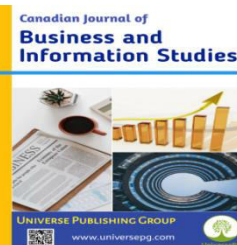




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Evaluating the Impact of SMACITs on the Online Entrepreneurs of Bangladesh after the COVID-19 Pandemic

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Abstract

This research paper provides an inclusive and nuanced overview of the deviations in online entrepreneurship through the presence of new technologies. It not just finds a multitude of opportunities for technological expansion but also looks at the deeply pressing issues that crop up in such a fast-changing world. The study examines the growing digital marketplace in Bangladesh and its impact on the entrepreneurial community, especially following the pandemic. Attaining research goals, significant factors include technology types, technology orientation, financial support, innovation, innovation speed, and entrepreneurial achievements. The study recruited 200 participants via an online questionnaire, thus enabling a rich picture of the findings. The results show the implications of new technologies for online entrepreneurship, both challenging and exhilarating in this fast-paced environment. Yet some challenges, like privacy of personal information, complex user interfaces, technological complexity, fraud, and declining personal contact, pose serious obstacles to overcome.

Keywords: Emerging technologies, SMACIT, Online Entrepreneurs, Covid-19, and Bangladesh.

1. Introduction

SMACIT is an acronym encompassing five transformative technologies: Social, Mobile, Analytics, Cloud, and Internet of Things- key enablers in shaping contemporary businesses and leading the path towards digital transformation. These combined technologies create a vibrant ecosystem that connects businesses with customers in new and interesting ways, gathering important data for decision-making or delivering novel services (Jingya, 2021; Bhuyean *et al.*, 2025).

Today, we stand on the cusp of a new era of digital transformation where the combined impact of rapidly expanding social media networks, mobile connectivity,

sophisticated analytical capabilities, and cloud computing power spurs unparalleled opportunity for your business (Cueto LJ, 2022). Individually, these things are game-changing, but together they form an entirely new way to think about business strategy and operations. But companies that only bolt these advances onto their existing business are squandering a huge opportunity. While the most forward-looking institutions are not merely spending on technology but redefining their entire business models to fully leverage what these front-edge technologies provide (Riera & Iijima, 2019). A proactive strategy such as this is how to win the new digital age. In general, entrepreneurs contribute significantly to driving

financial growth, especially in less developed countries where they drive innovation, create jobs, and foster social development. The COVID-19 pandemic has cast a dark shadow over various entrepreneurial activities (Raju, 2021). The implementation of digital technologies in entrepreneurship education was fairly modest before the pandemic, centred mainly around practical, experience-based methods requiring physical presence. However, the pandemic crisis made a radical turn in favor of remote work, which changed the game for many online entrepreneurs (Tasmilah, 2022; Ayman Abu-Rumman, 2022) stated that the emergence of modern technologies has left a profound impact on entrepreneurship in developing nations, particularly in the wake of the COVID-19 pandemic. Digital innovations have played a pivotal role in empowering online entrepreneurs to pivot and endure amidst the crisis, while also opening up novel prospects for advancement and expansion. In a study conducted in Indonesia, it was discovered that digital technology and internet usage had a discernible and adverse impact on the transition of formal entrepreneurship during the pandemic (Firdaus Abdullah, 2009).

This implies that entrepreneurs who harnessed digital tools were more inclined to uphold their formal business status rather than transitioning into informal entrepreneurship or exiting the sector altogether. To help entrepreneurs, the utilization of digital technology proved influential for sales and promotional purposes (Ssekiziyivu, 2024). Notably, while digital technologies have been very influential for entrepreneurs, they also have their particular challenges. (Koster, 2008) stated that in the wake of the COVID-19 pandemic, the emergence of modern technologies has left a reflective impression on entrepreneurs and online- entrepreneurs also face the impact. In empowering entrepreneurs on digital platforms, digital technologies played a pivotal role in enduring the crisis. It also opens up innovative prospects for enlargement and progression. These findings underscore the significance of addressing these obstacles to fully harness the potential of digital entrepreneurial opportunities in the developing world. In conclusion, new technologies have played a huge role in entrepreneurship in developing countries prior to and after the pandemic (F Okocha, 2019).

While these technologies have afforded opportunities for resilience and ingenuity, they have also emphasized the requirement for tailored support and infrastructure development (Neumeyer X. S., 2021). As countries maneuver the post-pandemic landscape, policies promoting digital literacy, wider internet access, and uptake of digital tools will be essential to promote entrepreneurship and stimulate economic recovery in developing economies (Zheng L, 2022). Entrepreneurs have identified some barriers that can prevent their digital entrepreneurship, such as the necessity for specific competencies, the availability of high-quality internet, and digital marketing challenges (Nipo *et al.*, 2024). Accordingly (Alshowaikh & Mubarak, 2025), these issues need to be resolved in order to make the best use of the digital medium in entrepreneurship in developing economies, for those are the countries most affected by the issues. First and foremost, it is worth noting that the application of modern technologies has been taking place in the entrepreneurship of developing economies during the COVID-19 pandemic, to a large extent (KHAN, 2020). Nevertheless, such advances have also raised the need for adequate support systems and infrastructure, while encouraging creativity and flexibility, these technologies pointed to the very need for them to be implemented (Cueto LJ, 2022; Tamanna M., 2024). With the onset of the post-COVID economy, it is suggested that policies directed towards the promotion of digital capabilities, provision of internet services, and encouraging technological application, especially with regard to Bangladesh's small and medium industries, should be viewed as a strategy for enhancing its entrepreneurship and economic recovery in the mid-term future (Kézai, 2023; Tamanna M. S., 2024).

The reviewed papers focused specifically on SME businesses and other natures of businesses in certain countries. This paper focuses on online entrepreneurs in Bangladesh. To gain a comprehensive understanding of how technology tools, especially those related to social, mobile, analytics, cloud, and the Internet of Things (SMACIT), impact entrepreneurs in developing countries like Bangladesh, this study aims to provide an overview. The purpose of this research paper is to study how new technologies impacted

entrepreneurship in developing countries and examine the COVID-19's impact. This will help frame limitations and opportunities faced by entrepreneurs online, and how the role of digital technologies changes entrepreneurial activities. The paper encompasses a literature review, following the theoretical model and hypothesis development. Next, the methodology includes data analysis and findings. Lastly, it concluded with a discussion & conclusion.

Research Scope

This paper examines the technology adoption trends among online-entrepreneurs in developing countries, such as Bangladesh. It also investigated the role of emerging technologies (Social, Mobile, Analytics, Cloud, and Internet of Things) in shaping entrepreneurial opportunities. Finding the barriers or limitations faced by entrepreneurs in implementing new technologies. This research also deals with the following questions:

RQ-1 How has the integration of modern technologies impacted the online entrepreneurial sector of Bangladesh after the pandemic?

RQ-2 What are the key opportunities and limitations of technology adoption for entrepreneurs, and what has changed in the pandemic?

Research Objectives

This study investigated the impact of SMACIT tools on entrepreneurs in developing countries. This research aims for the following:

- 1) To investigate the role of contemporary technologies in altering entrepreneurial activities in a specific developing country.
- 2) To approximate the influence of the COVID-19 pandemic on the online entrepreneurs of Bangladesh.
- 3) To diagnose the barriers or limitations of technology adoption pre- and post-pandemic for entrepreneurs.

2. Review of Literature

In (Kreiterling, 2023) it is reported that the origin of the pandemic, in developing countries, has significantly affected entrepreneurship. Even before the pandemic, digital transformation had identified online entrepreneurship as an emerging area. Over the past few decades, digital technology has developed so fast, with the remarkable progress of computing, communication, and information (Biclesanu *et al.*, 2021).

