marketing must be established, such as developing a competitive product range, determining customer premiums, and familiarizing the target group with the goods and services. Only after these steps can the actual marketing efforts begin, which are necessary to monetize all prior efforts (Pepels, W. 2023, 4).

In navigating the dynamic terrain of the Bangladeshi market, technology-oriented SMEs deftly wield the 4 Ps (Product, Price, Promotion, and Place) as their guiding principles (Goldsmith, R. E. 1999, 178). In our opinion, through a relentless pursuit of innovation, a nuanced understanding of pricing dynamics, an unwavering commitment to promotional excellence, and a strategic approach to distribution, these SMEs chart a course towards sustainable growth and success in the ever-evolving technology landscape of Bangladesh.



Figure 2. 4Ps of Technology based SMEs in Bangladesh (Karim, R. Al, & Habiba, W., 2021)

2.3 Marketing plan

In crafting a comprehensive marketing plan for technology-oriented SMEs in the Bangladeshi market, it's crucial to consider various elements to effectively position the SMEs, attract customers, and drive growth.

This can be initiated by conducting a thorough analysis of the Bangladeshi market, including the competitive landscape, target audience demographics, market trends, and customer preferences and the key competitors can be identified along with their strengths and weaknesses, as well as gaps in the market that the SME can capitalize on. We have to understand the unique challenges and opportunities within the technology sector in Bangladesh, considering factors such as digital adoption rates, infrastructure, and regulatory environment.

From a technological standpoint, the primary tool companies use to manage customer relationships is CRM, which has been enhanced to better predict demand, optimize sales team effectiveness, manage contacts, and provide after-sales assistance. CRM offers companies an updated customer history, enabling more targeted and timely marketing actions. It serves as a facilitator to systematically track the customer journey and interact with end-users. Additionally, CRM reduces information asymmetry and simplifies the purchasing process by offering relevant content and products. The evolving nature of sales portals also allows for customized packages and products, making the sales process more flexible (Pascucci, F., Savelli, E., & Gistri, G. 2023, 42).

Digital technologies have transformed the customer journey into a more dynamic and interactive process, featuring multiple touchpoints where customers engage with companies and their brands (Pascucci, F., Savelli, E., & Gistri, G. 2023, 42). This allows customers to easily inform themselves about products and express their needs, expectations, and satisfaction. Consequently, companies have noticed an increased customer willingness to collaborate in the value creation process for personalized solutions (Pascucci, F., Savelli, E., & Gistri, G. 2023, 42). In our opinion, we have to define a clear and compelling value proposition that communicates the unique benefits and advantages of the SME's products or services. We can highlight key features, functionalities, and competitive advantages that differentiate the SME from competitors and address the needs of target customers. Ensure that the value proposition is communicated consistently across all marketing channels and touchpoints.

Some companies using common technologies like social media and mobile apps were in the intermediate stage of digitalization, converting analogue information into digital formats to enhance business processes (Pascucci, F., Savelli, E., & Gistri, G. 2023, 50). Only a few companies, such as Biesse and Simonelli Group, had nearly reached the advanced stage of digital transformation, significantly adapting their internal procedures, organization, and business models (Pascucci, F., Savelli, E., & Gistri, G. 2023, 50). We can set specific, measurable, achievable, relevant, and time-bound (SMART) marketing objectives aligned with the overall business goals of the SME. Examples of marketing objectives may include increasing brand awareness, generating leads, driving website traffic, improving customer engagement, or increasing sales revenue. Salespersons remained focused on a product-oriented mindset, using digital services mainly to drive extra product sales (Pascucci, F., Savelli, E., & Gistri, G. 2023, 45). They lacked motivation and resisted the new digital servitization strategy until additional organizational measures like key performance indicators (KPIs) and training were implemented (Pascucci, F., Savelli, E., & Gistri, G. 2023, 45). So, we have to define KPIs to track progress and evaluate the effectiveness of marketing efforts.

The integration of IoT and Blockchain is a near-future goal. Ariston Thermo is still in the early stages of digital communications; while present on social media, it lacks a cohesive strategy as these platforms are not managed centrally (Pascucci, F., Savelli, E., & Gistri, G. 2023, 37). We have to develop a comprehensive mix of marketing strategies and tactics to achieve the defined objectives and reach the target audience effectively (Goldsmith, R. E. 1999). In our opinion, we need to implement SEO techniques to improve visibility in search engine results and drive organic traffic to the SME's website. We also need to invest in paid advertising campaigns on platforms like Google Ads, Facebook Ads, and LinkedIn Ads to target specific demographics and increase brand exposure.

Branding is essential for every company, large or small, as it differentiates products from competitors and builds brand equity. Brand equity affects consumer perception, creating either positive or negative feelings. Positive brand equity fosters customer loyalty and word-of-mouth promotion. It can be measured through differentiation (brand uniqueness), relevance (satisfaction of customer needs), knowledge (consumer awareness), and esteem consumer respect for the brand (Appelroth, E. 2015, 15). In our opinion, we have to position key executives or subject matter experts within the SME as thought leaders by participating in industry conferences, speaking engagements, webinars, and panel discussions. We can publish white papers, research reports, and industry insights that highlight the SME's expertise, innovation, and thought leadership in technology-related topics. Cultivate relationships with media outlets, industry influencers, and industry associations to secure speaking opportunities and media coverage, further enhancing the SME's reputation and credibility. We can create high-quality content

such as blog posts, articles, videos, infographics, and case studies that provide valuable insights, educate prospects, and position the SME as a thought leader in the industry. Share content through owned channels like company websites, blogs, and social media profiles, as well as through earned and paid media outlets to expand reach and engagement. We can implement a content calendar to ensure consistent publishing and distribution of content across various channels, keeping audiences engaged and informed over time.

We can forge strategic partnerships and collaborations with other SMEs, startups, academic institutions, and industry organizations to expand market reach, access new customer segments, and leverage complementary resources and expertise (Henttonen, K., & Lehtimäki, H., 2017). We can jointly develop and co-market products or services with partners, offering bundled solutions or cross-promotional opportunities to mutual benefit. Participate in industry clusters, trade associations, and networking events to build relationships, share knowledge, and explore potential collaboration opportunities within the technology ecosystem (Appelroth, E. 2015, 4-12).

We have to implement a CRM system to manage customer interactions, track leads, and nurture relationships throughout the sales cycle. Personalize communication and engagement with prospects and customers based on their preferences, behavior, and past interactions, fostering loyalty and repeat business. We need to solicit feedback from customers through surveys, reviews, and testimonials, and use insights to improve products, services, and customer experience.

We have to regularly monitor and analyze key marketing metrics and KPIs (Pascucci, F., Savelli, E., & Gistri, G. 2023, 45) to track the performance of marketing initiatives and campaigns. We can conduct periodic reviews and assessments of the marketing plan to ensure alignment with business objectives and market dynamics, making adjustments and refinements as necessary to drive continued success.

By following this marketing plan, technology-oriented SMEs in the Bangladeshi market can effectively position themselves, attract customers, and drive growth in the competitive technology landscape.

2.4 Marketing analysis

A marketing analysis for technology-oriented SMEs in the Bangladeshi market involves a comprehensive examination of various factors that influence the success and growth of these businesses within the local ecosystem. One of the key aspects of marketing analysis for technology-oriented SMEs in Bangladesh is understanding the prevailing market trends. This includes an examination of

technological advancements, adoption rates of digital solutions, emerging industry niches, and shifting consumer preferences.

The increasing reliance on mobile technology, the rise of e-commerce, and the growing demand for digital services present significant opportunities for SMEs to innovate and cater to evolving market needs. A thorough analysis of the competitive landscape is essential for SMEs to identify key competitors, their strengths and weaknesses, and the strategies they employ (Mangram, M. E. 2012, 14-15). This includes both direct competitors offering similar technology solutions and indirect competitors providing alternative solutions to the same market needs. Understanding competitor positioning, pricing strategies, marketing tactics, and customer satisfaction levels helps SMEs differentiate themselves and carve out a unique market position (Mangram, M. E. 2012, 14-15).

Results from SEM two-group analyses indicate that both main effects positively impact performance in both environmental contexts. However, their interaction effect is significant only in high-turbulence environments, the marketing-related main effect is lower in high-turbulence environments, and technology-related capabilities have the same impact in both environments (Song, M., Droge, C., Hanvanich, S., & Calantone, R. 2005, 259).

In our analysis, identifying and understanding the target audience is critical for effective marketing by technology-oriented SMEs in Bangladesh. This involves segmenting the market based on demographic, geographic, psychographic, and behavioral factors to create detailed buyer personas. By understanding the needs, preferences, pain points, and purchasing behavior of their target audience, SMEs can tailor their products, messaging, and marketing strategies to resonate with potential customers and drive engagement. Navigating the regulatory environment is another important aspect of marketing analysis for SMEs in Bangladesh. This includes compliance with laws and regulations related to data privacy, intellectual property rights, online transactions, and consumer protection. SMEs must stay informed about any regulatory changes or updates that may impact their operations, marketing practices, or product offerings to ensure compliance and mitigate legal risks. Assessing the infrastructure and technology adoption rates in Bangladesh is crucial for understanding the market readiness for digital solutions offered by technology-oriented SMEs. Factors such as internet connectivity, smartphone penetration, access to digital payment methods, and technological literacy among the population influence the adoption and uptake of technology products and services. SMEs must align their marketing strategies with the prevailing infrastructure and technological landscape to maximize market penetration and adoption of their offerings.

Based on the marketing analysis, technology-oriented SMEs in Bangladesh can develop appropriate market entry strategies to effectively penetrate the market and gain a competitive advantage.

Technology-oriented SMEs can involve selecting the most viable market segments to target, positioning their products or services effectively, setting competitive pricing strategies, and leveraging the right marketing channels and platforms to reach their target audience (Mangram, M. E. 2012, 305).

By conducting a comprehensive marketing analysis encompassing market trends, competitive landscape, target audience, regulatory environment, infrastructure, and market entry strategies, technology-oriented SMEs in the Bangladeshi market can gain valuable insights to inform their marketing decisions and drive business growth.

2.5 Marketing channels and platforms

Technology-oriented SMEs in the Bangladeshi market leverage various market channels and platforms to reach their target audience, raise awareness about their products or services, and drive sales.

Several channels and platforms encompass both digital and traditional avenues, each offering unique opportunities to connect with customers and expand market reach (Yamin, A. Bin., 2018).

Online marketplaces such as Daraz, AjkerDeal, and Evaly serve as popular platforms for SMEs to showcase and sell their technology products. These marketplaces provide SMEs with access to a large pool of potential customers, streamlined payment processing, and logistical support for order fulfillment. By listing their products on these platforms, SMEs can tap into the growing trend of online shopping in Bangladesh and reach customers across the country (Jaina Humayra Rafa, B., 2021).

Many technology-oriented SMEs in Bangladesh operate their own e-commerce websites to sell their products directly to customers. These websites offer SMEs greater control over branding, product presentation, and customer experience (Islam, R., 2022).

By investing in search engine optimization (SEO), user-friendly design, and secure payment gateways, SMEs can attract organic traffic and drive conversions through their e-commerce platforms (Sinkovics, R. R., & Sinkovics, N. 2020, 437–446). Social media platforms such as Facebook, Instagram, and LinkedIn provide valuable channels for SMEs to engage with their target audience, share updates about their products or services, and build brand loyalty. By creating compelling content, running targeted advertising campaigns, and fostering community engagement, SMEs can leverage social media to

increase brand visibility, generate leads, and drive website traffic (Sinkovics, R. R., & Sinkovics, N. 2020, 437–446).

Search engine optimization (SEO) and search engine marketing (SEM) are essential for SMEs looking to improve their visibility on search engine results pages (SERPs) and attract organic and paid traffic to their websites. By optimizing their website content, implementing relevant keywords, and running targeted Google Ads campaigns, SMEs can increase their chances of ranking higher in search engine results and capturing the attention of potential customers actively searching for technology solutions. Participating in industry events, trade shows, and exhibitions provides SMEs with valuable opportunities to showcase their products, network with industry professionals, and generate leads. By setting up booths, giving product demonstrations, and participating in panel discussions or speaking engagements, SMEs can enhance their brand visibility, establish credibility, and forge strategic partnerships within the technology ecosystem (Sinkovics, R. R., & Sinkovics, N. 2020, 437–446).

Collaborating with other SMEs, startups, academic institutions, and industry organizations allows technology-oriented SMEs to leverage complementary resources, expertise, and market reach. By forming strategic partnerships, co-developing products or services, and cross-promoting each other's offerings, SMEs can expand their market channels and access new customer segments more effectively. While digital marketing channels dominate the landscape, traditional marketing channels such as print media, television, and radio still hold relevance in reaching certain demographics in Bangladesh. Depending on the target audience and market segment, SMEs may incorporate traditional marketing tactics alongside their digital efforts to ensure comprehensive market coverage and maximize reach. By leveraging these market channels and platforms effectively, technology-oriented SMEs in the Bangladeshi market can enhance their market presence, attract customers, and drive growth in the competitive technology landscape (Krasnov, A., Nikonorov, V., & Yanenko, M., 2018).

3 ANALYSIS ON TECHNOLOGY BASED SMES IN BANGLADESHI MARKET

There are several analyses related to technology-based SMEs in Bangladesh. Firstly, we have a business plan, and we analyzed some issues on that which are discussed here.

3.1 Business Plan

Crafting a business plan for technology-oriented SMEs entails a strategic roadmap that outlines the vision, objectives, strategies, and tactics to achieve sustainable growth and success (Kuchina, S. O., & Kitchenko, O. M. 2016). The executive summary (MaRS., 2009) provides an overview of the SME's business concept, target market, unique value proposition, and growth potential. It summarizes the key elements of the business plan and highlights the SME's competitive advantage and market differentiation. When raising money and engaging with potential investors, we need to develop several key communication tools: the elevator pitch, executive summary, investor presentation (or pitch deck), and business plan. These documents are used at different stages of the fundraising process, gradually revealing more detailed information. We can start with an elevator pitch and executive summary to introduce your company. Based on this, investors will decide whether to proceed. If they are interested, you will present the pitch deck and later provide the business plan (MaRS. 2009, 5).

The company description (Business, E., Experts, B., Description, M., & Team, M. 2006, 3) delves into the background, history, and mission of the SME, providing context for its operations and market presence. It outlines the SME's legal structure, ownership, management team, and key personnel, showcasing their expertise and qualifications.

The market analysis section conducts a thorough examination of the Bangladeshi market, including market trends, competitive landscape, target audience demographics, and regulatory environment. It identifies market opportunities, challenges, and potential risks, informing the SME's market positioning and strategy development.

This section details the technology products or services offered by the SME, highlighting their features, functionalities, and value proposition. It outlines the target market segments, customer needs, and competitive advantages of the SME's offerings, demonstrating how they address market demand and provide solutions to customer problems (Robert, S., Officer, C. E., Office, S., & Road 2008, 1-18).

The marketing and sales strategy outlines how the SME plans to promote its products or services, attract customers, and drive revenue growth. It includes an analysis of target customer segments, pricing strategies, distribution channels, promotional tactics, and customer acquisition plans. It also defines key performance indicators (KPIs) to measure the effectiveness of marketing and sales efforts (Pascucci, F., Savelli, E., & Gistri, G. 2023, 45).

The operational plan details the day-to-day operations of the SME, including production processes, supply chain management, technology infrastructure, and resource allocation. It outlines the organizational structure, roles and responsibilities, and workflow procedures to ensure smooth and efficient business operations. Conceptual and operational plans are essential for managing product and package disposal, as governments globally are enacting regulations. Strategies promoting reconsumption can offer a competitive advantage. Implementing these strategies can enhance product appeal and sustainability (Sheth, J. N., & Parvatiyar, A. 2021, 156).

The financial plan presents the financial projections, budget, and funding requirements of the SME. It includes revenue forecasts, expense estimates, cash flow projections, and break-even analysis to assess the financial viability and sustainability of the business. In emerging markets, underbanked individuals often lack the traditional collateral or identification needed for loans. Using documentary and conceptual analysis it is found that AI and machine learning significantly improve credit risk assessments by utilizing alternative data sources. These technologies address issues of information asymmetry, adverse selection, and moral hazard (Mhlanga, D. 2021).

The risk management plan identifies potential risks and challenges (Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E. 2021, 108). It may impact the SME's operations and outlines strategies to mitigate and manage these risks effectively. It includes contingency plans, risk mitigation measures, and monitoring mechanisms to ensure business continuity and resilience in the face of uncertainty.

By developing a comprehensive business plan that addresses these key components, technology-oriented SMEs in the Bangladeshi market can align their goals, strategies, and resources to achieve long-term success and create value for stakeholders.

