








Entrepreneurship in India's Handicraft Industry with the Support of Digital Technology and Innovation During Natural Calamities

Uma Shankar Yadav¹, Kiran Sood², Ravindra Tripathi¹, Simon Grima^{3,4*}, Nikhil Yadav⁵

¹ Humanities and Social Sciences Department, Motilal Nehru National Institute of Technology Allahabad, Prayagraj 211004, India

² Chitkara Business School, Chitkara University, Punjab 140401, India

³ Department of Insurance and Risk Management, Faculty of Economics, Management and Accountancy, University of Malta, Msida MSD 2080, Malta

⁴ Faculty of Business, Economics and Management, University of Latvia, Riga LV-1586, Latvia

⁵ Jaypee Business School, Jaypee Institute of Information Technology "Deemed to be University" Noida, Uttar Pradesh 201307, India

Corresponding Author Email: simon.grima@um.edu.mt

<https://doi.org/10.18280/ijstdp.180613>

ABSTRACT

Received: 17 February 2023

Accepted: 24 May 2023

Keywords:

digital innovation, Pandemic, handicraft artisans, young craft entrepreneurs, digital entrepreneurship, economic disruption

This research aimed to identify the characteristics that either foster or stifle digital innovation and entrepreneurship amongst small businesses operating in the Handicraft industry during times of economic downturn. In the eyes of young Indian craft entrepreneurs, digital technology is essential for surviving the crisis and would help, for the most part, the artisanal and handmade goods market and the entrepreneurial spirit. Fifty owners of online handicraft businesses, all of whom held unique craft skills, were interviewed using a qualitative technique, and the researcher then utilized inductive (qualitative) content analysis to draw out common threads from the transcripts. The findings showed that the Pandemic's internal and external factors encourage the movement of handicraft businesses to digital platforms, fostering entrepreneurship and digital innovation. The respondents identified several obstacles, including a lack of available high-quality digital infrastructures, the spread of pandemics, market worries over digital platforms, and the lack of knowledge and IT skills required to run an online business. The article's findings contribute to the growing body of digital information on novel approaches to entrepreneurship and suggest avenues for carrying out quantitative research toward the end of creating aid programmes for proprietors of handmade goods enterprises during economic downturns. This could serve as a standard against which new policies and tactics for reviving the economy and expanding the handmade goods industry through technological and entrepreneurial ingenuity can be measured.

1. INTRODUCTION

In 2020, a novel Corona Virus (nCoV) was found in China, which is currently the centre of global trade. Over time, COVID-19 expanded to all continents and became an international public health epidemic. The COVID-19 Pandemic brought on the illness COVID-19. Countries dealt with the virus and COVID-19 with lockdowns that restricted social interaction because there was no cure. In India, a developing nation where more than 60% of economic activity is undertaken through the handicraft sector as a component of MSMEs, the effects of the COVID-19 Pandemic and the lockdowns on the survival of the handicraft industry as a part of MSMEs are analyzed.

The COVID-19 epidemic has had far-reaching effects on every sector of society. WHO estimates that 279 million individuals were infected with COVID-19, and 5 million people lost their lives to the Pandemic [1]. The spread of coronaviruses was stymied by various societal and economic restrictions imposed by various countries. These restrictions limited people's ability to travel and communicate with one another. Because of distance and isolation barriers, the

handicraft industry has recently seen a surge in digital entrepreneurship, particularly on digital platforms [2]. As a result of the widespread impact this epidemic has had on economic growth and employment creation, numerous studies have argued in recent years over the factors and conditions that permit the e-technology transformation of craft companies and government policies that promote the phenomena [3]. 3D printing, open educational resources, digital imaging, social media, crowdsourcing, and data mining, are just a few examples of the well-known digital and innovative enablers [4]. These technologies encourage new artisans or entrepreneurs by lowering the barriers between forming and inventing a new business. The COVID-19 programme also played a role in the acceleration of digital transformation in the micro, small, and medium-sized enterprise (MSE) sector, especially in the handicraft industry [5, 6]. As lockdowns become the norm, businesses and consumers in the handmade goods industry are increasingly turning to digital platforms, selling and buying more functional decorative goods and services online, driving up global e-share business from 14% to 18% between 2019 and 2020 and up to 22% by 2024 [7, 8]. The economic disruption has had varying effects on large and

small firms alike; although some companies have closed their doors for good, others have shown resilience by adjusting their strategies and weathering the storm. Savings practises financial literacy and technology adoption are just a few of the internal and external factors that affect the success of resilient (handicraft) MSEs. However, failed MSMEs, particularly those in the handicraft industry, had financial difficulties and lacked an internet presence [9]. Three paths lead to small business success: those with the most digital maturity make the transition to digital handicraft firms more quickly. Those that are neither financially stable nor technologically advanced may simply digitize their sales procedures. Finally, partners with exceptional digital skills help those with minimal computer experience [10].

Many developing and industrialized nations rely on the handicraft sector as their economic backbone. Hence research on the handicraft industry's ongoing development as a part of MSMEs in the digital and global world is necessary [11].