Digital transformation has also opened doors for online entrepreneurs and innovators. Given the pace of digitalization, enhanced through educational evidence, the potential of the tools is being well-realized (Samara & Terzian, 2020; Bahadur Ali Soomro, 2021). Based on the empirical facts, entrepreneurship, especially the SMEs, has demonstrated a high capacity to spot and capitalize on fluctuations in market trends (Sitaridis & Kitsios, 2023). Entrepreneurship businesses during the COVID-19 pandemic have been confronted with unanticipated changes in consumer demand, changing market trends, and governmental regulations to suppress the spread of the virus (Mei Chen, 2023). And with tech experts, innovation did spiral up across the entire economy during the pandemic. This worldwide disruption provides online entrepreneurs with the opportunity or the challenge, depending upon their organizational culture, to deploy new technologies and to reshape business models (Shasha, 2023; Shaifullah and Hossain, 2025).

Theoretical Framework

In this study, the researcher utilizes a dynamic triad of theories to unpack the complex relationships between many variables. The theories consisted of the Dynamic Capabilities Theory (DCT), and the Technology–Organization – Environment (TOE) framework. The TOE framework draws attention to how organizations approach their adoption of technology. Each organization was faced with an ever-changing external environment that created layers of pressure to adopt technologies (Baker, 2011). The present study demonstrates with vivid clarity how adoption of technologies – encompassing many types of technologies such as social media, cloud computing, and Internet of Things (IoT), but also, kinds of technology orientation such as culture of being a digital organization, and leadership involving expertise in technology – affected entrepreneurship in the after- pandemic context. As it turns out, organizations with the necessary technological and organizational readiness not only survived the pandemic but thrived and learned important lessons about their adaptation to new realities. Dynamic capabilities theory sought to explain how organizations experienced, thought through, restructured, sensed, and seized opportunities in a competitive environment characterized by rapid, disruptive, con-

tinuous change, as exemplified by the disruption caused by the pandemic (Bleady *et al.*, 2018). The framework explained how businesses needed to reshape the ways in which they did business and learn to capitalize on new opportunities as they sensed them, ultimately, which translates into a growing organizational crisis. This theory explained how online entrepreneurs made sense of their use of technology, their speed of innovation, as a way to adapt their company or organization and reconfigure their business to deal with the unsettling transformations and crises created through the disruption associated with the pandemic. Altogether, these theories represent a perspective of the significant transformations that organizations were delivering across essential areas and how different the world seemed after COVID-19.

Hypothesis Development

This research uses theories to analyze an integrated model within its scope. It combines two important concepts from Technology-Organization-Environment (TOE) and dynamic capabilities theory regarding the different types of technology and innovation. It is expected that these factors will significantly influence entrepreneurial performance, innovation, and the rate at which innovation occurs. In addition, the joint effect of technology orientation and financial support is assumed to have a very meaningful impact on innovation and the rate of entrepreneurial activity. The combination of TOE with dynamic capabilities makes this discussion more robust through the inclusion of critical elements such as the speed of innovation, innovation, entrepreneurial performance, and the rela-

tionship between the variables of technology orientation with financial support and business performance. These advanced relationships and hypotheses shall be elaborated in the subsequent sections of this paper.

Technology types

In (Jingya, 2021) he highlights how this research demonstrates the essentiality of technology to gain a competitive advantage for organizations. There is evidence showing that SMACIT (Social, Mobile, Analytics, Cloud, and Internet of Things) will enhance operational efficiency, security measures, and the ability to quickly adopt industry advancements. (Oduro *et al.*, 2023) discusses how a strong technology orientation contributes to agility and innovation in organizations in an ever-changing environment. This research investigates the effect of a pandemic on technology orientation and provides important context for managing recent unanticipated shocks (Wedda & Bolatan, 2024; Alshowaikh & Mubarak, 2025) Comprehensive research included the use of advanced models, SMACIT, and the assimilation of these to improve current processes and secure data from organizations. It was observed that they benefit the organizations by speeding up turnaround time and by promoting interaction between various sections in the organizations (Jonny *et al.*, 2021). Strategically, it explored the employment of SMACIT by the businesspeople in Bangladesh (Fig. 1).

H1: Technology types have a significant effect on innovation speed.

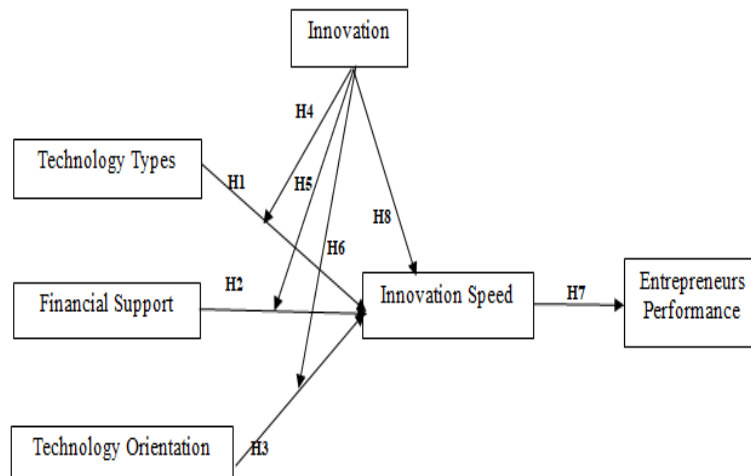


Fig. 1: Research model.

Technology orientation

Linking technological entrepreneurship, consumer behavior, and firm performance was the focus of the investigation of (A.F. Alheet, 2021). The model studied the influence of technological progress and the approach to entrepreneurship on consumers' attitudes. These factors were found to be associated with organizational performance as a whole. Furthermore, in this study, the researcher tries to find an evaluation of the entrepreneurial performance from the perspective of Bangladesh. By analyzing the influence of creativity, the various technology solutions, product technology support, velocity of innovation, and technology direction, valuable results can be obtained (Bin *et al.*, 2022). Such results will show that what makes technology highly innovative, what forces resources, and what the nature of technology (hardware or software, etc.) matters. Faster innovation is also generally better for online entrepreneurs. At the end of the day, having the right technology, the funding, and a concentrated technological model can greatly influence the success of an entrepreneur (Juliana *et al.*, 2021). (Devendra Kumar Pandey, 2021) extensive research was conducted on the technological revolution and entrepreneurship. Showing how technological improvements impact entrepreneurship by assembling data from industry experts, entrepreneurs, and workers. The authors argue that technology plays three critical roles: leading to new roles and functions in jobs, increasing entrepreneurial skills, and contributing a great deal to economic development. The paper tests the impact of technological transformation in Dhaka, Bangladesh. The impact of this has piqued the interest of researchers (Cui & Song, 2022). An orientation toward technology changes the way innovation happens, as a force multiplier that speeds the transition of concepts into paradigm-shifting improvements.

H2: There is a strong effect of technology orientation on innovation speed.

Financial Support

We need to intensify global enforcement efforts in order to not only react to the side effects of the pandemic but to prevent this illegal tide before it starts (Halim *et al.*, 2023). Studies have shown that, due to the pandemic, purchasing power has reduced drama-

tically, and it has a great influence on reshaping purchasing habits on the web. Amid these challenges, many governments introduced comprehensive incentive programs and policies to support small businesses. According to (Anwar *et al.*, 2020) from loans directly to small and medium-sized businesses to backing them with credit guarantees and substantial subsidies, governments across the region moved to help small online businesses stay afloat. That said, it is worth mentioning that despite this government aid, at the end of the day, many small businesses continue to row their own boat with their own wallets (Gunartin *et al.*, 2021). To re-strengthen the online sector, governments publicized a host of stimulation measures including loan reform and credit renewal, capital support, microloans, and other forms of financial aid. These actions not only allowed for short-term financial relief but have also reignited entrepreneurs' innovative spirit, pushing them to excel even in the face of adversity (Aikaterini Petropoulou, 2024).

H3: Financial assistance has a positive impact on the pace of innovation.

Innovation Speed

Innovation speed, also known as speed to market, time to market, or cycle time, represents the critical period from the moment a new product idea is conceived until it is available to the consumer market (Markman *et al.*, 2005). The rate at which innovation comes to market is an incredibly important factor for entrepreneurs because it can significantly increase product margins, enlarge customer bases, and improve profit. This article investigates the crucial role of innovation speed and elaborates on its strong influence on online entrepreneurial effectiveness. In today's dynamically changing business world, the speed of innovation is becoming more crucial, not only in terms of ensuring superior organizational performance, but also in the development of increased efficacy and success for the entrepreneur (Sprong *et al.*, 2021).