3.2 Operational Plan

The operational plan for technology-oriented SMEs in the Bangladeshi market outlines the day-to-day activities and processes necessary to effectively run the business and deliver products or services to customers. Great interest showed in learning about the development of product innovation expansion for MSME groups presenting in a structured and systematic manner, making it easy for participants to understand and absorb the information (Aulia, I. N., Soelton, M., Hanafia, A., Thoullon, M. S., Paijan, P., Karyatun, S., & Saratian, E. T. P. 2023, 123).

The operational plan begins by detailing the production processes involved in developing and delivering technology products or services. This may include software development, hardware manufacturing, or IT services provisioning. The plan outlines the steps involved in each stage of production, from concept and design to testing, implementation, and delivery. It also identifies key resources, equipment, and technologies required to execute these processes efficiently.

The most effective enterprise interventions often come from corporations that set sustainability goals across environmental, social, and governance pillars. These companies establish science-based targets (SBTs) for system-wide implementation, engaging all stakeholders, including customers, suppliers, employees, shareholders, and the community (Sheth, J. N., & Parvatiyar, A. 2021, 154).

According to our analysis and investigation from different companies in the context of Bangladesh, efficient supply chain management is crucial for technology-oriented SMEs to ensure timely procurement of raw materials, components, and equipment necessary for production. The operational plan outlines the sourcing strategies, vendor relationships, and inventory management practices employed to optimize the supply chain. It also addresses logistics, transportation, and warehousing considerations to minimize lead times and reduce operational costs. Given the nature of technology-oriented SMEs, a robust technology infrastructure is essential to support business operations and service delivery. The operational plan describes the IT systems, software applications, and hardware devices utilized to facilitate various functions such as communication, collaboration, data management, and customer support. It outlines the maintenance and upgrade schedules to ensure the reliability, security, and scalability of the technology infrastructure. The operational plan allocates resources effectively to support business activities and achieve strategic objectives. This includes human resources, financial resources, and physical assets such as equipment and facilities. The plan defines staffing requirements, roles and responsibilities, and recruitment strategies to build a skilled and motivated workforce. It also

establishes budgetary allocations, expenditure controls, and financial reporting mechanisms to manage resources efficiently.

Providing excellent customer support is essential for technology-oriented SMEs to build strong relationships with customers and enhance their reputation. The operational plan outlines the customer support channels, response times, and service level agreements (SLAs) to address customer inquiries, requests, and issues effectively. It includes training programs for customer support staff, knowledge bases, and escalation procedures to ensure prompt and satisfactory resolution of customer concerns. An initiative has driven suppliers to commit to sustainability goals, with Walmart making it a condition for doing business. Similar outcomes have been observed at Unilever and other organizations, using their purchasing power to ensure supply chain members adhere to sustainability targets (Sheth, J. N., & Parvatiyar, A. 2021, 1-16).

As technology-oriented SMEs grow and expand their operations, the operational plan addresses scalability and growth considerations. It identifies opportunities for scaling production capacity, expanding market reach, and diversifying product/service offerings and outlines strategies for talent acquisition, organizational development, and strategic partnerships to support long-term growth and sustainability. Entrepreneurship isn't exclusive to the naturally talented; anyone can cultivate an entrepreneurial spirit by fostering positive thinking, courage, determination, and innovation. Beyond just seeking business opportunities, creating them helps to develop this spirit (Aulia, I. N., Soelton, M., Hanafia, A., Thoullon, M. S., Paijan, P., Karyatun, S., & Saratian, E. T. P. 2023, 122).

By developing a comprehensive operational plan that addresses these key components, technology-oriented SMEs in the Bangladeshi market can streamline their operations, optimize resource utilization, and enhance their competitiveness in the dynamic technology landscape.

3.3 Risk Management

Risk analysis and management are crucial aspects for technology-oriented SMEs operating in the Bangladeshi market. Market risks include factors such as changes in consumer preferences, shifts in technology trends, and fluctuations in demand. SMEs must conduct market research to stay abreast of changing market dynamics and anticipate potential risks. Strategies to mitigate market risks may involve

diversifying product offerings, targeting multiple market segments, and continuously innovating to stay ahead of competitors.

Regulatory risks arise from changes in laws, regulations, or government policies that impact SME operations. In terms of the internal business model canvas elements, success or risks predominantly center around the left-hand side, focusing on value creation mechanisms such as key activities, resources, and partners. This includes aspects like logistics, storage, and partnerships with waste suppliers and research entities. The cost structure and revenue streams also play crucial roles, emphasizing economies of scale and competitiveness in pricing. Circular business model success in agriculture isn't primarily determined by the value proposition or customer channels, but rather by effective value creation and cost-effective operations (Donner, M., Verniquet, A., Broeze, J., Kayser, K., & De Vries, H., 2021).

In the context of Bangladesh, SMEs may face regulatory challenges related to data privacy, cybersecurity, intellectual property rights, and compliance with industry standards.

Operational risks encompass potential losses resulting from human error, process failures, technological shortcomings, and unforeseen external events. This definition encompasses legal risk, which arises from contractual defects and potential penalties or compensation due to harm to third parties (Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E. 2021, 111). To mitigate regulatory risks, SMEs should stay informed about relevant regulations, seek legal counsel when necessary, and ensure compliance with all applicable laws and regulations.

Technology risks encompass threats such as system failures, cybersecurity breaches, and technological obsolescence. Cyber risk entails the potential for financial loss or harm to an organization's reputation due to failures in its information systems. It extends beyond mere technological risk, posing a significant threat to the business itself. (Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E., 2021). SMEs must invest in robust IT infrastructure, implement cybersecurity measures, and regularly update their technology systems to mitigate these risks. Additionally, SMEs should stay informed about emerging technologies and trends to ensure their products and services remain relevant in the rapidly evolving technology landscape.

Financial risks include factors such as cash flow challenges, funding constraints, and economic downturns. SMEs should maintain financial discipline, monitor cash flow regularly, and develop contingency plans to address potential financial challenges. Building strong relationships with financial

institutions, investors, and government agencies can also provide access to additional funding and support during times of financial uncertainty (Mhlanga, D. 2021).

Operational risks arise from internal factors such as inefficient processes, supply chain disruptions, and human errors. SMEs should implement robust operational procedures, invest in employee training, and establish effective risk management protocols to minimize operational risks. Regular monitoring and evaluation of operational processes can help identify areas for improvement and enhance overall efficiency and effectiveness (Sheth, J. N., & Parvatiyar, A. 2021).

Reputation risks stem from negative publicity, customer complaints, or unethical business practices that damage the SME's brand image and credibility. SMEs should prioritize customer satisfaction, uphold high ethical standards, and maintain transparent communication with stakeholders to safeguard their reputation (Donner, M., Verniquet, A., Broeze, J., Kayser, K., & De Vries, H., 2021). Promptly addressing customer concerns and actively engaging with feedback can help mitigate reputation risks and preserve the trust and loyalty of customers (Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E., 2021).

To effectively manage these risks, technology-oriented SMEs in the Bangladeshi market should develop a comprehensive risk management strategy that includes risk identification, assessment, mitigation, and monitoring. By proactively addressing potential risks and implementing appropriate risk management measures, SMEs can enhance resilience, minimize vulnerabilities, and sustain long-term success in the competitive technology landscape (Rio, F. Del, Energy, S., Rio, F. Del, & Reviews, S. E., 2020).

3.4 SWOT Analysis

In this section, we have analyzed several strengths, weaknesses, opportunities, and threats, which is known as SWOT Analysis (Sabbaghi, A., & Vaidyanathan, G., 2004) and it is illustrated in FIGURE 3. By addressing the strengths, weaknesses, opportunities, and threats, the thesis can enhance its effectiveness in providing valuable insights into the impact of globalization on technology-oriented SMEs in the Bangladeshi market.

3.4.1 Strengths

The analysis of Basque SMEs participating in the Enterprise Innovates program highlights several strengths of technology-based SMEs (Davide, M., Aitziber, P., & L, M. Á. O. Á. 2012, 904-905). These firms, operating in both traditional manufacturing sectors and new knowledge-intensive services, exhibit a significant size in terms of employees and turnover, enabling them to face innovation challenges effectively (Davide, M., Aitziber, P., & L, M. Á. O. Á. 2012, 904-905). The study reveals a notable heterogeneity in their innovation drivers, with a majority showing embryonic STI (Science, Technology, and Innovation) and DUI (Doing, Using, and Interacting) profiles, and some combining both. Importantly, STI drivers, such as R&D, human capital, and formalized procedures, emerge as critical for achieving significant innovation outputs, suggesting that structured, science-based approaches enhance competitiveness (Davide, M., Aitziber, P., & L, M. Á. O. Á. 2012, 904-905). Additionally, qualified interaction with regional, national, and international innovation agents, including technology centers and universities, is crucial for these SMEs, underscoring the value of collaborative and knowledge-based activities (Davide, M., Aitziber, P., & L, M. Á. O. Á. 2012, 904-905). This alignment with external knowledge sources and continuous R&D activities positions technology-based SMEs for greater innovation success and competitive advantage (Davide, M., Aitziber, P., & L, M. Á. O. Á. 2012, 904-905).

In our opinion, technology-oriented SMEs often thrive on innovation, continuously developing new products, services, or processes to stay competitive in the market. SMEs are typically more agile and flexible than larger corporations, allowing them to adapt quickly to market changes and technological advancements. SMEs often have lower overhead costs compared to larger enterprises, enabling them to offer competitive pricing for their products and services.

3.4.2 Weaknesses

Due to their resource constraints, SMEs rely on diverse sources and networks to gather necessary information for strategy development and environmental organization. These networks, whether personal or business-related, typically consist of geographically or sociologically proximate connections, known as strong tie networks (Julien, P. A., Andriambelolon, E., & Ramangalahy, C., 2004). They provide familiar signals, based on habit and reciprocal knowledge, aiding in understanding changes in the economy and identifying innovation opportunities. However, more dynamic firms also engage with weak tie networks, which offer fewer familiar signals but provide valuable pre-competitive

information crucial for major innovations (Julien, P. A., Andriambeloson, E., & Ramangalahy, C., 2004). Despite limited empirical research, a survey involving 147 SMEs in the land-based transportation equipment sector confirms the significance of weak tie networks in contributing to technological innovation, emphasizing their complementary role alongside other network types (Julien, P. A., Andriambeloson, E., & Ramangalahy, C., 2004).

From the discussion, we can say that SMEs may have limited financial resources, which can constrain their ability to invest in research and development, marketing, or expansion efforts. Some technology-oriented SMEs may struggle with scaling their operations to meet growing demand, especially if they lack the resources or infrastructure to support rapid expansion. SMEs may face challenges in gaining visibility and brand recognition in crowded technology markets dominated by larger competitors. Recruiting and retaining skilled talent can be a challenge for SMEs, especially in highly competitive industries where larger corporations offer more attractive compensation packages.

3.4.3 Opportunities

Globalization has fundamentally transformed the innovation practices of all firms. There is a noticeable increase in non-internal technology development, achieved through outsourcing and strategic alliances (Nation., 2001). Additionally, products are becoming more multifaceted in terms of technology, leading to heightened reliance on networks by firms, a domain that was once a primary competitive edge for SMEs. These changes present both opportunities and challenges for SMEs (Nation., 2001). While larger firms are increasingly seeking collaboration with SMEs to leverage their external networks, this also allows them to capitalize on the flexibility traditionally associated with SMEs (Nation., 2001). However, in sectors like electronics hardware, where we've assessed R&D activities of both large and small firms, SMEs retain their advantages in flexibility and rapid response. Nonetheless, challenges arise due to the demand for diverse technological competencies and intensified cross-border competition, potentially exacerbating the traditional limitations imposed by size (Nation., 2001).

The increasing digitalization in highly globalized economies presents numerous opportunities for tech-based SMEs in international markets. With the right organizational resources and capabilities, SMEs can leverage digital technologies to support their international marketing strategies effectively. These technologies facilitate market selection and entry, transforming product development, pricing strategies, distribution channels, logistics, and promotional activities abroad. Moreover, digital tools enhance the

implementation and control of international marketing strategies, offering SMEs greater efficiency and effectiveness in reaching global customers. Looking ahead, there are promising avenues for future research to explore how SMEs can further optimize their international marketing strategies in the digital era (Katsikeas, C., Leonidou, L., & Zeriti, A. 2020, 1).

3.4.4 Threats

Technology markets are highly competitive, with numerous players competing for market share, making it challenging for SMEs to differentiate themselves and establish a strong foothold.

While digital technologies offer avenues for firms to enhance their international marketing strategies and expand into foreign markets, they also introduce new threats. These threats include shifts in foreign customer attitudes and behavior, intensified competitive practices, and evolving environmental conditions. Additionally, the reliance on digital technologies for market selection, market entry, and strategy implementation necessitates adaptation and continuous innovation in product, pricing, distribution, logistics, and promotional strategies abroad. As tech-based SMEs navigate these challenges, there is a need for ongoing research to revisit international marketing strategies in light of the digital era, ensuring relevance and effectiveness in a rapidly evolving global marketplace (Katsikeas, C., Leonidou, L., & Zeriti, A. 2020, 1).



Figure 3. SWOT Analysis of Technology-oriented SMEs in the Bangladeshi Market

3.5 PESTEL Analysis

In this section, we have analyzed several political, economic, social, technological, environmental, and legal factors, which is known as PESTEL Analysis (Pan, W., Chen, L., & Zhan, W., 2019) and it is illustrated in FIGURE 3. By analyzing these political, economic, social, technological, environmental, and legal factors, the thesis can gain a comprehensive understanding of the external environment and its impact on technology-oriented SMEs in the Bangladeshi market under the influence of globalization.

3.5.1 Political Factors

This thesis needs to consider how government policies, such as trade agreements, taxation policies, and regulations regarding technology transfer, may impact technology-oriented SMEs in Bangladesh. Analyzing how nations or governments formulate their strategic responses, including the possibility of no-response, is crucial (Karabag, S. F. 2020, 3). Understanding how these strategies impact economic activities, management decisions, and consumer behavior over the short and long term is essential (Karabag, S. F. 2020, 3). The effectiveness of any strategy depends on various factors such as national, institutional, and behavioral elements, as well as existing medical and societal capacities, infrastructure, and levels of trust in government (Karabag, S. F. 2020, 3). In our opinion, political instability or changes in government could affect the business environment and the ability of SMEs to operate and thrive in a globalized market. Relations with other countries, especially key trading partners, can influence the opportunities and challenges faced by technology-oriented SMEs engaging in global markets.

3.5.2 Economic Factors

Economic conditions in major markets, exchange rate fluctuations, and global economic growth rates can impact the competitiveness and profitability of Bangladeshi SMEs operating in the global market. Availability of financing options, interest rates, and access to capital markets can significantly affect the ability of technology-oriented SMEs to invest in innovation and expansion. Amidst the economic repercussions of the coronavirus crisis, it is essential to examine the transformation of industrial policies by nations and the reevaluation of global operations by both nations and firms. This includes assessing investment strategies and reshaping supply chains. Understanding how these adjustments influence firm

strategies, employment levels, entrepreneurship, business innovation, and capability development is crucial. (Karabag, S. F. 2020, 3).

3.5.3 Social Factors

The thesis should analyze societal attitudes towards technology adoption and digitalization, as well as the level of technological literacy among SMEs and the broader population in Bangladesh. Population demographics, such as age distribution and urbanization rates, can impact market demand and preferences for technology-oriented products and services. The availability of skilled labor and the quality of education and training programs in technology-related fields can affect the competitiveness of technology-oriented SMEs in Bangladesh. The significance of social media in the digital transformation of B2B companies, examining various aspects such as its impact, tools, adoption, strategies, and effectiveness measurement should be considered (Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Raman, R. 2023, 971). By synthesizing existing literature and analyzing key findings, it offers valuable insights for both academics and practitioners, serving as an informative framework for understanding social media's role in B2B contexts (Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Raman, R. 2023, 971).

3.5.4 Technological Factors

Technological advancements, including the integration of digital applications, empower firms to engage with customers and remain agile in responding to competitors, all while utilizing minimal resources (Nuseir, M. T., & Aljumah, A. 2020, 310). Ensuring that customers can easily access accurate and timely information about SME products or services is imperative through diverse digital technologies (Nuseir, M. T., & Aljumah, A. 2020, 310).

In our opinion, rapid advancements in technology, such as artificial intelligence, Internet of Things, and blockchain, can create both opportunities and challenges for technology-oriented SMEs in Bangladesh. The state of digital infrastructure, including internet connectivity and access to technology platforms, influences the ability of SMEs to participate in global value chains and reach international markets.

3.5.5 Environmental Factors

The rapid adoption of social media among SMEs has heightened concerns about privacy and online security globally, particularly regarding data privacy and payment methods. Firms are compelled to adhere to governmental regulations concerning data security and financial safety as a proactive measure. Despite the growing importance of digital marketing, empirical evidence regarding its impact on firm performance is scarce, and there is a dearth of literature detailing the role of digital and technological advancements in business operations (Nuseir, M. T., & Aljumah, A. 2020, 313).