H4: The rate of innovation has a significant influence on online entrepreneurs' performance.

Innovation as a mediator

A synthesis of several articles has explained how small, medium-sized or entrepreneurial enterprises struggled with multiple hardships and survived by

making use of special strategies and concepts (Takeda *et al.*, 2022). This examination revealed various forms of innovation as critical lifelines in times of crisis, including non-financial, financial, and resource-based innovation. The study underscores the point that even at desperate moments, the rate of innovation doesn't always lead to quick, dramatic breakthroughs. But the advent of revolutionary technological advancements has undoubtedly revolutionized technology and tactical approach, creating room for genius solutions, as well as for efficient implementation tactics. This can be explained by the high sense of urgency pushing entrepreneurs and business leaders to come up with new answers and new strategies (Halim *et al.*, 2023). In addition, the urgency of innovation and rapid deployment is forcing governments to reconsider and invent new modes of financing. When we look back at five years of unprecedented impact from the COVID-19 pandemic in 2020, we see valuable new business opportunities with potential that has exploded in all directions (Bakry *et al.*, 2022). Innovation has become a game-changer, that is changing lives and redefining how entrepreneurs wade through the business scenario.

H5: Innovation has a significant effect on innovation speed.

H6: Innovation moderates the relationship between technology types and innovation speed.

H7: Innovation moderates the relationship between financial support and innovation speed.

H8: Innovation moderates the relationship between technology orientation and innovation speed.

SMACIT is a much-loved tool by businesses and startups globally and around Bangladesh. Many organizations in Bangladesh have adopted this tool massively just after the outbreak of the COVID-19 pandemic. The global scene has had a seismic impact from the pandemic, and it's manifested in business (ONEA, 2022). Therefore, the objective of the present study is to explore the key determinants influencing online entrepreneurs post-COVID-19. The study attempts to clarify how SMACIT. These findings have important implications for business owners and online entrepreneurs who seek to nurture inventive ecosystems through understanding what the building blocks of innovation and performance are. This study
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also examined the influence of COVID-19 on online businesses, the challenges encountered by entrepreneurs, and the benefits accruing to them from SMACIT utilization. It also explored the opportunities that emerged before and after the pandemic.

3. Methodology

(Ghanad, 2023), stated the need to use quantitative research methods for this study to get into the complex relationships and models of this type, due to the very nature that is suitable for researching the value in question. In attempting to address the hypothesis and questions rather than ending with a messy, highly managed list of trends and reasons, the researcher has crafted a concise array of variables and a solid history of these patterns and their consequences. This delicate manipulation ensured that the research captured the subtle nuances of how the study worked, allowing it, therefore, to develop richer and deeper insights (Hensen *et al.*, 2021). Using a quantitative study design, the researcher introduced an online survey that supported the effectiveness of SMACIT technologies in successful online entrepreneurship efforts. An online survey tool allowed the researcher to explore technology-related issues and circumvented some of the challenges of collecting data from our population, both in terms of cost, responsiveness, and access.

Data Collection

In the search for data collection, the researcher started with a mixed face-to-face and online survey. The researcher was able to tap into a broad spectrum of viewpoints over a four-month period from September to December 2025. The researcher then managed to obtain an excellent blooming of 200 responses from a small set of seeds that the researcher selected. Using a mix of accessible web-based surveys and personal contact methods, this research attained an unprecedented close-to-75% response rate, demonstrating the eagerness of participants to share their views. All the respondents are adults in this study (18 years or older), and they contribute voluntarily. The participants were reassured that their answers would be kept rigidly confidential and used only for research work. To further enhance this commitment, the researcher included an explicit reassuring statement on the cover page of the survey questionnaire that the protection of their identities would be guaranteed. The information

explicitly stated that the information collected would be presented in broad themes and without any identifying details that could be traced to individual participants. The caring attitude helped to develop an environment of confidence that allowed the respondents to disclose their thoughts, experiences, and this with greater impunity.

Measurement

This research adopted a more sophisticated scale to measure the Likert five-point score of the answer from the participants. This scale ranges from one, meaning “Strongly Agree,” to five, meaning “Strongly Disagree.” In this study, the author utilized the analytical capabilities of SPSS (version 29) and Smart PLS-4 models, which are advanced and appropriate for investigating complex relationships between latent constructs. (Jr. *et al.*, 2021) Stated that Partial Least Squares-Structural Equation Modelling (PLS-SEM) does a great job of predicting outcomes. PLS-SEM, which was welcomed with open arms in social sciences and business and management, is a type of variance-based analysis, with the ability of dealing with the procedural characteristics of latent constructs, the distinct characteristics of unique data distributions that may be present in them, and with small samples instead in an exceptionally well effective manner.

Instruments

This research took advantage of the PLS-SEM technique to examine the complex relationships between the elements in the conceptual framework

that had been put forward. The validation and reliability of the measurement model were carefully tested in this study and thus served as a good basis for the analysis. The researcher then conducted path analysis and structural modelling and tested hypotheses to clarify these relationships. To enhance the richness of the findings, it capitalized on the efficiency of the SPSS application to critically examine how challenges interacted with the most commonly used SMACIT tools. In total, the full exploration of this system in all its complexity revealed important properties of the interplay of factors of this framework.

4. Results

Population & Sampling

For purposes of validation, a convenient sampling process was used to collect data on a representative sample of online entrepreneurs in Bangladesh. The attendees were made up of a wide array of people who are already a part of different kinds of online businesses, proving the existence of a true entrepreneurial spirit within the country. One remarkable thing about the survey results was the approximately equal participation of both men and women in the sample. The 60-40% ratio shows an impressive dedication to inclusivity and diversity in the entrepreneur space. Based on **Table 1**, the demographic of the participants shows that 54.5% of the participants are in the age group higher than 25 years.

Table 1: Characteristics of the sample (n=200).

Measure	Items	N	%
Gender	Male	120	60
	Female	80	40
Age	Above 18	82	41
	Above 25	109	54.5
	Above 35	7	3.5
	Above 45	2	1
Education	SSC	2	1
	HSC	37	18.5
	Diploma	10	5
	Bachelor	137	68.5
	Masters	14	7

However, the survey also reflects 41% of respondents who are older than 18 years of age, which means Universe PG | www.universepg.com

young entrepreneurs, have stepped forward in the technology space. Mature ones account for only 3.5%,

and those aged over 45 a mere 1%, confirming the tendency for youthfulness of the online business. These numbers collectively add up to a picture of a group who are almost entirely young and tech-conscious, seeking to carve a new business-oriented landscape of Bangladesh

Normality test

To check the normality of the sample, the skewness-kurtosis technique was used for full statistical

inspection. The researcher applied Partial Least Squares-Structural Equation Model (PLS-SEM) to critically examine the kurtosis and skewness. The changes were quite revealing: each kurtosis value stayed way below the critical value of 8, as did each skewness value, which was well within the acceptable value of 3, as can be seen in **Table 2**. These results strongly confirm the existence of a univariate distribution that obeys the normality precepts.

Table 2: Assessment of Normality.

	Constructs	Skewness	Kurtosis
Technology Types	KOTU_3	-0.04031097	-2.0186632
	KOTU_4	-0.02015246	-2.0198943
	KOTU_5	-0.04031097	-2.0186632
	KOTU_6	0.040310967	-2.0186632
	FoT_1	-0.41133979	-1.849395
	FoT_2	0.202529712	-1.9788719
Financial Support	FS_1	-1.19478567	-0.5783717
	FS_2	0.040310967	-2.0186632
	FS_3	-0.16172998	-1.9938838
Technology Orientation	SNED_1	-0.47625139	-1.791198
	SNEA_1	-0.08067037	-2.0137311
	SNEA_2	-0.58775068	-1.6713641
	SNEA_3	-0.06048158	-2.0166096
	SNEA_4	-0.20252971	-1.9788719
	SNEA_5	0.100883443	-2.0100243
Innovation	OFT_3	-0.08067037	-2.0137311
	OFT_4	-0.61063305	-1.6436653
	OFT_6	-0.43283204	-1.8310685
	OFT_7	0.060481578	-2.0166096
Innovation Speed	FAI-D-1	0.037934206	-1.2472517
	FAI-D-2	0.117410666	-1.3189787
	FAI-D-3	0.149719116	-1.4018277
	FAI-D-4	0.088137996	-1.122201
	FAI-D-5	0.084686506	-1.109948
	FAI-D-6	0.117446572	-1.1432679
	FAI-D-7	0.226333743	-1.1555882
	FAI-D-8	0.133500574	-1.0271844
	FAI-D-9	0.217638162	-1.1895169
	FAI-D-10	0.083275221	-1.0175058
	FAI-A-1	0.192031726	-1.1854561
	FAI-A-2	0.112364768	-1.1815713
	FAI-A-3	0.120553174	-1.108467
	FAI-A-4	-0.01240005	-0.9425118
FAI-A-5	-0.10888561	-1.0943739	
FAI-A-6	0.13042725	-1.2005673	
FAI-A-7	0.296085021	-1.0162737	

	FAI-A-8	0.060354138	-1.1233578
	FAI-A-9	0.176190929	-0.9933958
	FAI-A-10	0.169251425	-0.6457401
Entrepreneurs Performance	(BE-D-1)	-0.10864046	-1.3683136
	(BE-D-2)	0.239299194	-0.9208555
	(BE-D-3)	-0.19286366	-1.3435101
	(BE-D-4)	0.075997925	-1.0435559
	(BE-D-5)	0.045749441	-1.1676811
	(BE-D-6)	0.036232421	-1.3222412
	(BE-D-7)	-0.0134	-1.3190113
	(BE-D-8)	-0.04428846	-1.2662952
	(BE-D-9)	0.079669199	-1.3579956
	(BE-D-10)	0.145934275	-1.3227103
	(BE-A-1)	-0.03406829	-1.2799855
	(BE-A-2)	0.158887491	-1.2486994
	(BE-A-3)	0.149090977	-1.2004261
	(BE-A-4)	0.094571972	-1.0770993
	(BE-A-5)	0.164834095	-1.1221556
	(BE-A-6)	0.20974059	-1.1268656
	(BE-A-7)	0.022615465	-1.0952503
	(BE-A-8)	-0.02553657	-1.0459035
	(BE-A-9)	0.07967898	-1.2009688
	(BE-A-10)	0.032789096	-1.177388

Respondents' consent and ethical approval

Under the national regulation and institutional practices, conducting social science research in Bangladesh is not subject to approval. Social science research in Bangladesh is carried out with a significant degree of freedom, in stark contrast to other academic disciplines, which have to navigate institutional frameworks and legislations, national laws, and policies. Ethical scrutiny of this form of research is not necessary, unlike other scientifically sensitive research that entails a review of ethics. The author took the necessary steps to guarantee that the participants received adequate information and consented to disclose their insights publicly so as to interweave their experiences.

The research was also considered to be low risk and, therefore, did not need an in-depth ethical appraisal. The participants were reassured that their answers would be kept rigidly confidential and used only for research work. All the respondents in the research were adults (aged 18 or older) and participated voluntarily. In the questionnaire cover page, it was ensured that the identities would be protected and emphasis on confidentiality.

Common method bias

To prevent a lack of accuracy and for secure, trustworthy research results, a close examination of CMB is essential. This careful procedure is necessary, since CMB could degrade the validity of the research results. The researcher uses Harman's single-factor analysis to test whether a single hypothesis can account for much of the variance within our model. In close examination of the data, identified the presence of one super-ordinate construct that emerged quite robustly and had a sizable impact, accounting for 29.54% of the variance (Podsakoff *et al.*, 2003). It has been recommended that this value should not exceed 50% as per established criteria. However, the results fall well below this level. This examination enabled the paper to confidently ascertain that the model integrity is still considered sound, without being disturbed by issues of common method bias. In addition to the investigation, a full collinearity test was performed to check whether any VIF exceeded the critical level of 3.3 (Podsakoff *et al.*, 2003). This test is valuable in assessing the degree of multicollinearity between the independent variable predictors and the potential risk of widening our results. The VIF values

in this analysis varied between 1.14 and 1.36, which suggested that there was no effect of common method bias on the validity of the results. This provides further support for the validity of our research results and the correctness of our analytic methodology.

Measurement Model

A full test of the validity and reliability of the constructs in the reflective model is essential. Cut-off levels regarding reliability, discriminant validity, internal consistency, and convergent validity have to be set. (Jr. J. H. *et al.*, 2021) suggests that the rule of thumb is that a factor loading > 0.70 indicates acceptable variable correlation. A loading of 0.40 could also be informative, but a higher threshold is recommended for stability. To evaluate the convergence validity of the study, the researcher used Average Variance

Extracted (AVE), which interestingly exceeded the recommended threshold of 0.50, reported by (Jr. J. H. *et al.*, 2021). This finding indicates that there is a good relationship among the items that are validly assessing the same factor. The internal reliability of the measures is also strong, as can be seen by the level of Cronbach's α reported in **Table 3**. All latent variables went over the critical cutoff of 0.70, promising good reliability and consistent construct. Moreover, the composite reliability analysis in the current study strongly supports the reliability of the latent constructs, as the results were greater than 0.70. For accurate and meaningful results, the research study variables must be reliable and valid, enhancing the study's trustworthiness and resultant credibility.

Table 3: Measurement Model Results.

Construct	Items	Loading	Cronbach's α	CR	AVE
Technology Types	KOTU_3	0.834	0.872	0.895	0.593
	KOTU_4	0.918			
	KOTU_5	0.737			
	KOTU_6	0.855			
	FoT_1	0.573			
	FoT_2	0.645			
Financial Support	FS_1	0.547	0.711	0.815	0.604
	FS_2	0.942			
	FS_3	0.646			
Technology Orientation	SNED_1	0.691	0.869	0.902	0.608
	SNEA_1	0.811			
	SNEA_2	0.627			
	SNEA_3	0.926			
	SNEA_4	0.752			
	SNEA_5	0.835			
Innovation	OFT_3	0.776	0.869	0.905	0.656
	OFT_4	0.823			
	OFT_5	0.809			
	OFT_6	0.842			
	OFT_7	0.797			
Innovation Speed	FAI-D-1	0.87	0.978	0.98	0.711
	FAI-D-2	0.876			
	FAI-D-3	0.894			
	FAI-D-4	0.870			
	FAI-D-5	0.849			
	FAI-D-6	0.880			
	FAI-D-7	0.846			
	FAI-D-8	0.812			

	FAI-D-9	0.828			
	FAI-D-10	0.745			
	FAI-A-1	0.857			
	FAI-A-2	0.874			
	FAI-A-3	0.880			
	FAI-A-4	0.848			
	FAI-A-5	0.882			
	FAI-A-6	0.875			
	FAI-A-7	0.881			
	FAI-A-8	0.849			
	FAI-A-9	0.813			
	FAI-A-10	0.574			
Entrepreneurs Performance	(BE-D-1)	0.762	0.980	0.982	0.73
	(BE-D-2)	0.829			
	(BE-D-3)	0.856			
	(BE-D-4)	0.825			
	(BE-D-5)	0.864			
	(BE-D-6)	0.852			
	(BE-D-7)	0.906			
	(BE-D-8)	0.874			
	(BE-D-9)	0.922			
	(BE-D-10)	0.885			
	(BE-A-1)	0.807			
	(BE-A-2)	0.893			
	(BE-A-3)	0.886			
	(BE-A-4)	0.838			
	(BE-A-5)	0.859			
	(BE-A-6)	0.829			
	(BE-A-7)	0.819			
	(BE-A-8)	0.837			
	(BE-A-9)	0.878			
	(BE-A-10)	0.855			

Table 4: Discriminant Validity.