In our opinion, compliance with environmental regulations and sustainability standards can impact the operations and supply chains of technology-oriented SMEs, especially in industries with high environmental impact. The growing demand for green technologies and environmentally friendly products presents opportunities for technology-oriented SMEs to differentiate themselves in the global market. Climate-related risks, such as extreme weather events and resource scarcity, can disrupt supply chains and operations, affecting the resilience of SMEs to global market dynamics in the context of Bangladesh.

3.5.6 Legal Factors

The thesis should consider the legal frameworks governing intellectual property rights protection and enforcement, which can impact the ability of technology-oriented SMEs to protect their innovations and compete in the global market. Various factors, both internal and external to the business ecosystem, contribute to the success and risks faced by businesses over time, categorizable into five main groups (Donner, M., Verniquet, A., Broeze, J., Kayser, K., & De Vries, H. 2021, 4). These include technical and logistic factors, such as innovative technologies and efficient logistics; economic, financial, and marketing aspects, such as economies of scale and price competitiveness; organizational and spatial considerations, like successful cooperation and geographical proximity; institutional and legal factors, such as public subsidies; and environmental, social, and cultural influences (Donner, M., Verniquet, A., Broeze, J., Kayser, K., & De Vries, H. 2021, 4).

In our opinion, compliance with data privacy regulations, both domestically and internationally, is essential for technology-oriented SMEs collecting and processing customer data in the global market. Moreover, changes in trade laws, tariffs, and trade agreements can affect the export-import dynamics and market access for technology-oriented SMEs in Bangladesh.

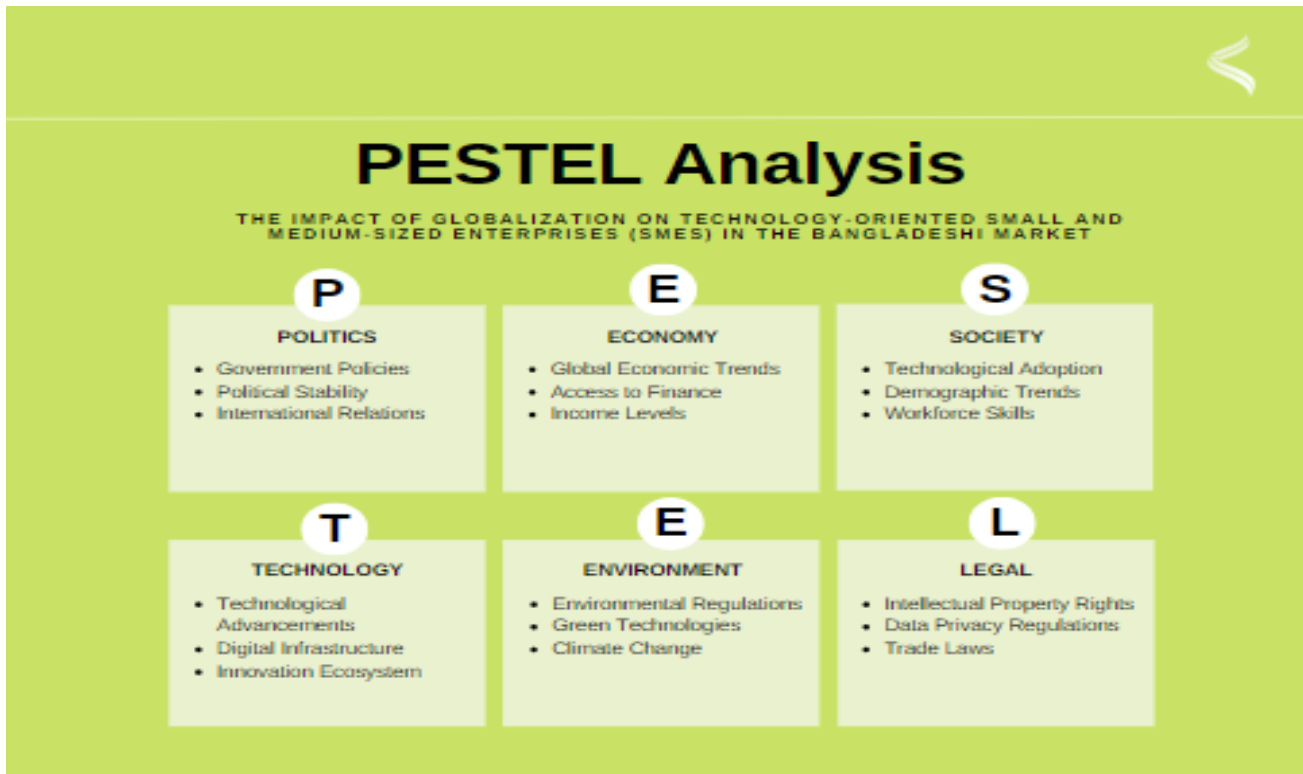


Figure 4. PESTEL Analysis of Technology-oriented SMEs in the Bangladeshi Market (Mira, J. M., & Mira, J. M., 2024)

4 SURVEY ANALYSIS

4.1 Respondents of the Survey

For this thesis, we have created 21 questions for survey analysis in the Google Form (SMALL AND MEDIUM SIZED ENTERPRISES (SMEs)., n.d.). We got 36 responses entirely, which is enough for us to conduct a better analysis. Those who responded, all of them are students, recent graduates (from business background), and businessman. However, most of the respondents of the survey encompass a diverse group integral to the technology-oriented SME sector in Bangladesh, including owners and managers who provide firsthand accounts of operational challenges and opportunities in a globalized market. Industry experts and consultants contribute broader, strategic perspectives on globalization's impact, while policymakers and government officials offer insights into regulatory frameworks and support measures essential for SME development. Academics and researchers add theoretical depth and contextual understanding, enhancing the analysis of globalization's effects. Additionally, employees of these SMEs share their views on workforce dynamics, skill requirements, and internal processes, enriching the study with comprehensive, multi-faceted perspectives. This diverse respondent base ensures a holistic understanding of how globalization influences technology-oriented SMEs in Bangladesh.

4.2 Connection to the Thesis Theme:

The respondents are directly connected to the theme as they are key stakeholders within the technology-oriented SME sector in Bangladesh. Their experiences, challenges, and observations are crucial for understanding the impact of globalization on these enterprises.

4.3 Relevance of the Survey:

The survey is a critical component of the thesis, designed to gather comprehensive data on the impact of globalization on technology-oriented SMEs in Bangladesh. It collects detailed information on how globalization influences daily operations and strategic decisions, identifies specific challenges such as competition and regulatory hurdles, and uncovers opportunities like new markets and technological advancements. The survey evaluates the integration of technological advancements within SMEs, aiding

in the assessment of their adaptation and innovation levels. Input from policymakers and industry experts helps formulate actionable policy recommendations, while insights from entrepreneurs and managers offer practical guidance for navigating the globalized business environment. Additionally, the survey identifies potential areas for collaboration among stakeholders, enhances awareness of the issues faced by SMEs, and highlights gaps for future research, thereby contributing to the broader discourse on globalization and SME development.

1. How would you rate your familiarity with the concept of globalization?

36 responses

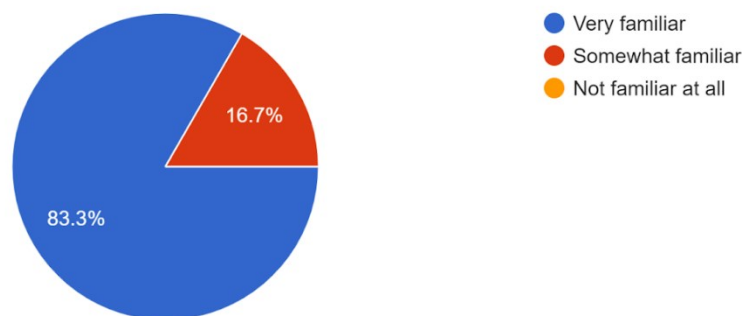


Figure 5. Familiarity with the concept of globalization

The question asked in FIGURE 5 “How would you rate your familiarity with the concept of globalization?”

The survey results indicate a strong level of familiarity with the concept of globalization among respondents, with 83.3% rating themselves as "Very familiar" and 16.7% as "Somewhat familiar." Notably, there were no respondents who rated themselves as "Not familiar at all." This distribution suggests that the majority of participants possess at least a moderate understanding of globalization, while a significant portion feel very confident in their comprehension of the concept.

The high percentage of respondents self-identifying as "Very familiar" with globalization underscores the pervasiveness of this concept in contemporary discourse and the awareness it holds in various spheres of society. Globalization has become a defining feature of the modern world, influencing economics, politics, culture, technology, and numerous other aspects of human life. The widespread familiarity indicated by the survey results likely reflects the extent to which globalization has shaped individuals' experiences and perceptions on a global scale.

The absence of respondents indicating that they are "Not familiar at all" with globalization suggests that even those who may not consider themselves experts on the topic still possess some level of awareness or exposure to the concept. This could be attributed to factors such as media coverage, educational curricula, or personal experiences that have exposed individuals to the interconnectedness and interdependence characterizing globalization. Such exposure may have contributed to a baseline understanding of globalization among the surveyed population, even if some individuals do not feel fully confident in their knowledge.

While the survey results provide valuable insights into the familiarity of respondents with globalization, further qualitative analysis could enhance understanding by exploring the depth and nuances of their knowledge and perceptions. Open-ended questions or follow-up interviews could elicit detailed explanations of how individuals conceptualize globalization, what specific aspects they are familiar with, and how they perceive its implications for various domains of life. Qualitative data could reveal divergent interpretations, attitudes, or concerns regarding globalization, offering a more comprehensive picture of its impact and significance from the perspective of individuals with varying levels of familiarity. Additionally, qualitative analysis could uncover areas where misconceptions or gaps in understanding exist, informing efforts to enhance public education or communication strategies related to globalization.

2. In your opinion, how has globalization influenced the growth of technology-oriented SMEs in Bangladesh?

36 responses

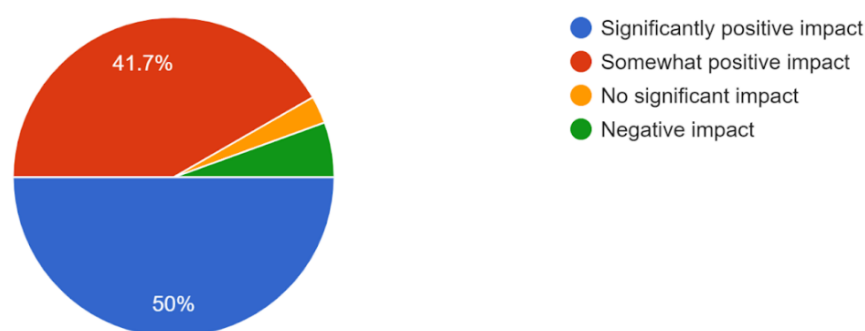


Figure 6. Influence of globalization in technology-based SME

The question asked in FIGURE 6 "In your opinion, how has globalization influenced the growth of technology-oriented SMEs in Bangladesh?" The survey results provide valuable insights into the perceived influence of globalization on the growth of technology-oriented Small and Medium

Enterprises (SMEs) in Bangladesh. The majority of respondents, 50%, perceive a significantly positive impact of globalization on these SMEs, while 41.7% believe it has had a somewhat positive influence. Additionally, a small proportion of respondents, 2.8%, indicated that globalization has had no significant impact, while 5.6% perceive a negative impact.

The high percentage of respondents indicating a significantly positive impact suggests that globalization has played a pivotal role in fostering the growth and development of technology-oriented SMEs in Bangladesh. Globalization has facilitated greater access to international markets, enabling SMEs to tap into global supply chains, access new customers, and forge partnerships with international firms. Additionally, globalization has facilitated the exchange of knowledge, technology, and best practices, empowering Bangladeshi SMEs to innovate and compete more effectively on the global stage. This positive perception likely reflects the tangible benefits experienced by SMEs as a result of their integration into the global economy.

The substantial proportion of respondents reporting a somewhat positive impact underscores the nuanced nature of globalization's influence on technology-oriented SMEs in Bangladesh. While these respondents acknowledge the benefits of globalization, they may also recognize challenges or limitations that SMEs face in fully capitalizing on global opportunities. Factors such as market competition, access to finance, regulatory barriers, and infrastructure constraints may temper the overall positive impact of globalization, leading to a more cautious assessment by some respondents.

The small percentage of respondents indicating no significant impact, or a negative impact suggests that there are divergent perspectives on the role of globalization in shaping the growth trajectory of technology-oriented SMEs in Bangladesh. While globalization has undoubtedly created opportunities for SMEs to thrive, it may not have been equally beneficial for all firms or sectors. Some SMEs may struggle to adapt to global market dynamics, face stiff competition from larger multinational corporations, or grapple with the adverse effects of global economic fluctuations. Additionally, concerns about the potential loss of local culture, employment displacement, or environmental degradation associated with globalization may influence perceptions of its impact among certain segments of the population.

The survey results highlight the complex interplay between globalization and the growth of technology-oriented SMEs in Bangladesh. While a majority of respondents perceive a positive impact, there are variations in the degree and nature of this impact, reflecting the diverse experiences and perspectives within the SME sector. Further qualitative research could delve deeper into the specific mechanisms

through which globalization shapes SME growth, as well as the challenges and opportunities it presents for different types of firms. Such insights could inform policy interventions and strategic initiatives aimed at fostering the sustainable development of technology-oriented SMEs within the context of a globalized economy.

3. Which technological advancements have had the most significant impact on your SME's operations?

36 responses

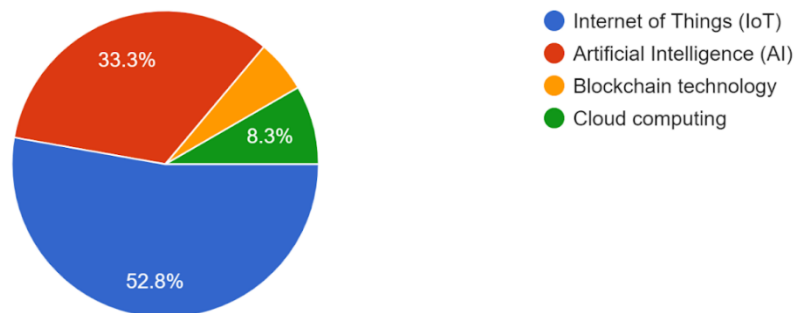


Figure 7. Significant technological advancement on SME operations

The question asked in FIGURE 7 “Which technological advancements have had the most significant impact on your SME's operations?” The survey results shed light on the technological advancements that have had the most significant impact on the operations of Small and Medium Enterprises (SMEs), as perceived by respondents. Among the options provided, the majority of respondents, 52.8%, identified the Internet of Things (IoT) as having the most significant impact on their SME's operations. Following closely behind, 33.3% of respondents cited artificial intelligence (AI) as having the most significant impact. A smaller proportion of respondents, 8.3%, identified cloud computing, while blockchain technology was mentioned by 5.6% of respondents.

The high percentage of respondents indicating that IoT has had the most significant impact on their SME's operations underscores the transformative potential of IoT technologies in enhancing efficiency, productivity, and connectivity within businesses. IoT enables SMEs to collect and analyze vast amounts of data from interconnected devices and sensors, allowing for real-time monitoring, predictive maintenance, and process optimization. For SMEs in sectors such as manufacturing, logistics, and agriculture, IoT solutions offer opportunities to streamline operations, reduce costs, and deliver innovative products and services to customers.

The substantial proportion of respondents citing AI as having the most significant impact reflects the growing adoption of AI-driven technologies across various industries and business functions. AI empowers SMEs to automate routine tasks, make data-driven decisions, and personalize customer experiences. Whether through chatbots for customer support, predictive analytics for demand forecasting, or machine learning algorithms for quality control, AI enables SMEs to harness the power of data and algorithms to drive innovation and competitive advantage. The perceived impact of AI highlights its potential to revolutionize business processes and unlock new opportunities for growth and efficiency.

While cloud computing garnered a smaller percentage of responses, it remains a critical enabler of digital transformation for SMEs. Cloud computing offers scalable and cost-effective solutions for storage, computation, and software delivery, freeing SMEs from the constraints of traditional IT infrastructure. By leveraging cloud services, SMEs can access advanced technologies, collaborate seamlessly, and scale their operations more flexibly. Additionally, blockchain technology, though mentioned by a minority of respondents, holds promise for enhancing transparency, security, and trust in SME operations, particularly in areas such as supply chain management, financial transactions, and intellectual property rights.