Fornell-Larcker Criterion	1	2	3	4	5	6			
Entrepreneurs Performance	0.855								
Financial Support	0.356	0.777							
Innovation	0.493	0.748	0.810						
Innovation Speed	0.932	0.357	0.527	0.843					
Technology Orientation	0.644	0.436	0.630	0.667	0.78				
Technology Types	0.598	0.410	0.664	0.626	0.92	0.77			
HTMT 0.85 Criterion									
	1	2	3	4	5	6	7	8	9
Entrepreneurs Performance									
Financial Support	0.346								
Innovation	0.528	0.728							
Innovation Speed	0.649	0.353	0.563						
Technology Orientation	0.670	0.508	0.716	0.692					
Technology Types	0.546	0.465	0.719	0.576	0.608				

Innovation x Technology Types	0.654	0.554	0.795	0.687	0.836	0.483			
Innovation x Technology Orientation	0.677	0.584	0.809	0.708	0.806	0.853	0.649		
Innovation x Financial Support	0.364	0.653	0.819	0.377	0.465	0.488	0.648	0.648	

An important issue to consider in the evaluation of the measurement model is that of discriminant validity. This is important for accurate measurement and complete examination (Fornell, 1981). Results displayed in **Table 4** provide an interesting insight: square roots of the AVE for the latent constructs actually appear to display more internal consistency than the correlation coefficients between the constructs. This finding suggests that the separate latent variables are not too highly correlated with each other, hence providing strong evidence for discriminant validity. To better tap the distinction between two items of the same construct, we used the Heterotrait-monotrait (HTMT) ratio. This testing instrument provided with the capability to examine the discriminant validity of some constructs. As noted by (Kline R. B., 2016) the recommended cut-off criteria, a ratio less than 0.85, indicate that the constructs have sufficient discriminant power between them.

In the current study, all HTMT values were less than the key threshold as well, supporting individuality. With the help of the well-developed measurement scales of the constructs involved, the reliability and validity of the results were assured. This firm basis is a prerequisite for follow-up structural model testing, to allow for a reliable and sound examination.

Structural Model

In order to analyze the impact of exogenous constructs on the endogenous ones, the author relies on a robust structural model. In this search, this study on the process of evaluation brings a lot of significance in analyzing the importance of the hypothesized relationships, and the relationships among the constructs to examine the collinearity. The emphasis in this analysis should be on the test of predictive relevance (Q^2) in addition to a proper calibration of the variance (R^2), as noted by (Hayes, 2021). In addition, the effect size (f^2) should be identified in order to understand the strength of these associations more adequately (Jr. J. H. *et al.*, 2021). The researcher used the bootstrapping method to estimate the significance of the relationships

specified, using 5,000 resamples for full examination. The research had significant path relationships based on the statistical tests, with the bootstrapping critical t-value of ± 1.65 for our one-tailed t-tests.

The findings of the analysis are revealing of a highly contrasted territory, where SMACIT is robustly positively and negatively correlated with the inclusion of various factors in the context of entrepreneurship. In particular, it found a strong positive relationship between several variables such as technology types and innovation speed, financial support and innovation speed, technology orientation and innovation speed, and (innovation \times technology types) and innovation speed, along with (innovation \times financial support) and innovation speed as well as innovation speed's effect on entrepreneurs' performance with the respective β , p values of ($\beta = -1.396$, $p = 0.001$), ($\beta = 0.519$, $p = 0.033$), ($\beta = 1.371$, $p = 0.001$), ($\beta = 1.834$, $p = 0.000$), ($\beta = -0.5$, $p = 0.044$), ($\beta = 0.932$, $p = 0.000$). These results indicate that adoption of SMACIT can improve the quality of service by increasing attention to technological orientation, innovation, financial support, and basic types of technology.

A complement and antinomy coexist in the landscape: a positive relationship was found between equation and managing the impact of (innovation x technology orientation), such as innovation speed ($\beta = 0.225$, $p < 0.6512$), and between innovativeness and innovation speed ($\beta = -0.212$, $p = 0.706$), ($\beta = -0.376$, $p = 0.167$), respectively. It is a reminder that the interactions between innovation and innovation speed could have a negative impact on technology orientation.

The findings support hypotheses H1, H2, H3, H4, H5, and H7, suggesting that the effect of SMACIT in entrepreneurship is affirmed in technology types, financial support, technology orientation, and innovation speed. However, the data did not support hypotheses H6 and H8. Second, these results reminded the need for caution when embedding new tools in the

fabric of a firm. Although SMACIT can lead to favorable consequences, be mindful of the consequences of managing innovation and the pace of innovation too quickly.

Table 5: Structural Model Results.

Hypothesis	Path	β	Standard error	t-value	P-values	Decision
H1	Technology Types -> Innovation Speed	-1.396	0.434	3.22	0.001*	Significant
H2	Financial Support -> Innovation Speed	0.519	0.243	2.135	0.033*	Significant
H3	Technology Orientation -> Innovation Speed	1.371	0.428	3.203	0.001*	Significant
H4	Innovation x Technology Types -> Innovation Speed	1.834	0.519	3.53	0.000*	Significant
H5	Innovation x Financial Support -> Innovation Speed	-0.5	0.248	2.018	0.044*	Significant
H6	Innovation x Technology Orientation -> Innovation Speed	-0.212	0.560	0.378	0.706	Not Significant
H7	Innovation Speed -> Entrepreneurs' Performance	0.932	0.014	68.515	0.000*	Significant
H8	Innovation -> Innovation Speed	-0.376	0.272	1.381	0.167	Not Significant

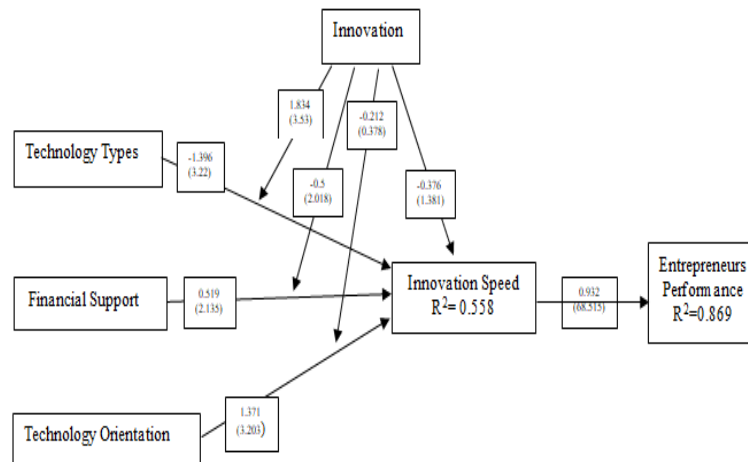


Fig. 2: Structural model assessment (PLS results). Notes: Numbers without brackets denote standardized beta and numbers with brackets show t-statistics.

Table 5 reveals the complex relationships within the study. The integration of SMACIT in the online business environment has a considerable positive impact in different aspects, including technology types, technology directions, financial support, and pace of innovation. However, the application of modern technology for creativity and the rate of its advancement have highlighted some negative aspects. Moreover, some hypotheses, such as H6 and H8, are not supported, suggesting that more research is needed. According to (Chicco *et al.*, 2021) the R^2 statistic obtained from the analysis is a lighthouse of

predictive conclusions, showing the percentage of variance accounted for. Careful consideration of the model has revealed that its explanatory potential is extremely wide-ranging. The former indicates that the exogenous construct is able to explain the endogenous variable (in this case, an aspect related to the integration of SMACIT in entrepreneurship, as the coefficient of determination seems to dominate the threshold accepted by authors, e.g., above 0.02 in some cases). This implies a high positive correlation of the adoption of SMACIT with entrepreneurship, which professes an increasing adoption and execution

both in the online and offline business context (illustrated in Fig. 2). And, the common factors systematically explain as much as 30.7% of the variance in SMACIT enterprise assimilations (described in Fig. 1). This further attests to the ability of the model to accurately predict the influence of modern technology on entrepreneurship. Using the PLS-SEM method, the researcher employed blind-folding to measure the fit of the model in a fine-grained manner.

5. Discussion

The research intended to determine the effects of emerging technologies on the online entrepreneurial segment of Bangladesh after the pandemic. To reach its research goals, this research included the variables of technology types, technology orientation, financial support, innovation, innovation speed, and entrepreneurial performance (Sarker *et al.*, 2024). The

paper's results help in explaining the digital transformation of entrepreneurship. The barriers and opportunities represented major difficulties for the online entrepreneur, who would find great difficulty in the two most important resources for the successful transformation – support for finances and skilled labor fit to the rhythm of innovation (Neumeyer & Morris, 2021). Big businesses could afford to do this - they had the capital to train employees - but small ones did not have the capital or time. Taking into consideration those constraints, entrepreneurship also offers some opportunities, as explained in the following (see Fig. 3). These also make it easier for online entrepreneurs to advertise their products, developing goods and services with the help of technology, keep in touch with consumers whether online or offline, and make payments on the Internet (Kano *et al.*, 2023).

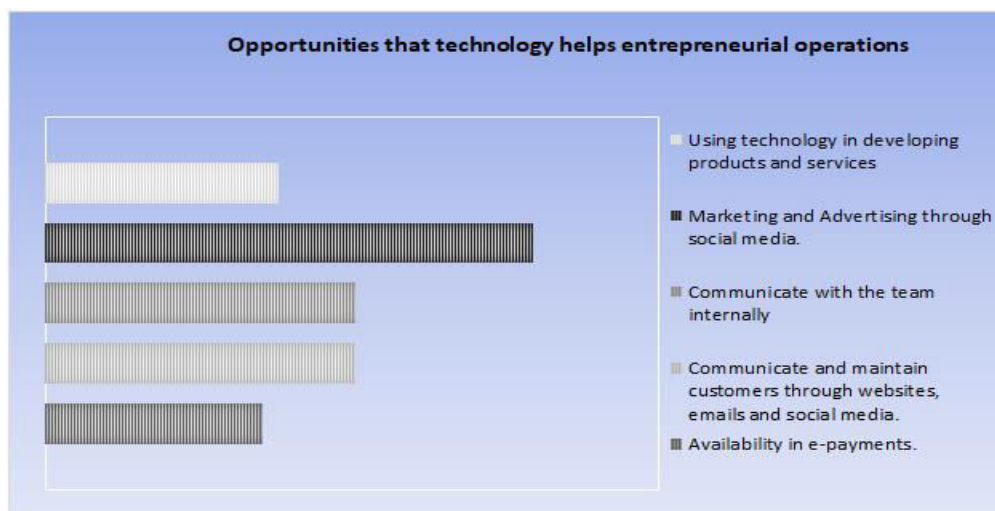


Fig. 3: Opportunities that technology has given online entrepreneurs.

The bibliometric insight provided in the study goes much beyond a simple quantitative overview of the research landscape around the transformative journey of SMANTIC in the time period. Digging deeper into the research, the data reveal a sweeping transformation in the nature of entrepreneurship - from a historical path of discovery to a line in the new norm's sand (Chen *et al.*, 2020). A broad array of technologies in the SMACIT framework - social, mobile, analytics, cloud (SMAC), and the Internet of Things (IoT) - points to a direction where simple digital solutions appear to be on the verge of ushering in more complex

and integrated ones (Riera & Iijima, 2019). This is illustrative of a very clear evolution from basic digital tools to fully fledged operating systems that are redefining the nature of entrepreneurship (Bruunetti *et al.*, 2020). Additionally, the study discovers some significant shifts in social networks that provided a record of the myriad things that had been lost and found before and after the pandemic (Fig. 4). This transition is described in the following sections:

The research shows that an ecosystem of the latest tools and technologies – from bright social media to pocket powerhouse mobile devices, from the com-

binned space of the internet of things – is having a significant beneficial effect on the pace of innovation and the greater success of online entrepreneurs (Veldhoven & Vanthienen, 2022).

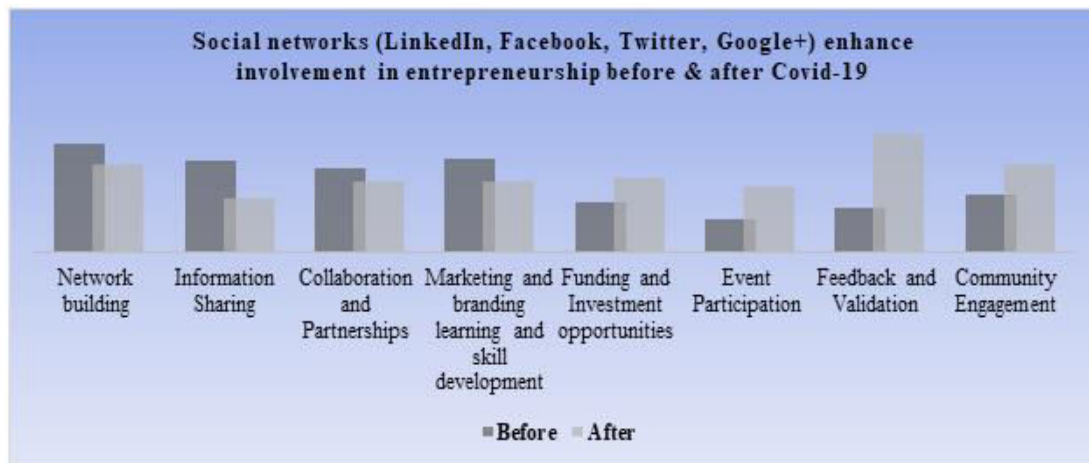


Fig. 4: Social Networking sites that enhance the engagement of online entrepreneurs.

The research also highlights that financial support from friends, family, the government, banks, and NGOs goes a long way to boosting entrepreneurial success (Anwar *et al.*, 2020). The findings of this study provide strong evidence for the significance of innovation as a driver to accelerate the adoption of new concepts and create a vibrant entrepreneurial culture (Bakry *et al.*, 2022). Intriguingly, it was observed that though the benefits individual online

entrepreneurs enjoyed post-pandemic have some ‘common’ winds, what has changed is the ‘degree’ of these advantages, indicative of the altered backdrop of entrepreneurial opportunities in a post-pandemic world (Shkabatur *et al.*, 2022). Furthermore, several limitations of technology, which are very common and which adversely affect the performance of online entrepreneurs, have also been pinpointed. Some of these drawbacks are (Fig. 5).

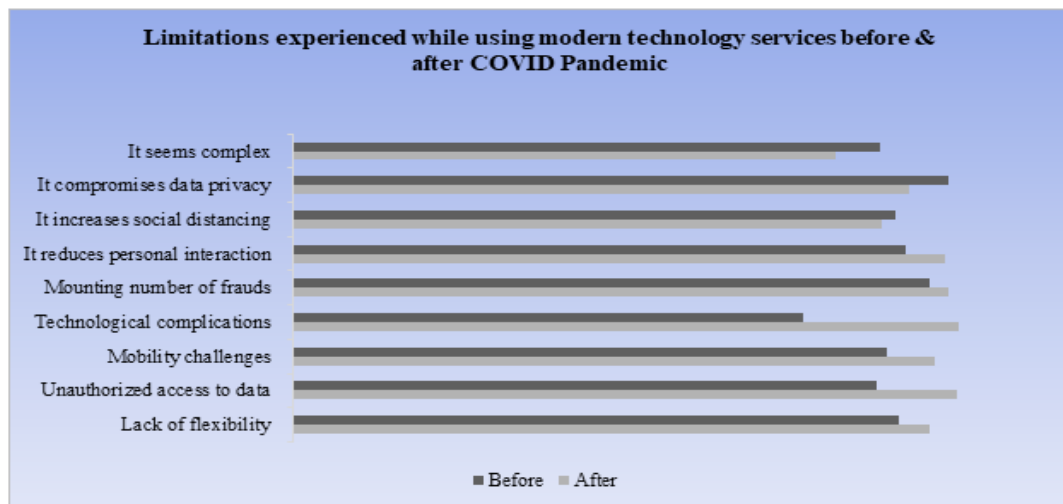


Fig. 5: Limitations experienced by online entrepreneurs.