The survey results highlight the diverse ways in which technological advancements are shaping the operations of SMEs, with IoT and AI emerging as the most impactful technologies according to respondents. Cloud computing and blockchain also play significant roles in driving innovation and efficiency within SMEs, albeit to a lesser extent. These findings underscore the importance of SMEs embracing digital technologies to stay competitive and resilient in an increasingly technology-driven business landscape. By harnessing the power of these advancements, SMEs can unlock new opportunities for growth, improve operational performance, and deliver greater value to customers in the digital age.

4. How has globalization affected your SME's access to international markets?

36 responses

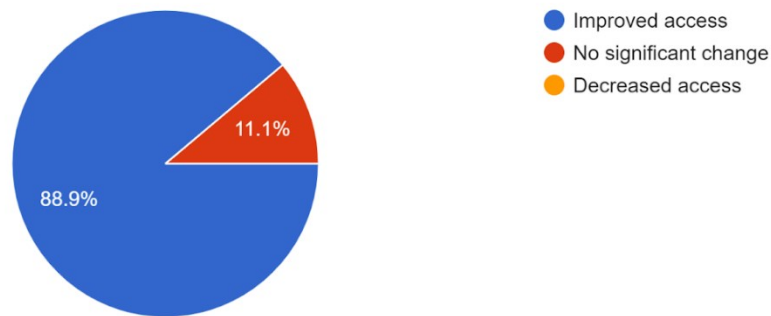


Figure 8. Impact of globalization in SMEs access to international market

The question asked in FIGURE 8 “How has globalization affected your SME's access to international markets?” The survey results provide valuable insights into how globalization has affected Small and Medium Enterprises' (SMEs) access to international markets, as perceived by respondents. A significant majority of respondents, 88.9%, reported that globalization has improved their SME's access to international markets. Conversely, a small proportion, 11.1%, indicated that there has been no significant change in their SME's access to international markets due to globalization, with no respondents reporting a decrease in access.

The overwhelmingly positive perception of globalization's impact on access to international markets suggests that SMEs are capitalizing on the opportunities created by global interconnectedness to expand their reach and tap into new markets. Globalization has dismantled traditional barriers to trade and investment, enabling SMEs to leverage digital technologies, logistics networks, and trade agreements to access customers and suppliers across borders. The proliferation of e-commerce platforms, online marketplaces, and digital marketing channels has further facilitated SMEs' entry into global markets, allowing them to reach a diverse and geographically dispersed customer base with relative ease.

The absence of respondents reporting a decrease in access to international markets underscores the transformative nature of globalization in leveling the playing field for SMEs and reducing the barriers to international trade. While challenges such as regulatory compliance, cultural differences, and logistical complexities may still exist, globalization has provided SMEs with unprecedented opportunities to compete and thrive in the global marketplace. By embracing globalization, SMEs can

leverage their agility, innovation, and niche expertise to carve out a competitive advantage and establish a foothold in new markets, driving business growth and economic development.

The perception that globalization has improved SMEs' access to international markets highlights the strategic importance of internationalization for SMEs seeking to sustain and expand their operations in an increasingly interconnected world. SMEs that successfully navigate the complexities of global markets can diversify their customer base, mitigate risks associated with domestic market fluctuations, and access resources, talent, and innovation from around the world. Moreover, globalization fosters cross-border collaboration, knowledge exchange, and partnerships, enabling SMEs to harness the collective expertise and networks of global stakeholders to drive innovation and create value for customers.

The survey results underscore the pivotal role of globalization in enhancing SMEs' access to international markets, with the overwhelming majority of respondents reporting improvements in access. By embracing the opportunities afforded by globalization, SMEs can unlock new avenues for growth, competitiveness, and sustainability in an increasingly globalized economy. As SMEs continue to navigate the opportunities and challenges of international expansion, strategic investments in market intelligence, cross-cultural competence, and digital capabilities will be crucial for seizing the full potential of globalization and maximizing the benefits for SMEs and the broader economy.

F9.

5. To what extent has globalization influenced your SME's ability to attract foreign investment?
36 responses

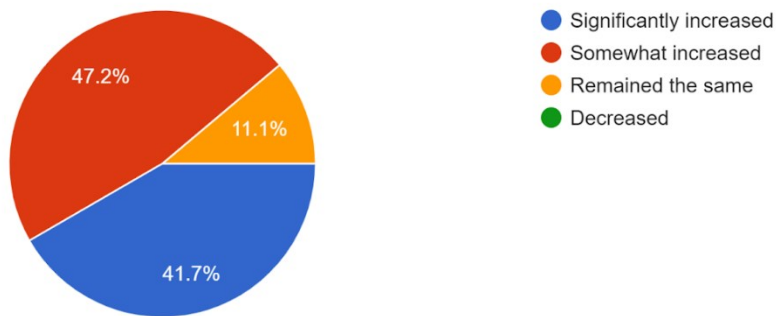


Figure 9: Influence of globalization to attract foreign investment

The question asked in FIGURE 9 “To what extent has globalization influenced your SME's ability to attract foreign investment?” The survey results provide valuable insights into how globalization has

impacted Small and Medium Enterprises' (SMEs) access to international markets, as perceived by respondents. According to the survey, 41.7% of respondents reported a significant increase in their SME's access to international markets due to globalization, while 47.2% indicated a somewhat increased access. Furthermore, 11.1% of respondents stated that their SME's access to international markets remained the same, with no respondents reporting a decrease in access.

The findings suggest that globalization has played a substantial role in expanding the reach of SMEs into international markets, with a majority of respondents reporting some degree of increased access. The significant and somewhat increases in access point to the wide-ranging opportunities that globalization has created for SMEs to tap into global supply chains, reach new customers, and establish international partnerships. Globalization has facilitated the removal of trade barriers, the adoption of digital technologies, and the emergence of global distribution networks, empowering SMEs to compete on a global scale and capitalize on emerging market trends.

The absence of respondents reporting a decrease in access underscores the resilience of SMEs in adapting to the challenges and uncertainties of the global marketplace. Despite potential obstacles such as regulatory complexities, cultural differences, and market volatility, SMEs have leveraged globalization to navigate and overcome barriers to entry into international markets. By embracing globalization, SMEs can harness their agility, innovation, and niche expertise to carve out a competitive edge and seize opportunities for growth and expansion beyond domestic borders.

The findings also highlight the nuanced nature of globalization's impact on SMEs' access to international markets, with some respondents reporting significant increases while others cite more moderate gains. This variation may reflect differences in industry dynamics, market conditions, and the strategic priorities of individual SMEs. Factors such as market saturation, competitive intensity, and resource constraints may influence the extent to which SMEs are able to capitalize on globalization to expand their international footprint.

The survey results underscore the transformative impact of globalization on SMEs' access to international markets, with a majority of respondents reporting increased access. As SMEs continue to navigate the opportunities and challenges of globalization, strategic investments in market intelligence, digital capabilities, and cross-cultural competence will be essential for maximizing the benefits of international expansion. By embracing globalization as a strategic imperative, SMEs can position themselves for sustained growth, competitiveness, and resilience in an increasingly interconnected global economy.

6. Have you experienced increased competition due to globalization?

36 responses

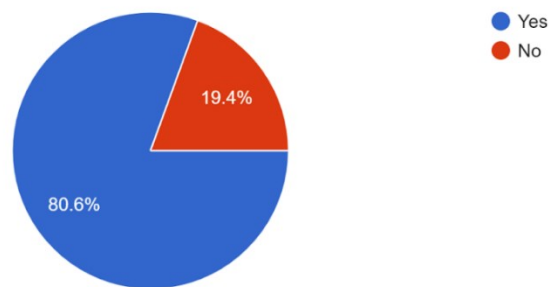


Figure 10. Increased competition for globalization

The question asked in FIGURE 10 “Have you experienced increased competition due to globalization?” The survey results provide insightful perspectives on the impact of globalization on competition as experienced by Small and Medium Enterprises (SMEs). According to the survey, a significant majority of respondents, 80.6%, reported experiencing increased competition as a result of globalization, while 19.4% indicated that they have not experienced such heightened competition.

The high percentage of respondents reporting increased competition underscores the profound effect of globalization in reshaping the competitive landscape for SMEs. Globalization has facilitated greater market integration, enabling firms from different regions to compete more directly with one another. SMEs are no longer constrained by geographical boundaries and face competition not only from local players but also from multinational corporations and emerging market challengers. This heightened competition stems from factors such as the liberalization of trade, the proliferation of digital technologies, and the emergence of new market entrants, all of which have intensified competitive pressures and raised the bar for performance and innovation.

The experience of increased competition due to globalization reflects the dynamic nature of the global marketplace, where firms must continuously adapt and differentiate themselves to stay ahead. SMEs face challenges such as pricing pressures, product commoditization, and the need to differentiate themselves based on quality, innovation, or customer experience. Moreover, globalization has accelerated the pace of change, requiring SMEs to be agile, responsive, and proactive in anticipating and addressing competitive threats and opportunities.

On the other hand, the minority of respondents who reported not experiencing increased competition may reflect unique circumstances or strategic advantages that have shielded their SMEs from the full

impact of globalization-induced competition. Factors such as niche specialization, strong customer relationships, or proprietary technology may afford certain SMEs a degree of insulation from competitive pressures. Additionally, SMEs operating in less exposed industries or serving niche markets may face less direct competition from global rivals, allowing them to carve out a more secure position in the marketplace.

The survey results highlight the dual nature of globalization as both an enabler of opportunity and a driver of competition for SMEs. While globalization opens doors to new markets, resources, and partnerships, it also exposes SMEs to heightened competitive pressures and challenges. To thrive in this competitive landscape, SMEs must leverage globalization to their advantage, embrace innovation, and differentiate themselves through value creation and customer-centric strategies. By adapting to the realities of global competition, SMEs can position themselves for sustained success and resilience in an increasingly interconnected and dynamic business environment.

7. How has your SME adapted to compete in the global market?

36 responses

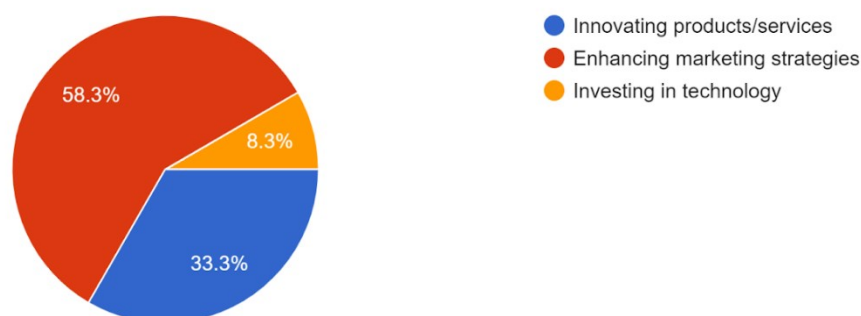


Figure 11. SMEs adapted to compete in the global market

The question asked in FIGURE 11 “How has your SME adapted to compete in the global market?” The survey results offer valuable insights into how Small and Medium Enterprises (SMEs) have adapted to compete in the global market. According to the survey, the majority of respondents, 58.3%, reported enhancing their marketing strategies as a key adaptation to global competition. Additionally, 33.3% of respondents cited innovating products or services as a strategy, while 8.3% mentioned investing in technology.

The significant percentage of respondents indicating the enhancement of marketing strategies as a key adaptation underscores the importance of effective marketing in gaining visibility, attracting customers,

and differentiating SMEs in the global marketplace. In a competitive global environment, SMEs must proactively engage with customers, build brand awareness, and communicate their unique value propositions through targeted and compelling marketing initiatives. This may involve leveraging digital marketing channels, social media platforms, and content marketing to reach diverse audiences across borders and cultures. By investing in marketing capabilities and strategies tailored to global audiences, SMEs can position themselves for success and stand out amidst intense competition.

The respondents who highlighted innovating products or services as a key adaptation recognize the importance of continuous innovation in meeting evolving customer needs, staying ahead of competitors, and capturing market opportunities. In the global marketplace, where trends, preferences, and technologies are constantly changing, SMEs must demonstrate agility and creativity in developing products or services that resonate with international customers. Innovation can take various forms, including the introduction of new features, the customization of offerings for different markets, or the development of disruptive solutions that address unmet needs. By fostering a culture of innovation and embracing feedback from global customers, SMEs can differentiate themselves and create sustainable competitive advantages.

While a smaller percentage of respondents mentioned investing in technology as an adaptation strategy, technology plays a crucial role in enabling SMEs to compete effectively in the global market. Technology investments can enhance operational efficiency, facilitate market intelligence, and enable SMEs to leverage data-driven insights for decision-making and strategy formulation. Whether through the adoption of cloud computing, e-commerce platforms, or customer relationship management systems, technology empowers SMEs to streamline processes, scale operations, and deliver superior value to global customers. Moreover, emerging technologies such as artificial intelligence, Internet of Things, and blockchain offer opportunities for SMEs to innovate, disrupt traditional business models, and gain a competitive edge in the global marketplace.

The survey results highlight the diverse strategies employed by SMEs to adapt and compete in the global market. By enhancing marketing strategies, innovating products or services, and investing in technology, SMEs can navigate the complexities of global competition, seize opportunities for growth, and differentiate themselves in a crowded marketplace. As SMEs continue to evolve and expand their presence on the global stage, strategic investments in marketing, innovation, and technology will be essential for driving sustainable success and resilience in an increasingly interconnected and competitive business landscape.

8. How has globalization impacted your SME's supply chain management?

36 responses

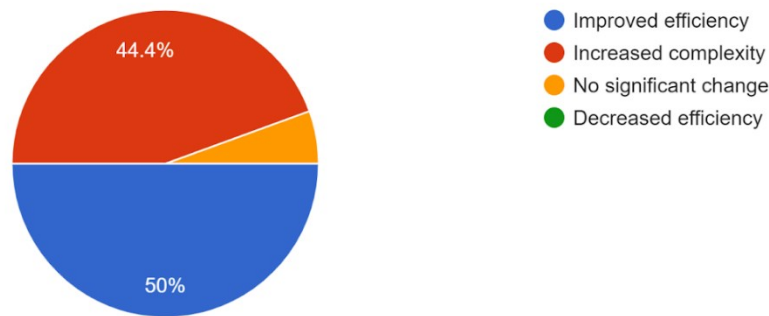


Figure 12. Impact of Globalization in Supply Chain Management

The question asked in FIGURE 12 “How has globalization impacted your SME's supply chain management?” The survey results offer valuable insights into how globalization has impacted Small and Medium Enterprises' (SMEs) supply chain management. According to the survey, 50% of respondents reported that globalization has improved the efficiency of their SME's supply chain management, while 44.4% indicated that it has increased complexity. Additionally, a small percentage of respondents, 5.6%, stated that there has been no significant change in their SME's supply chain efficiency due to globalization.

The finding that half of the respondents reported improved efficiency in their SME's supply chain management underscores the positive impact of globalization on streamlining processes, reducing costs, and enhancing overall performance. Globalization has enabled SMEs to optimize their supply chains by leveraging economies of scale, accessing a broader pool of suppliers and partners, and adopting best practices from global leaders. Through innovations in logistics, transportation, and inventory management, SMEs can minimize lead times, improve inventory turnover, and meet customer demand more effectively. The improved efficiency of supply chain management enables SMEs to operate more competitively in the global marketplace, delivering value to customers while maintaining cost-effectiveness.

Conversely, the substantial percentage of respondents indicating that globalization has increased complexity in their SME's supply chain management highlights the challenges and trade-offs associated with global expansion. Globalization exposes SMEs to a myriad of complexities, including longer supply chains, cultural differences, regulatory requirements, and geopolitical risks, which can complicate

coordination, decision-making, and risk mitigation efforts. Managing a global supply chain requires SMEs to navigate diverse markets, adapt to changing regulations, and build resilient networks of suppliers and partners. While globalization offers opportunities for growth and access to new markets, it also necessitates careful strategic planning and investment in capabilities to effectively manage the increased complexity of global supply chains.

The small percentage of respondents reporting no significant change in supply chain efficiency may reflect unique circumstances or strategic choices that have limited the impact of globalization on their SME's supply chain management. Factors such as market focus, product specialization, or supply chain resilience may mitigate some of the challenges posed by globalization, allowing certain SMEs to maintain stable and efficient supply chain operations despite global disruptions or uncertainties.

The survey results highlight the multifaceted impact of globalization on SMEs' supply chain management, with implications for efficiency, complexity, and resilience. While globalization has the potential to improve supply chain efficiency through access to global markets and resources, it also introduces complexities that require SMEs to adapt and innovate in order to thrive. By proactively addressing challenges and leveraging opportunities presented by globalization, SMEs can build agile, resilient, and efficient supply chains that enable sustainable growth and competitiveness in an increasingly interconnected and dynamic global economy.