Theoretical implications

This extensive research provides an examination of modern technology absorption and its deep impact on countries' online businesses. It provides an examination of the obstacles and benefits that entrepreneurs faced when adopting technology and illuminates a Universe PG | www.universepg.com

relatively young field. The study painstakingly dissects various critical factors affecting the research, such as various technological developments, attitude towards innovation, and financial intervention to expedite creativity and its tempo. The report shows there are many rewards to using SMACIT solutions

(Social, Mobile, Analytics, Cloud, IoT) and how they can be used to drive change (Sprong *et al.*, 2021). It also discusses the endless possibilities as well as the limitations and challenges of the new technology at these respective times of the pandemic and calls for a strategic way out of these challenges. They emphasize the importance of clarifying not only barriers but also benefits to overcome the barriers in the adoption of modern technology.

Furthermore, the study analyses the importance of social media, where entrepreneurs have used these platforms extensively for networking, both during and post-crisis. It deals with and comments on some of the concerns that arise in the use of these platforms and the measures that can be taken to mitigate problems. The results of the present research set a strong foundation for future studies in the area, which will enable them to move to new practices on using technology in fostering entrepreneurship. All in all, this penetrating analysis offers invaluable discernment for the academician, the policymaker, and the educator, pointing the way toward a more innovative and durable future.

Practical Implications

Notwithstanding its focus on the layered web of practices and policies connected to using SMACIT technologies in online (Tamanna M., 2024) entrepreneurship, the paper offers important and timely empirical information that has considerable value for scholars (Audretsch *et al.*, 2022). In sum, this complete reference is an indispensable tool for academics wishing to get in touch with the variety of pertinent, practically informed research approaches needed to make any headway in the lively space of entrepreneurship (Amouri *et al.*, 2021).

Limitations and future guidelines

The paper has had both a lasting influence on policy and theoretical frameworks, but it is important to note some limitations of what was found. One main potential limitation is its exclusive approach to online entrepreneurs, which indicates that a wider range of entrepreneur types needs to be explored in the future (Cunningham *et al.*, 2023). This study highlights the disruptive new capabilities featured by the SMACIT that influence the entrepreneurial dimension. More-

over, it sets out to address entrepreneurs' experiences after the outbreak, and thus critically analyses these turning points. In order to develop a better understanding of the motives of the entrepreneurs, future research should aim to include a larger population, diversified in nature. The present study was mainly based on quantitative cross-sectional research that allowed for the collection of data at a single point in time (Cooper). Nonetheless, more naturalistic measurements could noticeably improve the understanding in future studies by using more all-encompassing quantitative methods. While qualitative research processes could help interpret thousands of narrative stories to make a well-informed sense of every individual's journey into the world of technology development (Joseph *et al.*, 2025).

6. Conclusion

This research explores the complex implications of new technologies on online entrepreneurship and uncovers the challenges and opportunities that emerge in such a dynamic context. Adopting the Dynamic Capabilities Theory (DCT) and the Technology–Organization – Environment (TOE) framework the researcher developed a valid model and analyzed the data using SPSS (version 29). The work highlights the state-of-the-art technologies that entrepreneurs most commonly adopt and reveals how these technologies are not only helping them enhance their operations but also create performance improvements driven by increased rates of innovation. This consideration provides researchers with a course to focus their work and make the most of their time. However, the study also draws attention to vital issues that arise concerning constraints and unintended consequences that entrepreneurs face when introducing such technologies. Nevertheless, the observations made in this study shed light on the importance of motivation in shaping the trajectory of the evolution and adoption of technology tools for entrepreneurship, thereby making future dialogue and research in this evolving space more grounded.

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8. Conflicts of Interest

The author states that she has no financial or personal relationships that are directly or indirectly related to the content of this paper

9. References

- A.F. Alheet, H. Y.-B. (2021). The Impact of Technology, Entrepreneurship and Consumer Attitudes on Firm Performance.
- Aikaterini Petropoulou, E. A. (2024). Digital Transformation in SMEs: Pre- and Post-COVID-19 Era: A Comparative Bibliometric Analysis. (Sustainability, Ed.) *MDPI*, 16.
- Alshowaikh, H. A., & Mubarak, M. A. (2025). Incorporation of Digital Technologies in Business. *Ethical Standards for Technological and Business Education Sustainability (Technological Innovation and Sustainability for Business Competitive Advantage)*, 53-66.
- Amouri, A., Festa, G., & Rossi, M. (2021). Technological propensity, financial constraints, and entrepreneurial limits in young entrepreneurs' social business enterprises: The tunisian experience. *Elsevier-Technological Forecasting and Social Change*, 173.
- Anwar, M., Kayhan, T., & Ullah, R. (2020). Entrepreneurial finance and new venture success - the moderating role of government support. *Business strategy and development*.
- Audretsch, D. B., Belitski, M., & Menter, M. (2022). Technology adoption over the stages of entrepreneurship. *Int. J. Entrepreneurial Venturing*, 14.
- Ayman Abu-Rumman, A. A. (2022). Innovation and Entrepreneurship: Attitudes and intentions of undergraduates in a developing country. *Research Square*.
- Bahadur Ali Soomro, G. R. (2021). COVID-19 impediments and business start-ups in Pakistan: Evidence from the second wave of the pandemic.
- Baker, J. (2011). The Technology-Organization-Environment Framework. In *Information Systems Theory* (pp. 231-245). *Hamburg, Germany: University of Hamburg*.
- Bakry, D. S., Daim, T., & Yesilada, B. (2022). An evaluation of the effectiveness of innovation ecosystems in facilitating the adoption of sustainable entrepreneurship. *Taylor & Francis- J. of Small Business Management*, 62(2), 763-789.
- Biclesanu, I., Anagnoste, S., & Savastano, M. (2021). Digital Entrepreneurship: Public Perception of Barriers, Drivers, and Future. *MDPI*, 11, 1-11.
- Bin, L., Qiandi, C., & Xiaoming, S. (2022). Impact of Creative Characteristics of Technical Entrepreneurs on Enterprise Performance. *Science & Technology Progress and Policy*, 39(19), 152-160.
- Bleady, A., Ali, A. H., & Ibrahim, S. B. (2018). Dynamic Capabilities Theory: Pinning Down SHIFTING CONCEPT. *Academy of Accounting and Financial Studies J.*, 22(2).
- Bruunetti, F., Matt, D. T., & Orzes, G. (2020). Digital transformation challenges: strategies emerging from a multi-stakeholder approach. *Emerald Insight- The TQM Journal*, 32(4).
- Chen, T., Peng, L., & Cong, G. (2020). The Impact of the COVID-19 Pandemic on User Experience with Online Education Platforms in China. *MDPI-Sustainability*, 12(18), 7829.
- Chicco, D., Warrens, M. J., & Jurman, G. (2021). The coefficient of determination R-squared is more informative than SMAPE, MAE, MAPE, MSE and RMSE in regression analysis evaluation. *PeerJ Computer Science*, 18.
- Cooper, M. (n.d.). Exploring Technology Adoption Trends Among Entrepreneurial Start-ups on the Digital Frontier.
- Cueto LJ, F. A. (2022). Digital Innovations in MSMEs during Economic Disruptions: Experiences and Challenges of Young Entrepreneurs. *Administrative Sciences*, 12(1), 8.
- Cui, F., & Song, J. H. (2022). Impact of Entrepreneurship on Innovation Performance of Chinese SMEs: Focusing on the Mediating Effect of Enterprise Dynamic Capability and Organizational Innovation Environment. *Sustainability, MDPI*, 14(19), 1-17.