9. Has globalization influenced the pricing strategy of your SME's products/services?

36 responses

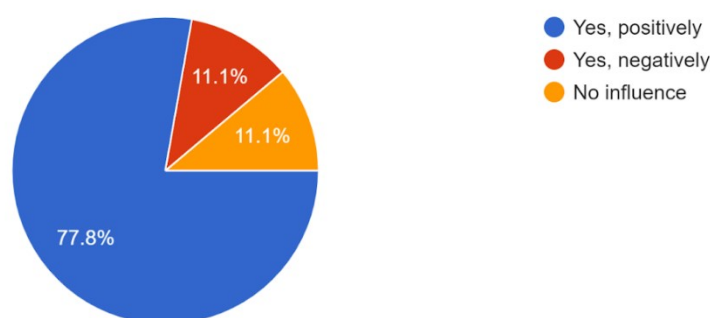


Figure13. Influence of Globalization in pricing strategy

The question asked in FIGURE 13 “Has globalization influenced the pricing strategy of your SME's products/services?” The survey results provide valuable insights into how globalization has influenced the pricing strategy of Small and Medium Enterprises (SMEs) regarding their products or services.

According to the survey, a significant majority of respondents, 77.8%, reported that globalization has positively influenced their SME's pricing strategy, while 11.1% indicated a negative influence. Additionally, 11.1% of respondents stated that globalization has had no influence on their SME's pricing strategy.

The finding that the majority of the respondents reported a positive influence of globalization on their SME's pricing strategy suggests that globalization has created opportunities for SMEs to enhance competitiveness, profitability, and market positioning through strategic pricing practices. Globalization has expanded the pool of potential customers and competitors, enabling SMEs to leverage economies of scale, access new markets, and optimize pricing strategies to maximize revenue and market share. By tapping into global supply chains, sourcing materials and components from lower-cost regions, or targeting international market segments with differentiated pricing strategies, SMEs can adapt to changing market dynamics and capitalize on globalization to drive growth and profitability.

Conversely, the small percentage of respondents reporting a negative influence of globalization on their SME's pricing strategy may reflect challenges such as increased competition, pricing pressure, or currency fluctuations that can erode profitability and constrain pricing flexibility. Globalization exposes SMEs to a wider array of competitors, including multinational corporations and low-cost producers from emerging markets, which can exert downward pressure on prices and margins. Moreover, global economic uncertainties, trade tensions, and geopolitical risks may introduce volatility and uncertainty into pricing decisions, complicating SMEs' ability to maintain stable and profitable pricing strategies.

The finding that a minority of respondents indicated no influence of globalization on their SME's pricing strategy underscores the diverse experiences and contexts in which SMEs operate. While globalization presents opportunities and challenges for pricing strategy, the extent to which SMEs are affected may vary depending on factors such as industry dynamics, market positioning, and competitive landscape. SMEs operating in niche markets or serving specialized customer segments may experience less direct impact from global pricing pressures, allowing them to maintain stable pricing strategies despite broader global trends.

The survey results highlight the complex interplay between globalization and SMEs' pricing strategies, with implications for competitiveness, profitability, and market positioning. By embracing globalization as an opportunity to innovate, differentiate, and adapt pricing strategies to changing market dynamics, SMEs can effectively navigate the challenges and opportunities of the global marketplace and drive sustainable growth and success. Strategic investments in market intelligence, pricing analytics, and

customer segmentation will be essential for SMEs to harness the potential of globalization and thrive in an increasingly interconnected and competitive business environment.

10. How important is international collaboration for the success of your SME?

36 responses

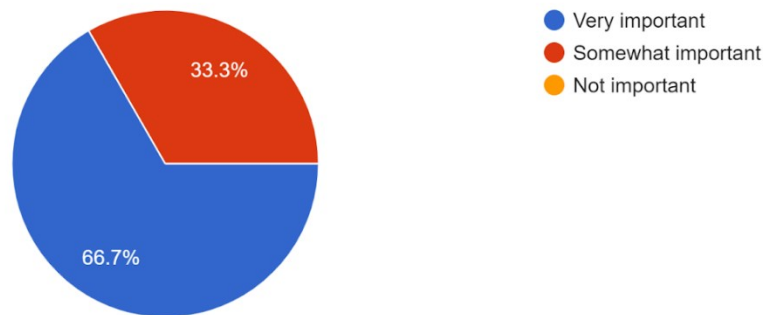


Figure 14. Importance of international collaboration for the success of SME

The question asked in FIGURE 14 “How important is international collaboration for the success of your SME?” The survey results provide valuable insights into the perceived importance of international collaboration for the success of Small and Medium Enterprises (SMEs). According to the survey, a significant majority of respondents, 66.7%, consider international collaboration to be very important for the success of their SME, while 33.3% view it as somewhat important. Notably, none of the respondents indicated that international collaboration is not important for their SME's success.

The finding that the majority of respondents consider international collaboration to be very important underscores the strategic significance of collaboration across borders in driving SME success in the global marketplace. International collaboration offers SMEs opportunities to access new markets, resources, expertise, and innovation that may not be available domestically. By forming partnerships, alliances, and networks with foreign firms, SMEs can leverage complementary strengths, share risks and costs, and expand their reach and capabilities to compete more effectively on a global scale. Whether through joint ventures, strategic alliances, or research and development partnerships, international collaboration enables SMEs to access new markets, technologies, and opportunities for growth and innovation.

The substantial percentage of respondents indicating that international collaboration is somewhat important reflects the recognition that while international collaboration offers valuable opportunities, it also entails challenges and trade-offs that must be carefully managed. International collaboration

requires SMEs to navigate diverse cultural, legal, regulatory, and logistical complexities, which may pose barriers to effective collaboration. Moreover, building trust, communication, and alignment with international partners can be time-consuming and resource-intensive, requiring careful planning, coordination, and investment in relationship-building. While international collaboration may not be considered as critical as other factors for SME success, such as product quality, customer satisfaction, or financial performance, it nonetheless plays a valuable role in enhancing SME competitiveness, resilience, and growth potential in the global marketplace.

The absence of respondents indicating that international collaboration is not important for their SME's success suggests a broad consensus among respondents regarding the strategic importance of collaboration across borders. In an increasingly interconnected and interdependent global economy, SMEs recognize the importance of leveraging international collaboration to stay competitive, innovative, and resilient amidst rapid technological, economic, and geopolitical changes. By embracing international collaboration as a strategic imperative, SMEs can access new markets, talent, and opportunities, build strategic alliances, and drive sustainable growth and success in the dynamic and complex global marketplace.

The survey results highlight the critical role of international collaboration in driving SME success in the global marketplace. By recognizing the strategic importance of collaboration across borders, SMEs can leverage international partnerships, alliances, and networks to access new markets, resources, and opportunities, enhance competitiveness, and drive sustainable growth and innovation. Strategic investments in relationship-building, cross-cultural competence, and collaboration capabilities will be essential for SMEs to harness the full potential of international collaboration and thrive in an increasingly interconnected and competitive global business environment.

11. What challenges has globalization posed for your SME in terms of talent acquisition and retention?

36 responses

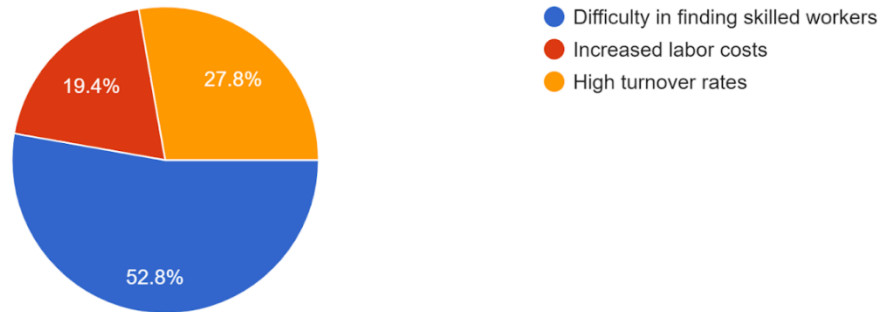


Figure 15. Challenges of globalization in SME

The question asked in FIGURE 15 “What challenges has globalization posed for your SME in terms of talent acquisition and retention?” The survey results offer valuable insights into the challenges that globalization has posed for Small and Medium Enterprises (SMEs) in terms of talent acquisition and retention. According to the survey, the most commonly cited challenge, reported by 52.8% of respondents, is difficulty in finding skilled workers. Additionally, 19.4% of respondents mentioned increased labor costs as a challenge, while 27.8% cited high turnover rates.

The finding that over half of the respondents reported difficulty in finding skilled workers highlights the talent shortage and mismatch that many SMEs face in the global marketplace. Globalization has intensified competition for talent, as SMEs compete not only with domestic firms but also with multinational corporations and global talent pools. Rapid technological advancements and evolving skill requirements further exacerbate the challenge, as SMEs struggle to find workers with the necessary expertise in areas such as digitalization, data analytics, and specialized technical fields. Moreover, SMEs may face challenges in attracting skilled workers to smaller or less-known firms compared to larger, more established employers, further exacerbating talent acquisition difficulties.

The respondents who mentioned increased labor costs as a challenge indicate the cost pressures that globalization can impose on SMEs, particularly in regions with rising wages or stringent labor regulations. As SMEs seek to attract and retain skilled workers in a competitive labor market, they may face upward pressure on wages and benefits, leading to increased labor costs that can strain profitability and competitiveness. Moreover, SMEs operating in global supply chains may face challenges in managing labor costs across different regions with varying wage levels, regulatory requirements, and

labor market dynamics. Balancing the need to attract and retain talent with cost considerations poses a significant challenge for SMEs seeking to maintain competitiveness in the global marketplace.

The respondents who cited high turnover rates as a challenge indicate the retention challenges that SMEs face in a highly dynamic and competitive business environment. Globalization has increased labor mobility, as workers seek opportunities for career advancement, skill development, and higher wages in the global marketplace. SMEs may struggle to retain skilled workers amidst competition from larger firms offering better compensation, benefits, and career development opportunities. Moreover, turnover can disrupt productivity, continuity, and organizational culture, leading to increased recruitment and training costs and affecting SMEs' ability to deliver consistent quality and service to customers.

The survey results highlight the multifaceted challenges that globalization poses for SMEs in talent acquisition and retention. Difficulty in finding skilled workers, increased labor costs, and high turnover rates underscore the complexities of managing human capital in the global marketplace. By addressing these challenges through strategic investments in talent development, employer branding, and retention strategies, SMEs can build a skilled, motivated, and resilient workforce that drives sustainable growth and success in an increasingly competitive and dynamic global business environment.

12. How has globalization affected the regulatory environment for your SME?

36 responses

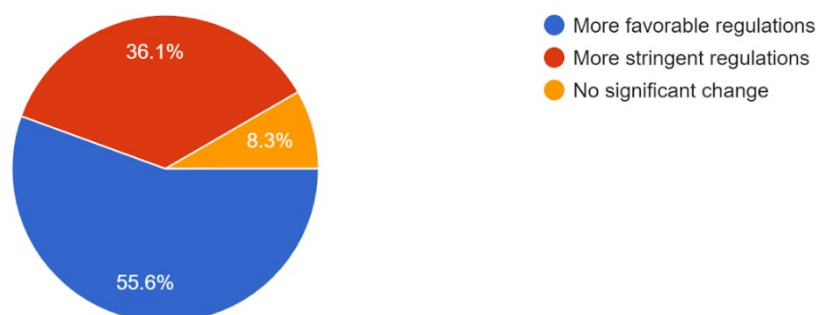


Figure 16. Impact of globalization in the regulatory environment for SME

The question asked in FIGURE 16 “How has globalization affected the regulatory environment for your SME?” The survey results provide valuable insights into how globalization has impacted the regulatory environment for Small and Medium Enterprises (SMEs). According to the survey, 55.6% of respondents reported experiencing more favorable regulations as a result of globalization, while 36.1% indicated

encountering more stringent regulations. Additionally, 8.3% of respondents stated that there has been no significant change in the regulatory environment for their SMEs due to globalization.

The finding that over half of the respondents reported experiencing more favorable regulations suggests that globalization has contributed to regulatory reforms and policy changes that benefit SMEs operating in the global marketplace. Globalization has led to increased economic integration, trade liberalization, and harmonization of regulatory standards across borders, creating a more conducive environment for SMEs to expand their operations, access new markets, and compete on a level playing field. Favorable regulations may include measures such as reduced tariffs, streamlined customs procedures, simplified licensing requirements, and investment incentives, which facilitate SMEs' internationalization efforts and support their growth and competitiveness in the global marketplace.

Conversely, the substantial percentage of respondents reporting encountering more stringent regulations indicates the regulatory challenges and complexities that globalization can introduce for SMEs. Globalization exposes SMEs to diverse regulatory frameworks, legal systems, and compliance requirements across different countries and regions, increasing the complexity and costs of doing business internationally. Stringent regulations may include measures such as stricter environmental standards, labor laws, product safety regulations, and intellectual property protections, which SMEs must navigate and comply with to operate legally and sustainably in the global marketplace. Moreover, regulatory divergence and uncertainty may create barriers to market entry, hinder innovation, and increase compliance risks for SMEs operating across borders.

The respondents who indicated no significant change in the regulatory environment for their SMEs due to globalization may reflect unique circumstances or regulatory contexts in which SMEs operate. While globalization may have led to regulatory reforms or changes in some jurisdictions, other regions may have remained relatively stable or unchanged in terms of regulatory frameworks affecting SMEs. Additionally, SMEs operating in niche markets or serving specialized customer segments may face less direct impact from global regulatory trends, allowing them to maintain stability and predictability in the regulatory environment despite broader global developments.

The survey results highlight the diverse impact of globalization on the regulatory environment for SMEs, with implications for growth, competitiveness, and compliance. While globalization has led to more favorable regulations in some cases, it has also introduced challenges and uncertainties through more stringent regulations in others. By staying informed, proactive, and adaptive to changing regulatory dynamics, SMEs can navigate the complexities of the global regulatory environment, seize opportunities for growth, and mitigate risks to ensure sustainable success in the global marketplace.

13. To what extent has your SME utilized e-commerce platforms to expand its market reach globally?

36 responses

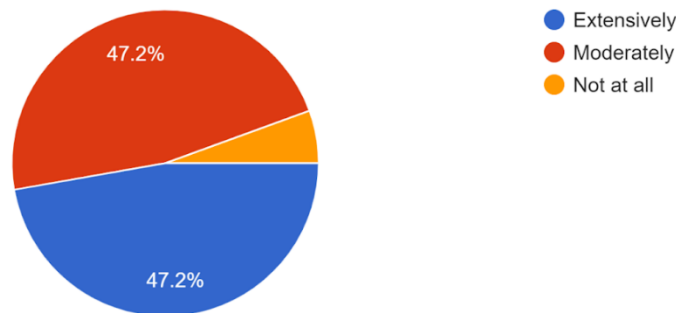


Figure 17. Utilization of SMEs in ecommerce platforms

The question asked in FIGURE 17 “To what extent has your SME utilized e-commerce platforms to expand its market reach globally?” The survey results shed light on the extent to which Small and Medium Enterprises (SMEs) have utilized e-commerce platforms to expand their market reach globally. According to the survey, an equal percentage of respondents, 47.2%, reported utilizing e-commerce platforms extensively and moderately, indicating a widespread adoption of online channels for market expansion. Additionally, a small percentage of respondents, 5.6%, stated that their SMEs have not utilized e-commerce platforms at all.

The finding that nearly half of the respondents reported utilizing e-commerce platforms extensively highlights the strategic importance of digital channels in enabling SMEs to reach global markets efficiently and effectively. E-commerce platforms offer SMEs opportunities to overcome traditional barriers to international trade, such as geographical distance, logistical constraints, and market access limitations. By leveraging e-commerce platforms, SMEs can showcase their products or services to a global audience, engage with customers in real-time, and facilitate seamless transactions across borders. Moreover, e-commerce platforms provide SMEs with valuable data and insights into customer preferences, behaviors, and market trends, enabling them to tailor their offerings and marketing strategies to global audiences with precision.

Similarly, the significant percentage of respondents indicating moderate utilization of e-commerce platforms underscores the growing recognition among SMEs of the importance of online channels in expanding market reach and driving growth in the digital age. While not fully reliant on e-commerce,

these SMEs recognize the value of digital channels as complementary to their traditional sales and distribution channels, allowing them to extend their reach, enhance customer engagement, and diversify revenue streams. Moderate utilization of e-commerce platforms may involve efforts such as developing an online presence, optimizing product listings, and investing in digital marketing to attract and retain customers in global markets.

The small percentage of respondents indicating no utilization of e-commerce platforms may reflect various factors such as industry dynamics, market characteristics, or strategic priorities that have limited SMEs' adoption of online channels for global market expansion. While e-commerce offers significant advantages in terms of market reach and scalability, certain SMEs may face barriers such as limited resources, technical expertise, or regulatory constraints that inhibit their ability to leverage digital platforms effectively. Moreover, SMEs operating in niche markets or serving specialized customer segments may find traditional sales channels more effective or suitable for their business models, leading to a limited adoption of e-commerce platforms.

The survey results highlight the growing importance of e-commerce platforms in enabling SMEs to expand their market reach globally. By utilizing digital channels extensively or moderately, SMEs can overcome traditional barriers to international trade, engage with global customers, and drive growth and competitiveness in the digital economy. As SMEs continue to embrace e-commerce as a strategic imperative, investments in digital capabilities, online marketing, and cross-border logistics will be essential for maximizing the opportunities and benefits of global market expansion through digital channels.

14. How has globalization impacted your SME's ability to access financing options?

36 responses

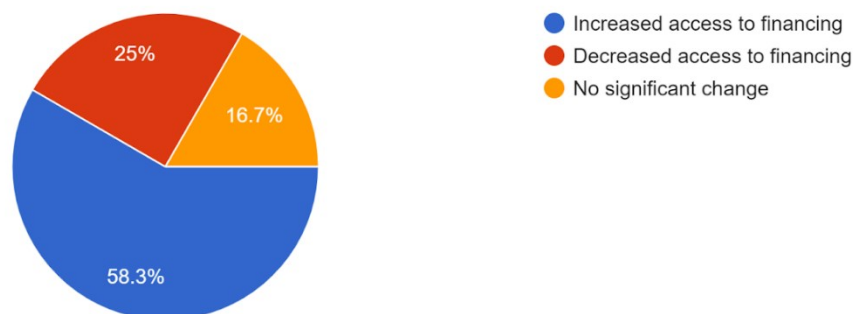


Figure 18. Impact of globalization to access financing options

The question asked in FIGURE 18 “How has globalization impacted your SME's ability to access financing options?” The survey results provide valuable insights into how globalization has impacted Small and Medium Enterprises' (SMEs) ability to access financing options. According to the survey, 58.3% of respondents reported increased access to financing as a result of globalization, while 25% indicated decreased access. Additionally, 16.7% of respondents stated that there has been no significant change in their SME's ability to access financing options due to globalization.

The finding that a majority of respondents reported increased access to financing highlights the positive impact of globalization in expanding SMEs' access to capital and financial resources. Globalization has opened up new avenues for SME financing by facilitating cross-border capital flows, fostering financial innovation, and expanding the range of financing options available to SMEs. Increased access to financing may include opportunities such as access to international capital markets, venture capital funding, angel investments, and crowdfunding platforms, which enable SMEs to raise funds for growth, innovation, and expansion into global markets. Moreover, globalization has encouraged financial institutions and investors to adopt more inclusive and flexible lending practices, reducing barriers to financing for SMEs operating in diverse sectors and regions.

Conversely, the percentage of respondents indicating decreased access to financing underscores the challenges and complexities that globalization can introduce for SMEs seeking capital. While globalization has created opportunities for SME financing, it has also intensified competition for capital, increased market volatility, and raised the bar for creditworthiness and risk assessment. SMEs may face challenges such as stringent lending criteria, higher interest rates, or limited access to financing in regions or sectors deemed risky or less attractive to investors. Moreover, global economic uncertainties, trade tensions, and currency fluctuations may exacerbate funding challenges for SMEs, leading to decreased access to financing options and constraining their ability to pursue growth and expansion initiatives.

The respondents who indicated no significant change in their SME's ability to access financing options due to globalization may reflect stable or balanced market conditions, strategic positioning, or access to alternative financing sources that have mitigated the impact of global trends. While globalization may have influenced financing dynamics in certain industries or regions, other SMEs may have maintained stable relationships with traditional lenders, suppliers, or business partners, enabling them to access financing on relatively consistent terms despite broader global developments.

The survey results highlight the mixed impact of globalization on SMEs' ability to access financing options, with implications for growth, innovation, and competitiveness. While globalization has expanded opportunities for SME financing in many cases, it has also introduced challenges and uncertainties that SMEs must navigate to secure capital for their business needs. By staying informed, proactive, and adaptive to changing market dynamics, SMEs can leverage globalization to access diverse financing options, optimize capital allocation, and drive sustainable growth and success in the global marketplace.

15. How important is digital marketing for promoting your SME's products/services globally?

36 responses

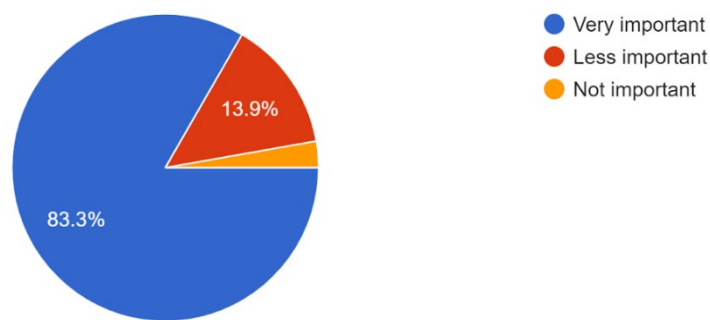


Figure 19. Significance of digital marketing for promoting SME products

The upcoming question asked in FIGURE 19 “How important is digital marketing for promoting your SME's products/services globally?” The survey results offer valuable insights into the perceived importance of digital marketing for promoting Small and Medium Enterprises' (SMEs) products and services globally. According to the survey, a significant majority of respondents, 83.3%, consider digital marketing to be very important for their SMEs, while 13.9% view it as less important. Additionally, a small percentage of respondents, 2.8%, stated that digital marketing is not important for their SMEs.

The finding that most respondents consider digital marketing to be very important underscores the pivotal role of digital channels in SMEs' global marketing strategies. In an increasingly digitalized and interconnected world, SMEs recognize the power of digital marketing to reach global audiences, drive engagement, and generate leads and sales across borders. Digital marketing offers SMEs a cost-effective and scalable means to promote their products or services, build brand awareness, and engage with customers in real-time through a variety of channels such as social media, search engine optimization (SEO), content marketing, email marketing, and online advertising. By leveraging digital marketing

strategies tailored to global audiences, SMEs can amplify their reach, maximize region of interest (ROI), and compete effectively in the global marketplace.

Conversely, the percentage of respondents indicating that digital marketing is less important suggests varying perceptions among SMEs regarding the effectiveness and relevance of digital channels in promoting their products or services globally. While digital marketing offers significant advantages in terms of reach, targeting, and measurability, certain SMEs may prioritize traditional marketing channels or rely on word-of-mouth referrals, industry networks, or offline sales channels to promote their offerings in global markets. Factors such as industry dynamics, target audience preferences, and resource constraints may influence SMEs' decision to allocate resources and investments towards digital marketing versus other marketing channels.

The small percentage of respondents indicating that digital marketing is not important for their SMEs may reflect unique circumstances, strategic choices, or misconceptions about the value and impact of digital channels in global marketing. While traditional marketing channels may still play a role in SMEs' marketing mix, dismissing digital marketing entirely overlooks the transformative potential of digital channels to reach, engage, and convert global audiences in a cost-effective and measurable manner (Trifunović, I., Spalević, Ž., Savić, S., & Prlinčević, B. 2023, 323-327). As digital technologies continue to evolve and consumer behaviors shift towards online platforms, SMEs that underestimate the importance of digital marketing risk falling behind competitors and missing out on opportunities for growth and expansion in the global marketplace.

The survey results highlight the critical importance of digital marketing for promoting SMEs' products and services globally. By embracing digital channels as a strategic imperative, SMEs can leverage the power of digital marketing to extend their reach, build brand equity, and drive business growth in the increasingly competitive and dynamic global marketplace. Strategic investments in digital capabilities, content creation, data analytics, and cross-cultural communication will be essential for SMEs to maximize the opportunities and benefits of digital marketing in reaching and engaging global audiences effectively.

16. Has your SME faced any cultural barriers while operating in the global market?

36 responses

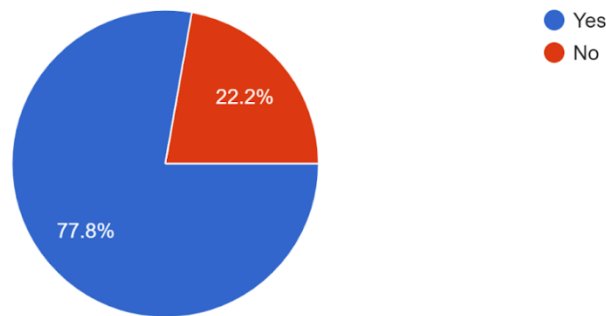


Figure 20. Cultural barriers faced by SMEs in global market

The next question asked in FIGURE 20 “Has your SME faced any cultural barriers while operating in the global market?” The survey results provide valuable insights into the prevalence of cultural barriers faced by Small and Medium Enterprises (SMEs) while operating in the global market. According to the survey, a significant majority of respondents, 77.8%, reported facing cultural barriers, while 22.2% indicated that their SMEs have not encountered such obstacles.

The finding that a large majority of respondents reported facing cultural barriers underscores the complexity and challenges inherent in conducting business across different cultural contexts. Cultural barriers can manifest in various forms, including differences in language, communication styles, business practices, social norms, values, and attitudes towards risk and uncertainty. SMEs operating in global markets must navigate these cultural differences effectively to build trust, establish relationships, and communicate their value proposition to customers, partners, and stakeholders from diverse cultural backgrounds.

Cultural barriers can pose significant challenges to SMEs' internationalization efforts, affecting various aspects of business operations, including marketing, sales, negotiations, and customer service. Differences in communication styles and language proficiency may hinder effective communication and understanding between SMEs and their international counterparts, leading to misinterpretations, misunderstandings, and breakdowns in communication. Moreover, cultural differences in business etiquette, hierarchy, and decision-making processes may require SMEs to adapt their strategies, behaviors, and expectations to align with local cultural norms and practices.

SMEs may also encounter challenges in building and maintaining relationships with customers and partners from different cultural backgrounds. Cultural nuances in relationship-building, trust-building, and conflict resolution may require SMEs to invest time and effort in understanding and respecting cultural differences, demonstrating cultural sensitivity, and building cross-cultural competencies within their organizations. Failure to recognize and address cultural barriers effectively can lead to missed opportunities, strained relationships, and reputational damage for SMEs operating in the global marketplace.

Conversely, the minority of respondents indicating that their SMEs have not faced cultural barriers may reflect unique circumstances, strategic positioning, or proactive measures taken by these SMEs to mitigate cultural risks and challenges. SMEs that prioritize cross-cultural training, intercultural communication, and cultural intelligence within their organizations may be better equipped to navigate cultural differences and adapt their strategies to diverse cultural contexts effectively. Additionally, SMEs operating in niche markets or serving homogeneous customer segments may encounter fewer cultural barriers compared to those operating in more diverse or internationalized markets.

The survey results highlight the pervasive impact of cultural barriers on SMEs' operations in the global market, with implications for communication, relationship-building, and business success. By recognizing and addressing cultural differences proactively, SMEs can overcome cultural barriers, build trust, and establish strong relationships with customers, partners, and stakeholders from diverse cultural backgrounds. Strategic investments in cultural competence, intercultural training, and cross-cultural collaboration will be essential for SMEs to navigate the complexities of cultural diversity and unlock the full potential of global market opportunities.

17. How has globalization influenced your SME's approach to sustainability and corporate social responsibility (CSR)?

36 responses

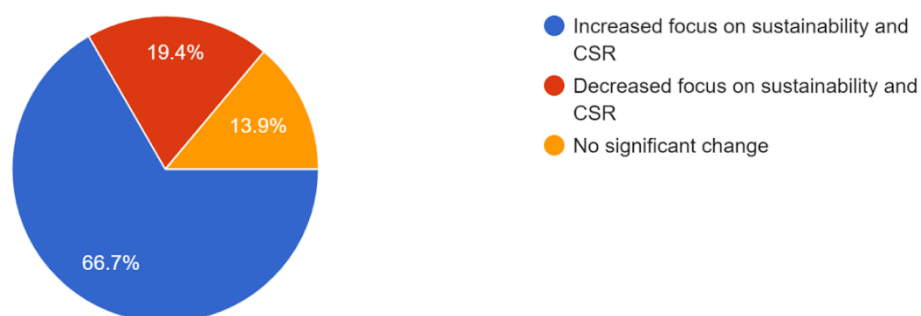


Figure 21. Influence of SMEs to sustainability and corporate social responsibility

The question asked in FIGURE 21 “How has globalization influenced your SME's approach to sustainability and corporate social responsibility (CSR)?” The survey results provide valuable insights into how globalization has influenced Small and Medium Enterprises' (SMEs) approach to sustainability and corporate social responsibility (CSR). According to the survey, a significant majority of respondents, 66.7%, reported an increased focus on sustainability and CSR, while 19.4% indicated a decreased focus. Additionally, 13.9% of respondents stated that there has been no significant change in their SMEs' approach to sustainability and CSR due to globalization.

The finding that the majority of respondents reported an increased focus on sustainability and CSR suggests that globalization has prompted SMEs to recognize the importance of integrating environmental, social, and governance (ESG) considerations into their business strategies and operations. Globalization has heightened awareness of sustainability challenges such as climate change, resource scarcity, social inequality, and ethical business practices, compelling SMEs to adopt more responsible and sustainable approaches to business. Increased stakeholder expectations, regulatory pressures, and market demands for sustainability and CSR initiatives have incentivized SMEs to embrace their role as responsible corporate citizens, address societal needs, and mitigate negative impacts on the environment and society.

Conversely, the percentage of respondents indicating a decreased focus on sustainability and CSR may reflect challenges or trade-offs that SMEs face in balancing sustainability goals with competitive pressures, cost considerations, or short-term financial performance objectives. Globalization can introduce complexities and uncertainties that may divert SMEs' attention or resources away from sustainability initiatives, particularly in industries or regions where regulatory frameworks are less stringent or where sustainability practices are not yet mainstream. Moreover, economic downturns, market disruptions, or competitive pressures may lead SMEs to deprioritize sustainability and CSR efforts in favor of more immediate business priorities or survival strategies.

The minority of respondents indicating no significant change in their SMEs' approach to sustainability and CSR suggests that certain SMEs may have maintained a consistent or stable stance on sustainability and CSR despite global trends or developments. While globalization may have influenced sustainability expectations and practices in some industries or regions, other SMEs may have established strong commitments to sustainability and CSR as core values or strategic priorities that remain unchanged over

time. These SMEs may have already integrated sustainability considerations into their business models, operations, and decision-making processes, positioning them for long-term success and resilience in the global marketplace.

The survey results highlight the nuanced impact of globalization on SMEs' approach to sustainability and CSR, with implications for business strategy, reputation, and competitiveness. By embracing sustainability and CSR as strategic imperatives, SMEs can enhance their resilience, reputation, and value creation potential in an increasingly interconnected and sustainability-conscious global economy. Strategic investments in sustainability initiatives, stakeholder engagement, and transparent reporting will be essential for SMEs to navigate the complexities of globalization and drive positive social and environmental impact while achieving long-term business success.

18. What role do government policies play in facilitating or hindering your SME's globalization efforts?

36 responses

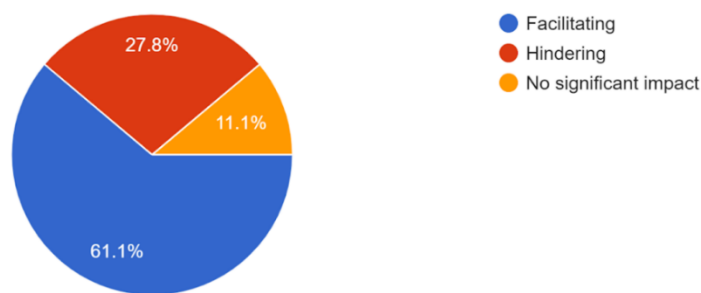


Figure 22. Role of government policies for facilitating SME's globalization efforts

The question asked in FIGURE 22 “What role do government policies play in facilitating or hindering your SME's globalization efforts?” The survey results offer valuable insights into the role of government policies in either facilitating or hindering the globalization efforts of Small and Medium Enterprises (SMEs). According to the survey, a majority of respondents, 61.1%, reported that government policies play a facilitating role, while 27.8% indicated that they hinder SME globalization efforts. Additionally, 11.1% of respondents stated that government policies have had no significant impact on their SMEs' globalization efforts.

The finding that a significant majority of respondents perceive government policies as facilitating globalization efforts underscores the importance of supportive regulatory frameworks, trade agreements, and policies that enable SMEs to expand their international presence and compete effectively in global

markets. Governments can play a crucial role in facilitating SME globalization by implementing measures such as reducing trade barriers, tariffs, and bureaucratic hurdles, promoting investment in infrastructure and logistics, providing financial incentives and export assistance programs, and fostering a conducive business environment that encourages innovation, entrepreneurship, and internationalization. By aligning policies with SME needs and priorities, governments can unlock opportunities for SMEs to access global markets, resources, and opportunities, driving economic growth, job creation, and competitiveness.