- Cunningham, J. A., Damij, N., & Olan, F. (2023). MSME technology adoption, entrepreneurial mindset and value creation: a configurational approach. *Springer Nature Link*, **48**, 1574-1598.
- Devendra Kumar Pandey, M. P. (2021). A Study to Determine Impact of Technological Changes On Entrepreneurs. *Academy of Entrepreneurship J.*, **27**(4).
- F Okocha, T. E.-o. (2019). Access to Information as a Veritable Strategy for. *Purpose-led publication*.
- Firdaus Abdullah, J. H. (2009). Developing a framework of success of Bumiputera entrepreneurs.
- Fornell, C. &. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. of Marketing Research*, **18**(1), 39-50.
- Ghanad, A. (2023). An Overview of Quantitative Research Methods. *Inter J. of Multidisciplinary Research AND Analysis*, **6**(8), 3794-3803.
- Gunartin, Pratikto, H., & Sopiah. (2021, Nov). Financial Support on SMEs Impact of the Covid 19 Pandemic: A Literature Review. **9**(2), 682 - 689.
- Halim, F., Kusuma, R. D., & Sudirman, A. (2023). The Influence of Social Capital and Innovation Capability on Creative Industry Business Performance. *Inter J. of Business, Law and Education*, **4**(2).
- Hayes, T. (2021). R-squared change in structural equation models with latent variables and missing data. *Springer Nature Link-*, **53**, 2127-2157.
- Hensen *et al.* (2021). Remote data collection for public health research in a COVID-19 era: ethical implications, challenges and opportunities. *Health Policy and Planning*, **36**(3), 360-368.
- Jingya, Y. (2021). Data centered Usage based Protection in a SMACIT context. *HAL-Open Science*.
- Jonny, Kriswanto, & Toshio, M. (2021). Building an Implementation Model of IoT and Big Data and Its Improvement. *Inter J. of Technology (IJTech)*, **12**(5), 1000-1008.
- Joseph, D., Miri, D., & Mswaka, W. (2025). Digital technology affordance and constraints in informal economies: a micro-entrepreneurial study. *J. of Small Business and Enterprise Development*.
- Jr., H. *et al.* (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. *Springer Nature*, 197.
- Jr., J. H., Hult, G. M., & Ray, S. (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. *Springer Nature Link*.
- Juliana, N. O., Hui, H. J., & Elvis, O. K. (2021). The Impact of Creativity and Innovation on Entrepreneurship Development: Evidence from Nigeria. *Open Journal of Business and Management*, **9**(4).
- Kano, K., Choi, L. K., & Octavyra, R. D. (2023). Implications of Digital Marketing Strategy The Competitive Advantages of Small Businesses in Indonesia. *Startupreneur Business Digital (SABDA Journal)*, **1**(1).
- Kézai, P. K. (2023). Crisis Resilience of Startup Companies (The Case of Hungary among the Visegrad Countries with a Focus on the Pandemic). *Sustainability*, **15**(9), 7108.
- KHAN, H. U. (2020). The Role of SMAC (Social Media, Mobility, Analytics, Cloud) For Students and Educators in Online Education. *J. of Theoretical and Applied Information Technology*, **98**(06).
- Kline, R. B. (2016). Principles and Practice of Structural Equation Modeling (4th ed.). *New York, NY: The Guilford Press*.
- Koster, S. &. (2008). Entrepreneurship and Economic Development in a Developing Country: A Case Study of India. *Sage*, **2**(17), 117-137.
- Kreiterling, C. (2023). Digital innovation and entrepreneurship: a review of challenges in competitive markets. *J. of Innovation and Entrepreneurship volume*, **12**(49).
- Li, A., Zhao, P., & Axhausen, K. W. (2021). How did micro-mobility change in response to COVID-19 pandemic? A case study based on spatial-temporal-semantic analytics. *National Library of Medicine*.
- Markman, G. D., Gianiodis, P. T., & Balkin, B. D. (2005). Innovation speed: Transferring uni-

- versity technology to market. *Elsevier*, 34(7), 1058-1075.
- Mei Chen, Y. C. (2023). Determinants of open government data usage: Integrating trust theory and social cognitive theory. *Government Information Quarterly*, 40(4).
- Neumeyer, X. C., & Morris, H. M. (2021). Overcoming barriers to technology adoption when fostering entrepreneurship among the poor: The role of technology and digital literacy. *IEEE Transactions on Engineering Management*, 68(6), 14.
- Nipo, D. T., Lily, J., & Jamil, I. A. (2024). Transforming Rural Entrepreneurship Through Digital Innovation: A Review on Opportunities, Barriers and Challenges, 14(2).
- Oduro, S., Nisco, A. D., & Mainolfi, G. (2023). Do digital technologies pay off? A meta-analytic review of the digital technologies/firm performance nexus. *Elsevier*, 128.
- ONEA, I. A. (2022). Exploring the COVID-19 pandemic impact on innovation and entrepreneurship – Review and evidence from Global Innovation Index. *Sciend*.
- Podsakoff, M. P., Mackenzie, S. B., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *National Library of Medicine*, 88(5), 879-903.
- Raju, M. R. (2021). Technology and Entrepreneurial Marketing Decisions During COVID-19. *Springer Link*, 22, 95-112.
- Riera, C., & Iijima, J. (2019). How Do Japanese SMEs Generate Digital Business Value from SMACIT Technologies with Knowledge Creation? *Knowledge Discovery, Knowledge Engineering and Knowledge Management*. 976. Springer, Cham.
- Samara, G., & Terzian, J. (2020). Challenges and Opportunities for Digital Entrepreneurship in Developing Countries. In M. H. Soltanifar, *Digital Entrepreneurship* (pp. 283-302). Springer,.
- Sarker, T., Roy, R., Yeasmin, S., & Asaduzzaman, M. (2024). Technology Adoption Intention and sustainable Entrepreneurship Ability of Rural Women in Bangladesh. *Business Strategy and Development*.
- Shaifullah AKMK., and Hossain E. (2025). Adoption of digital technologies in Bangladeshi SMEs: barriers, enablers, and strategic responses post-Covid-19, *Can. J. Bus. Inf. Stud.*, 7(5), 474-493.
<https://doi.org/10.34104/cjbis.025.04740493>
- Shasha, Z. (2023). The Impact of Digital Transformation on the Insurance Business Model and Innovative Opportunities. *CSP-Financial Engineering and Risk Management*, 6(11), 121-126.
- Shkabatur, J., Bar-El, R., & Schwartz, D. (2022). Innovation and entrepreneurship for sustainable development: Lessons from Ethiopia. *Elsevier*, 160.
- Sitaridis, I., & Kitsios, F. (2023). Digital entrepreneurship and entrepreneurship education: a review of the literature. *Emerald Insight*, 30(2/3), 277-304.
- Sprong, N., Driessen, P. H., & Molner, S. (2021, February). Market innovation: A literature review and new research directions. *Eslevier*, 123, 450-462.
- Ssekiziyivu, B. T. (2024). Challenges Facing Women Entrepreneurship: A Developing Country Perspective. *Sage*.
- Takeda, A., Truong, T. H., & Sonobe, T. (2022). The impacts of the COVID-19 pandemic on micro, small, and medium enterprises in Asia and their digitalization responses. *Elseivier*, 82.
- Tamanna, M. (2024). Impacts of Technological Advancement on Achieving Sustainable Development Goals (SDGs): in Developing Countries. *Canadian Journal of Business & Information Studies*, 63-72.
- Tamanna, M. S. (2024). A conceptual analysis of artificial intelligence (AI) on academic opportunities and challenges: a case study based on higher educational institutions in Bangladesh. *Quality Assurance in Education*, 218-236.
- Tasmilah, P. D. (2022). The Impact of Digital Technology In The Entrepreneur Transition During The Covid-19 Pandemic. *Journal of Indonesian Applied Economics*, 10(1), 58-66.

- Utami , H., & Alamanos, E. (2025). Resource-Based Theory: A review. *The theoryHub*.
- Veldhoven, Z. V., & Vanthienen, J. (2022). Digital transformation as an interaction-driven perspective between business, society, and technology. *Springer Nature Link- Electronic Market*, **32**, 629-644.
- Wedda, R., & Bolatan, G. S. (2024). Sustainability in the Digital Age: Impact of Digital Transformation on Sustainability. *Springer Nature-Engineering and Technology Management in Challenging Times*, **1137**, 253-272.
- Zheng L, D. Y. (2022). Impact of Crisis on Sustainable Business Model Innovation - The Role of Technology Innovation. *Sustainability*, **14**(18), 11596.

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