Conversely, the percentage of respondents indicating that government policies hinder SME globalization efforts suggests that regulatory burdens, trade barriers, and policy uncertainties can impede SMEs' ability to expand internationally and compete in global markets. Hindering policies may include measures such as protectionist trade policies, cumbersome regulatory requirements, bureaucratic red tape, and inadequate support for SMEs' internationalization initiatives, which create barriers to market entry, increase compliance costs, and limit SMEs' access to global opportunities. Moreover, geopolitical tensions, trade disputes, and policy uncertainties can exacerbate risks and uncertainties for SMEs operating across borders, constraining their ability to plan, invest, and grow globally.

The minority of respondents indicating no significant impact of government policies on SME globalization efforts may reflect diverse experiences or contexts in which SMEs operate. While government policies may play a facilitating or hindering role for certain SMEs, others may perceive limited direct impact of government policies on their globalization efforts due to factors such as market focus, industry dynamics, or strategic positioning. Moreover, SMEs that have successfully navigated regulatory challenges or adapted to market conditions may perceive government policies as less influential compared to other factors shaping their globalization strategies, such as market demand, competitive dynamics, or technological trends.

The survey results highlight the pivotal role of government policies in shaping SMEs' globalization efforts, with implications for competitiveness, growth, and sustainability. By adopting policies that support SME internationalization, governments can unlock the full potential of SMEs to drive economic development, innovation, and job creation in the global marketplace. Strategic collaboration between governments, industry stakeholders, and SMEs will be essential for identifying barriers, addressing challenges, and designing policies that foster an enabling environment for SMEs to thrive and succeed in an increasingly interconnected and competitive global economy.

19. How has globalization influenced consumer behavior in the markets your SME operates in?

36 responses

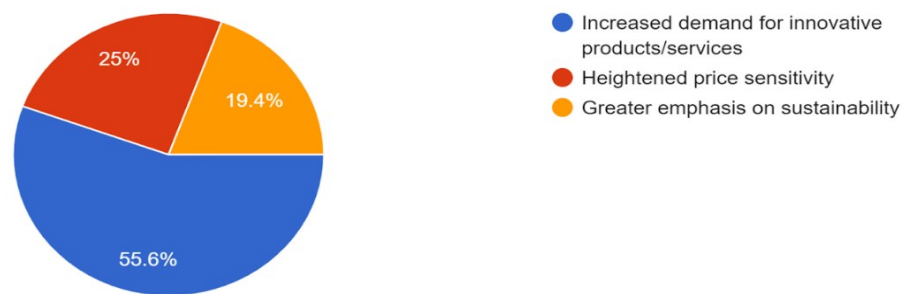


Figure 23. Influence of globalization in customer behavior by SME

The question asked in FIGURE 23 “How has globalization influenced consumer behavior in the markets your SME operates in?” The survey results shed light on how globalization has influenced consumer behavior in the markets where Small and Medium Enterprises (SMEs) operate. According to the survey, the majority of respondents, 55.6%, reported increased demand for innovative products/services, indicating a shift in consumer preferences towards novel and cutting-edge offerings. Additionally, 25% of respondents highlighted heightened price sensitivity among consumers, while 19.4% mentioned a greater emphasis on sustainability in consumer choices.

The finding that a significant majority of respondents reported increased demand for innovative products/services suggests that globalization has fueled consumer expectations for new, unique, and technologically advanced offerings. As markets become more interconnected and information flows more freely, consumers have access to a wider array of products and services from around the world, leading to higher expectations for innovation, quality, and differentiation. SMEs that innovate and adapt to changing consumer preferences can gain a competitive edge by offering products or services that meet evolving needs, solve pressing challenges, or deliver superior value propositions compared to traditional offerings.

Conversely, the percentage of respondents indicating heightened price sensitivity among consumers reflects the impact of globalization on market dynamics, competition, and pricing strategies. Globalization has intensified competition by opening up markets to new entrants, lowering barriers to entry, and increasing price transparency, leading consumers to become more price-conscious and value-driven in their purchasing decisions. SMEs that compete on price alone may struggle to differentiate themselves and sustain profitability amidst global price pressures, commoditization, and margin erosion.

However, SMEs that focus on delivering unique value propositions, premium experiences, or innovative solutions may mitigate the impact of price sensitivity by offering products or services that command higher price points based on quality, brand, or differentiation.

The minority of respondents indicating a greater emphasis on sustainability in consumer choices reflects the growing awareness and concern among consumers regarding environmental, social, and ethical issues associated with products and brands. Globalization has enabled consumers to access information and resources to make more informed choices about the products they purchase, leading to increased scrutiny of companies' sustainability practices, supply chain transparency, and ethical sourcing. SMEs that embrace sustainability as a core value and differentiate themselves through eco-friendly products, responsible sourcing, and transparent practices can appeal to environmentally conscious consumers and gain a competitive advantage in the global marketplace.

The survey results highlight the multifaceted impact of globalization on consumer behavior, with implications for product innovation, pricing strategies, and sustainability practices. By understanding and adapting to changing consumer preferences, SMEs can capitalize on globalization to drive demand, differentiate their offerings, and build strong, sustainable relationships with customers in the global marketplace. Strategic investments in innovation, value creation, and sustainability will be essential for SMEs to meet the evolving needs and expectations of consumers and achieve long-term success and competitiveness in an increasingly interconnected and dynamic global economy.

20. In your opinion, what are the future prospects for technology-oriented SMEs in Bangladesh amidst ongoing globalization trends?

36 responses

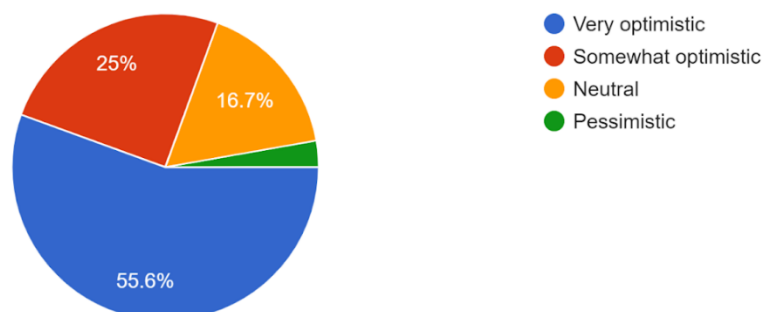


Figure 24. Future prospects of technology-based SMEs in Bangladesh

The question asked in FIGURE 24 “In your opinion, what are the future prospects for technology-oriented SMEs in Bangladesh amidst ongoing globalization trends?” The survey results provide insights into the perceived future prospects for technology-oriented Small and Medium Enterprises (SMEs) in Bangladesh amidst ongoing globalization trends. According to the survey, a majority of respondents, 55.6%, expressed a very optimistic outlook for the future of technology-oriented SMEs in Bangladesh. Additionally, 25% of respondents reported feeling somewhat optimistic, while 16.7% expressed a neutral stance, and only 2.8% were pessimistic about the future prospects.

The overwhelmingly optimistic outlook among respondents suggests a strong belief in the potential of technology-oriented SMEs to thrive and succeed in Bangladesh's evolving business landscape shaped by globalization trends. As Bangladesh continues to embrace digitalization, innovation, and connectivity, technology-oriented SMEs are well-positioned to capitalize on opportunities arising from increased access to global markets, digital infrastructure, and technological advancements. With supportive government policies, growing investor interest, and a burgeoning startup ecosystem, technology-oriented SMEs in Bangladesh have access to the resources, talent, and networks necessary to drive innovation, create value, and compete on a global scale.

The significant percentage of respondents expressing somewhat optimistic sentiments reflects a cautious yet hopeful outlook for technology-oriented SMEs in Bangladesh. While acknowledging the opportunities presented by globalization and technological advancements, these respondents may also recognize the challenges and uncertainties that SMEs face in navigating competitive pressures, market dynamics, and regulatory complexities. However, with proactive strategies, resilience, and adaptability, technology-oriented SMEs can overcome obstacles and capitalize on emerging trends such as digital transformation, e-commerce growth, and Industry 4.0 initiatives to achieve sustainable growth and success in the long term.

The minority of respondents expressing a neutral stance may reflect a wait-and-see approach or uncertainty regarding the future trajectory of technology-oriented SMEs in Bangladesh. While recognizing the potential opportunities presented by globalization and technology, these respondents may adopt a cautious approach to forecasting future prospects, acknowledging both the opportunities and risks associated with rapid technological change, market volatility, and global uncertainties. However, with ongoing monitoring, strategic planning, and collaboration with stakeholders, technology-oriented SMEs can position themselves to seize opportunities, mitigate risks, and adapt to evolving market conditions in Bangladesh and beyond.

The small percentage of respondents expressing pessimistic sentiments may reflect concerns about systemic challenges, constraints, or barriers that could hinder the growth and success of technology-oriented SMEs in Bangladesh amidst ongoing globalization trends. These concerns may include issues such as infrastructure gaps, digital divide, talent shortages, regulatory bottlenecks, or geopolitical risks that pose barriers to market entry, expansion, or sustainability for SMEs operating in the technology sector. However, concerted efforts by stakeholders across government, industry, academia, and civil society can address these challenges and create an enabling environment for technology-oriented SMEs to thrive, innovate, and contribute to Bangladesh's economic growth and global competitiveness.

The survey results highlight a generally optimistic outlook for the future prospects of technology-oriented SMEs in Bangladesh amidst ongoing globalization trends. By leveraging technological innovations, embracing digitalization, and seizing opportunities in global markets, technology-oriented SMEs can play a transformative role in driving economic growth, job creation, and innovation in Bangladesh, while also contributing to the country's integration into the global economy and advancement on the global stage. Strategic investments, collaboration, and supportive policies will be essential for realizing the full potential of technology-oriented SMEs and ensuring their continued success and competitiveness in the years to come.

21. Which segment of Technology is significant in the SMEs in Bangladesh?

36 responses

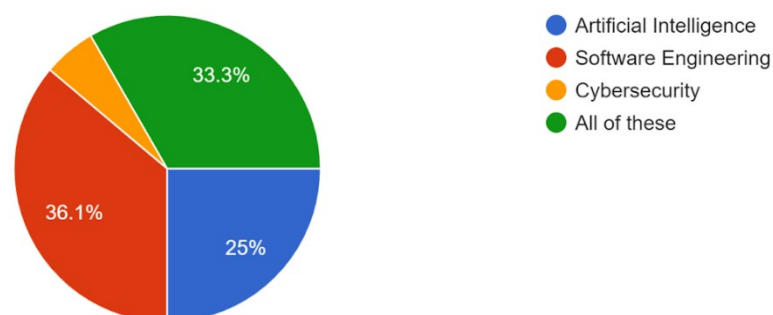


Figure 25. Significant segment of technology in the SME of Bangladesh

The last question asked in FIGURE 25 “Which segment of Technology is significant in the SMEs in Bangladesh?” The survey results provide valuable insights into the significant segments of technology within Small and Medium Enterprises (SMEs) in Bangladesh. According to the survey, software engineering emerged as the most significant segment, with 36.1% of respondents indicating its

importance. This underscores the critical role of software development and engineering in powering various aspects of SME operations, from developing custom solutions to managing business processes and enhancing efficiency.

Additionally, artificial intelligence (AI) was identified by 25% of respondents as a significant segment. This highlights the growing adoption of AI technologies among SMEs in Bangladesh, reflecting a trend towards automation, data-driven decision-making, and the integration of AI-powered solutions across diverse industries. AI holds immense potential for SMEs to optimize processes, personalize customer experiences, and unlock insights from data, driving innovation and competitive advantage in the digital economy.

While cybersecurity received a lower percentage of responses (5.6%), its significance cannot be understated, especially in the context of digitalization and increasing cyber threats facing SMEs globally. Cybersecurity is essential for protecting sensitive data, mitigating risks, and safeguarding against cyberattacks, which can have devastating consequences for SMEs in terms of financial losses, reputational damage, and operational disruptions. As SMEs increasingly rely on digital technologies and online channels, cybersecurity becomes a critical priority for ensuring trust, resilience, and continuity in business operations.

Interestingly, a significant portion of respondents (33.1%) indicated that all of the mentioned segments—AI, software engineering, and cybersecurity—are significant within SMEs in Bangladesh. This suggests a holistic approach to technology adoption and innovation among SMEs, recognizing the interconnectedness and complementary nature of different technology segments in driving business growth and competitiveness. SMEs may recognize the importance of leveraging a diverse range of technologies to address various business needs, overcome challenges, and capitalize on emerging opportunities in the dynamic and evolving digital landscape.

The survey results highlight the diverse landscape of technology adoption within SMEs in Bangladesh, with software engineering, artificial intelligence, and cybersecurity emerging as significant segments. While each segment plays a distinct role in SME operations, there is also recognition of the synergies and interdependencies between these technologies. By embracing a multidimensional approach to technology adoption, SMEs can harness the power of software engineering, AI-driven insights, and robust cybersecurity measures to drive innovation, efficiency, and resilience, positioning themselves for sustainable growth and success in the digital age. Strategic investments, talent development, and

collaborative partnerships will be essential for SMEs to navigate the complexities of technology adoption and leverage its transformative potential to thrive in Bangladesh's dynamic business environment.

5 DISCUSSION

This section delves into the significance and drawbacks of addressing the impacts of globalization and technological advancements on technology-oriented SMEs in Bangladesh. It highlights the timeliness and relevance of the research in offering valuable insights for various stakeholders, including policymakers, entrepreneurs, and researchers, by focusing on a specific sector within the broader SME landscape. It also identifies potential challenges encountered during the research process, such as data limitations and biases, and considers external factors like economic uncertainties and rapid technological changes that could affect the applicability of the findings. Through this comprehensive analysis, the thesis aims to foster collaboration among academia, industry, and policymakers and pave the way for future research on enhancing SME competitiveness in a globalized economy.

5.1 Significance of this Thesis

This thesis addresses a pertinent issue in the contemporary business environment, where globalization and technological advancements significantly impact SMEs worldwide. Again, with globalization rapidly transforming markets, the thesis offers timely insights into its effects on technology-oriented SMEs, providing valuable information for policymakers, entrepreneurs, and researchers. By concentrating on technology-oriented SMEs, the thesis narrows down the scope, allowing for more in-depth analysis and targeted recommendations. Lastly, the findings and recommendations from the thesis could potentially offer actionable insights for SMEs in Bangladesh to navigate the challenges and opportunities posed by globalization.

The thesis could open avenues for collaboration between academia, industry, and policymakers to address the challenges faced by technology-oriented SMEs in Bangladesh and harness opportunities for growth. Again, the findings could inform policymakers about necessary regulatory and policy measures to support the development of technology-oriented SMEs within the context of globalization. Moreover, through conferences, workshops, and publications, the research findings could reach a wider audience, fostering awareness and understanding of the issues faced by SMEs in Bangladesh. Last of all, the thesis could pave the way for further research on related topics, such as the role of innovation, access to finance, and skills development in enhancing the competitiveness of SMEs in a globalized economy.

5.2 Drawbacks of this Thesis

Depending on the availability of data, conducting empirical research to support the thesis might be challenging, potentially limiting the depth of analysis and generalizability of findings. Again, focusing solely on technology-oriented SMEs may overlook important factors affecting other types of SMEs in the Bangladeshi market, potentially reducing the comprehensiveness of the study. Moreover, there might be inherent biases in the selection of research methodologies or data interpretation, which could influence the objectivity and credibility of the findings. Moreover, accessing relevant literature, data, and SMEs for research purposes might pose challenges, especially if there are limitations in resources or cooperation from stakeholders.

Global economic uncertainties, political instability, or unforeseen events like pandemics could disrupt the business environment and affect the relevance and applicability of the thesis findings. Again, rapid advancements in technology could render some of the research findings obsolete or require frequent updates to maintain relevance. Other researchers may undertake similar studies, potentially diluting the uniqueness and impact of the thesis if not adequately differentiate. Lastly, SMEs may face challenges in implementing recommended strategies due to factors like organizational inertia, lack of awareness, or reluctance to adapt to new practices influenced by globalization.

6 CONCLUSION

This thesis has explored the landscape of technology-oriented Small and Medium-Sized Enterprises (SMEs) in the Bangladeshi market, shedding light on their significance, challenges, and opportunities. Through a comprehensive analysis of various factors including market trends, competitive dynamics, regulatory environment, and operational considerations, several key insights have emerged.

For this thesis, we created 21 questions for the survey analysis in the google form, and 36 persons responded in that survey who are students, recent graduates from business background, and businessman in different countries experienced in this field. From the survey questions and responses, we made a thorough analysis of how globalization impacts Bangladeshi SMEs in the field of technology, considering economic, social, and cultural factors. Employing case studies, empirical research, and theoretical frameworks, which can elucidate the intricate interplay between global forces and SME operations. The research can uncover innovative strategies and best practices that empower SMEs to excel in the global arena. By examining both challenges and opportunities, this study aims to provide valuable insights for academics, policymakers, and industry practitioners, enabling them to make informed decisions supporting the growth and sustainability of Bangladeshi SMEs amidst the complexities of globalization, particularly within the technology sector.

By examining both challenges and opportunities, this study aims to provide valuable insights for academics, policymakers, and industry practitioners, enabling them to make informed decisions supporting the growth and sustainability of Bangladeshi SMEs amidst the complexities of globalization, particularly within the technology sector.

Technology-oriented SMEs play a vital role in driving innovation, economic growth, and job creation in Bangladesh (Hossin, M. M., Azam, M. S., & Hossain, M. S. 2023). Their ability to develop and deliver innovative technology solutions tailored to local market needs contributes to the country's digital transformation and global competitiveness.

However, these SMEs face numerous challenges ranging from market competition and regulatory compliance to financial constraints and talent shortage. Navigating these challenges requires resilience, adaptability, and strategic planning to capitalize on emerging opportunities and mitigate potential risks. Despite the challenges, technology-oriented SMEs in Bangladesh possess significant potential for growth and expansion. By leveraging digital marketing strategies, forging strategic partnerships, and

adopting agile operational practices, these SMEs can enhance their market presence, attract customers, and drive sustainable growth in the competitive technology landscape.

Finally, while the journey ahead may be fraught with challenges, the prospects for technology-oriented SMEs in the Bangladeshi market are promising. With the right mix of innovation, entrepreneurship, and strategic management, these SMEs can thrive and contribute to the continued development and prosperity of Bangladesh's technology ecosystem.

REFERENCES

- AULIA, I. N., SOELTON, M., HANAFIAH, A., THOULLON, M. S., PAIJAN, P., KARYATUN, S., & SARATIAN, E. T. P. (2023). *Entrepreneurial Planning Strategy At Meruya Utara-Kembangan-Jakarta*. *Icccd*, 5(1), 121–128. Available at: <https://doi.org/10.33068/iccd.v5i1.571>
- Appelroth, E. (2015). *Marketing Plan for a Restaurant*. 67, 4–12.
- Alzoubi, H., Alshurideh, M., Kurdi, B. Al, Akour, I., & Aziz, R. (2022). *Does BLE technology contribute towards improving marketing strategies, customers' satisfaction and loyalty? The role of open innovation*. *International Journal of Data and Network Science*, 6(2), 449–460. Available at: <https://doi.org/10.5267/j.ijdns.2021.12.009>
- Botezatu, M. A. & Hosszu, A. (2020). Small and Medium-Sized Enterprises (SMEs): The Engine of Economic Growth through Investments and Innovation. In: *Small and Medium-Sized Enterprises (SMEs): The Engine of Economic Growth through Investments and Innovation*.
- Business, E., Experts, B., Description, M., & Team, M. (2006). *Business plan for a Modern and Efficient Business* by Richard-Nicolas LACROIX IT Consultant, International Researcher.
- Davide, M., Aitziber, P., & L, M. Á. O. Á. (2012). *The strength of science and technology drivers for SME innovation*. 897–907. <https://doi.org/10.1007/s11187-011-9319-6>
- Donner, M., Verniquet, A., Broeze, J., Kayser, K., & De Vries, H. (2021). *Critical success and risk factors for circular business models valorising agricultural waste and by-products*. *Resources, Conservation and Recycling*, 165, 105236. Available at: <https://doi.org/10.1016/j.resconrec.2020.105236>
- Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Raman, R. (2023). *Social Media Adoption, Usage And Impact In Business-To-Business (B2B) Context: A State-Of-The-Art Literature Review*. *Information Systems Frontiers*, 25(3), 971–993. Available at: <https://doi.org/10.1007/s10796-021-10106-y>
- Dzisi, S., & Ofosu, D. (2014). *Marketing Strategies and the Performance of SMEs in Ghana*. *European Journal of Business and Management*, 6(5), 102–111. www.iiste.org
- Galbraith, C. S., Rodriguez, C. L., & Denoble, A. F. (2008). *SME competitive strategy and location behavior: An exploratory study of high-technology manufacturing*. *Journal of Small Business Management*, 46(2), 183–202. <https://doi.org/10.1111/j.1540-627X.2008.00239.x>
- Globalization, upgrading, and small enterprises: A view from Central America: Competition and Change: Vol 7, No 4. (2003). February 20, 2024. Available at: https://www.tandfonline.com/doi/abs/10.1080/1024529042000197686*
- Goldsmith, R. E. (1999). *The personalised marketplace: Beyond the 4Ps*. *Marketing Intelligence & Planning*, 17(4), 178–185. <https://doi.org/10.1108/02634509910275917>

- Henttonen, K., & Lehtimäki, H. (2017). *Open innovation in SMEs: Collaboration modes and strategies for commercialization in technology-intensive companies in forestry industry*. *European Journal of Innovation Management*, 20(2), 329–347. <https://doi.org/10.1108/EJIM-06-2015-0047>
- Hossin, M. M., Azam, M. S., & Hossain, M. S. (2023). *Understanding the Concept of SMEs in Driving Economic Growth and Development in Bangladesh*. *International Journal of Finance, Economics and Business*, 2(3), 195–204. <https://doi.org/10.56225/ijfeb.v2i3.14>
- Huang, M. H., & Rust, R. T. (2022). *A Framework for Collaborative Artificial Intelligence in Marketing*. *Journal of Retailing*, 98(2), 209–223. Available at: <https://doi.org/10.1016/j.jretai.2021.03.001>
- Inspirar, B. (2023). *SME Bangladesh: Industry Revolution, Challenge & Opportunity - Economy, Technology*. Available at: <https://inspira-bd.com/sme-bangladesh-industry-revolution-challenge-opportunity-economy-technology>
- Islam, R. (2022). *E-Communication Adoption and its Impact on SMEs: A Case of Bangladesh*.
- Jaina Humayra Rafa, B. (2021). *E-commerce and its evolution and growth in time of corona in Bangladesh*. January.
- Julien, P. A., Andriambelason, E., & Ramangalahy, C. (2004). *Networks, weak signals and technological innovations among SMEs in the land-based transportation equipment sector*. *Entrepreneurship and Regional Development*, 16(4), 251–269. <https://doi.org/10.1080/0898562042000263249>
- Kannan, P. K., and Hongshuang Alice Li. (2017). *Digital marketing: A framework, review and research agenda*. *International Journal of Research in Marketing* 34.1: 22-45.
- Karabag, S. F. (2020). *An Unprecedented Global Crisis! The Global, Regional, National, Political, Economic and Commercial Impact of the Coronavirus Pandemic*. *Journal of Applied Economics and Business Research JAEBR*, 10(1), 1–6. Available at: www.worldometers.info
- Karim, R. Al, & Habiba, W. (2021). *Influence of 4P Strategy on Organisation's Performance: A Case on Influence of 4P Strategy on Organisation's Performance: A Case on Bangladesh RMG Sector*. June. <https://doi.org/10.31580/ijer.v3i1.1166>
- Katsikeas, C., Leonidou, L., & Zeriti, A. (2020). *Revisiting international marketing strategy in a digital era: Opportunities, challenges, and research directions*. *International Marketing Review*, 37(3), 405–424. <https://doi.org/10.1108/IMR-02-2019-0080>
- Krasnov, A., Nikonorov, V., & Yanenko, M. (2018). *Digital platforms-based marketing innovations: new development trends*. *SHS Web Conf.*, 44, 00049. <https://doi.org/10.1051/shsconf/20184400049>
- Kuchina, S. O., & Kitchenko, O. M. (2016). *The Analysis of Common Mistakes in Preparing a Business Plan*. 260–265.

- Lingyan, M., Qamruzzaman, M., & Adow, A. H. E. (2021). *Technological adaption and open innovation in smes: An strategic assessment for women-owned smes sustainability in bangladesh*. Sustainability (Switzerland), 13(5), 1–23. <https://doi.org/10.3390/su13052942>
- Mangram, M. E. (2012). *The globalization of Tesla Motors: A strategic marketing plan analysis*. *Journal of Strategic Marketing*, 20(4), 289–312. Available at: <https://doi.org/10.1080/0965254X.2012.657224>
- MaRS. (2009). *Business Planning and The Business Plan and Executive Summary - A Guide. Guide/Manual*, December.
- Mhlanga, D. (2021). *Financial inclusion in emerging economies: The application of machine learning and artificial intelligence in credit risk assessment* [Inclusión financiera en economías emergentes: la aplicación de Machine Learning e Inteligencia Artificial en Crédito Eval. *International Journal of Financial Studies*, 9(39), 1–16.
- Mira, J. M., & Mira, J. M. (2024). *AI applied to SME marketing*.
- Moktan, S. (2007). *Development of SMEs in Bhutan*. *South Asian Survey*, 14(2), 251–282.
- Nation. (2001). *No 主観的健康感を中心とした在宅高齢者における健康関連指標に関する共分散構造分析*Title. *Journal of the American Chemical Society*, 123(10), 2176–2181. <https://cursa.ihmc.us/rid=1R440PDZR-13G3T80-2W50/4.Pautas-para-evaluar-Estilos-de-Aprendizajes.pdf>
- Nuseir, M. T., & Aljumah, A. (2020). *The role of digital marketing in business performance with the moderating effect of environment factors among SMEs of UAE*. *International Journal of Innovation, Creativity and Change*, 3, 310–324.
- Pan, W., Chen, L., & Zhan, W. (2019). *PESTEL Analysis of Construction Productivity Enhancement Strategies: A Case Study of Three Economies*. *Journal of Management in Engineering*, 35(1), 1–40. [https://doi.org/10.1061/\(asce\)me.1943-5479.0000662](https://doi.org/10.1061/(asce)me.1943-5479.0000662)
- Pascucci, F., Savelli, E., & Gistri, G. (2023). *How digital technologies reshape marketing: evidence from a qualitative investigation*. *Italian Journal of Marketing*, 27–58. <https://doi.org/10.1007/s43039-023-00063-6>
- Pepels, W. (2023). *The 4Ps in Marketing-Mix*. *The 4Ps in Marketing-Mix*. <https://doi.org/10.35998/9783830543237>
- Rio, F. Del, Energy, S., Rio, F. Del, & Reviews, S. E. (2020). *Coversheet*. December 2017, 0–44.
- Robert, S., Officer, C. E., Office, S., & Road, L. (2008). *BUSINESS PLAN Rockford Harris Group, Ltd*. 774, 1–18.
- Sabbaghi, A., & Vaidyanathan, G. (2004). *SWOT analysis and theory of constraint in information technology projects*. *Information Systems Education Journal*, 2(23), 3–19. <http://isedj.org/2/23/>

- Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E. (2021). *Flexibility and Resilience in Corporate Decision Making: A New Sustainability-Based Risk Management System in Uncertain Times*. *Global Journal of Flexible Systems Management*, 22(December), 107–132. <https://doi.org/10.1007/s40171-021-00277-7>
- Sheth, J. N., & Parvatiyar, A. (2021). *Sustainable Marketing: Market-Driving, Not Market-Driven*. *Journal of Macromarketing*, 41(1), 150–165. Available at: <https://doi.org/10.1177/0276146720961836>
- Sinkovics, R. R., & Sinkovics, N. (2020). *The Internet and international marketing – from trigger technology to platforms and new markets*. *International Marketing Review*, 37(3), 437–446. doi: 10.1108/IMR-07-2019-0185
- SMALL AND MEDIUM SIZED ENTERPRISES (SMEs). (2024). Google Forms. Retrieved May 14, 2024, from Available: https://docs.google.com/forms/d/1_FHJIgDkjOFcEEAc9V9C-sRWQv17PAYYZEYid_tI75U/edit
- Small and Medium-sized Enterprises (SMEs)—Definition, Importance*. (2017). Retrieved February 20, 2024. Globalization. (2006). February 20, 2024.
- Small and Midsize Enterprise (SME) Defined: Types Around the World*. (2023). Investopedia. Retrieved February 20, 2024. Available at: <https://www.investopedia.com/terms/s/smallandmidsizeenterprises.asp>
- Song, M., Droge, C., Hanvanich, S., & Calantone, R. (2005). *Marketing and technology resource complementarity: An analysis of their interaction effect in two environmental contexts*. *Strategic Management Journal*, 26(3), 259–276. <https://doi.org/10.1002/smj.450>
- Steger, M. B., Benedikter, R., Pechlaner, H., & Kofler, I. (2023). *Globalization: Past, present, future*. In *Globalization: Past, Present, Future*. Available at: <https://doi.org/10.1525/luminos.172>
- Trifunović, I., Spalević, Ž., Savić, S., & Prlinčević, B. (2023). 1st International Scientific Conference on Economy, Management and Information Technologies – ICEMIT 2023 Information technologies as a tool for improving the tourist offer.
- Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. (2015). *Absorptive capacity and performance: The role of customer relationship and technological capabilities in high-tech SMEs*. *Industrial Marketing Management*, 47, 134–142. <https://doi.org/10.1016/j.indmarman.2015.02.033>
- Yamin, A. Bin. (2018). *Impact of Digital Marketing as a Tool of Marketing Communication: A Behavioral Perspective on Consumers of Bangladesh*. *Impact of Digital Marketing as a Tool of Marketing Communication: A Behavioral Perspective on Consumers of Bangladesh*. April. Available at: <https://doi.org/10.18034/ajtp.v4i3.426>

Zhu, Z. (2022). *The Influence of Digital Technology in the Digital Marketing*. Proceedings of the 2021 3rd International Conference on Economic Management and Cultural Industry (ICEMCI 2021), 203(Icemci), 1514–1519. Available at: <https://doi.org/10.2991/assehr.k.211209.246>

APPENDIX

1. How would you rate your familiarity with the concept of globalization?
 - a) Very familiar
 - b) Somewhat familiar
 - c) Not familiar at all

2. In your opinion, how has globalization influenced the growth of technology-oriented SMEs in Bangladesh?
 - a) Significantly positive impact
 - b) Somewhat positive impact
 - c) No significant impact
 - d) Negative impact

3. Which technological advancements have had the most significant impact on your SME's operations?
 - a) Internet of Things (IoT)
 - b) Artificial Intelligence (AI)
 - c) Blockchain technology
 - d) Cloud computing
 - e) Others (please specify)

4. How has globalization affected your SME's access to international markets?
 - a) Improved access
 - b) No significant change
 - c) Decreased access

5. To what extent has globalization influenced your SME's ability to attract foreign investment?
 - a) Significantly increased
 - b) Somewhat increased
 - c) Remained the same
 - d) Decreased

6. Have you experienced increased competition due to globalization?

- a) Yes
- b) No

7. How has your SME adapted to compete in the global market?

- a) Innovating products/services
- b) Enhancing marketing strategies
- c) Investing in technology
- d) Others (please specify)

8. How has globalization impacted your SME's supply chain management?

- a) Improved efficiency
- b) Increased complexity
- c) No significant change
- d) Decreased efficiency

9. Has globalization influenced the pricing strategy of your SME's products/services?

- a) Yes, positively
- b) Yes, negatively
- c) No influence

10. How important is international collaboration for the success of your SME?

- a) Very important
- b) Somewhat important
- c) Not important

11. What challenges has globalization posed for your SME in terms of talent acquisition and retention?

- a) Difficulty in finding skilled workers
- b) Increased labor costs
- c) High turnover rates
- d) Others (please specify)

12. How has globalization affected the regulatory environment for your SME?

- a) More favorable regulations
- b) More stringent regulations

c) No significant change

13. To what extent has your SME utilized e-commerce platforms to expand its market reach globally?

a) Extensively

b) Moderately

c) Not at all

14. How has globalization impacted your SME's ability to access financing options?

a) Increased access to financing

b) Decreased access to financing

c) No significant change

15. How important is digital marketing for promoting your SME's products/services globally?

a) Very important

b) Somewhat important

c) Not important

16. Has your SME faced any cultural barriers while operating in the global market?

a) Yes

b) No

17. How has globalization influenced your SME's approach to sustainability and corporate social responsibility (CSR)?

a) Increased focus on sustainability and CSR

b) Decreased focus on sustainability and CSR

c) No significant change

18. What role do government policies play in facilitating or hindering your SME's globalization efforts?

a) Facilitating

b) Hindering

c) No significant impact

19. How has globalization influenced consumer behavior in the markets your SME operates in?

a) Increased demand for innovative products/services

- b) Heightened price sensitivity
- c) Greater emphasis on sustainability
- d) Others (please specify)

20. In your opinion, what are the future prospects for technology-oriented SMEs in Bangladesh amidst ongoing globalization trends?

- a) Very optimistic
- b) Somewhat optimistic
- c) Neutral
- d) Pessimistic

21. Which segment of Technology is significant in the SMEs in Bangladesh?

- a) Artificial intelligence
- b) Software Engineering
- c) Cyber Security
- d) All of these.