So that they can compete more effectively with machine-made items across industries and geographies, researchers have been focusing on digitalizing and innovating handicrafts. Looking at how the literature had evolved: Muhamad et al. [12] conducted a digital poll among India's manufacturing sectors (services, tourism and manufacturing, wholesale) and discovered that, compared to before the Pandemic, business use of digital technology grew dramatically. Customers are more confident in using digital technology to address the problem [13] since prior research studies in manufacturing with infrastructure (secondary sector) revealed that using digital technology during COVID-19 boosted customer satisfaction. Online platforms, frameworks of handicraft product businesses, and disruption procedures were important to the European handmade and unorganized Cooperative Sector [14]. It has been argued in Massaro's study [15] that new paradigms in various development, such as artificial intelligence (AI), machine learning, and block chain technology, which helps with data analytics and data management, could be useful in resolving difficulties in artisanal expertise.

About 87.5% of all registered firms in India are in the handicraft sector of MSMEs, and these businesses employ more than 69% of India's skilled artisans. While many studies [16-18] have looked into how COVID-19 has affected the handicraft industry elsewhere, not much has been done in India to shed light on this critical issue. Several studies [19-22] examined the impact of the Pandemic on the digitization of businesses selling handicrafts by limiting their employees' mobility. The financial impact of COVID-19 and government policies and initiatives was measured in a more in-depth study [23], which surveyed the top executives and directors of India's most successful corporations. This research aims to contribute to this growing body of knowledge by exploring the drivers and constraints of India's nascent handicraft entrepreneur class as they undergo a digital transformation as part of micro, small, and medium enterprises (MSMEs) amid economic crises. Because they are considered as drivers of digital technology, creativity, economic advancement, and social improvement, it is crucial to analyze how young entrepreneurs are perceived [24]. Given that India is widely considered the global social media capital in recent situations [25], young handicraft artists as entrepreneurs are also capable of greatly making a positive impact on the socioeconomic approach pursued by the Indian government on behalf of the handicraft industry.

1.1 Significance of the study

As we know, the Indian handicraft industry is an emerging industry in the growth of the Indian GDP. And in the handicraft industry role of craft entrepreneurs have significant value because more of the Indian rural workers as well as owners are engaged in handmade work, especially family-based industries like Agarbatti making, Moonj craft making, basket making, and during the Pandemic COVID-19 they helped the people by making mask at mass level. So, this study has focused on digital and innovative entrepreneurship in the handicraft sector during economic calamities. This study will also be focused on the major challenged face by entrepreneurs during Pandemic and what opportunities were seen during this time while due to the help of digital and innovative technology, they transformed into different new craft owners and the adverse impact of the Pandemic on the family-based industry, and the role of entrepreneurs in the handicraft industry, and their problems, and has suggested some advanced strategies for the development of the handicraft sector in modern scenarios and enhancing the skill of women to become entrepreneurs in the handicraft industry. This article will contribute to policymakers for making skill development policies for handicraft entrepreneurs engaged in this craft industry in India and reduce the impact of the Pandemic if it again courses in future.

2. LITERATURE REVIEW

2.1 Entrepreneurship theory and history

The process of Indian entrepreneurship and handicraft skill is the provision of services and items with added imagination to satisfy the growing needs of the local society. The foundation of each entrepreneurial endeavour is the capability to exploit opportunities that result in the tertiary sector, commodities, and handicraft production technique [26]. The term "entrepreneurship" is commonly used to describe the process by which an individual learns, takes risks, and invests in new business opportunities. Consequently, it is seen to be an effective technique for addressing young dependency and unemployment, with the potential to spark artistic Innovation and economic growth in any nation [23, 27, 28].

Many theoretical viewpoints such as "user entrepreneurship," "effectuation," and "the creation perspective" along with entrepreneurial bricolage) have emerged over the past few decades to describe ideas and activities that promote small business expansion, as well as the differences between traditional and cutting-edge approaches to entrepreneurship [29]. Meanwhile, academics have been forced to change their thinking due to the recent COVID-19 predicament. to understand better and explain the consequences of the economy owing to COVID-19 on smaller sectors in low-income countries, the severity of the crisis, and company sizes [30] (such as catastrophe theory, resilience, dynamic capacities, and digitalization). Based on these speculations, we analyze the drivers and brakes of technological and business ingenuity in the handmade goods industry during the Pandemic. First, when faced with uncertainty, craft workers follow choices that deviate from what one may expect based on the rational entrepreneur model to the Effectuation Theory [31]. Research [32] suggests that companies' reactions to the second "wave" of the COVID-19

epidemic varied according to their level of uncertainty and the lessons they had learned from the first wave. The results also show that when managers are uncertain, they tend to focus on losses they can easily absorb, whereas when they are faced with a calamity, they are more willing to take risks. Potential buyers are individuals who do so despite the fact that the future is rife with danger. Rather than focusing on goals, businesspeople tend to take charge of the variety of available possibilities. Thus, effectuation can also mean starting a business after accumulating the necessary capital. New craft businesses are supplying the growing handcraft industry [26].

The theory of resilience, which focuses on how businesses handle crises and exogenous shocks, can also be applied to the study of business uncertainty [33]. Shocks are unanticipated or unforeseeable events that occur in a different business but have the potential to have a major impact on the markets in that area. Rebuilding individuals, organizations, and entire communities is an ongoing process that requires resilience [30]. Beyond the COVID-19 Pandemic, the agility and resilience of emerging enterprises might help them seize opportunities presented by the economic disruption caused by the pandemic [34].

Other researchers have found that successful digital transformation and innovation management procedures necessitate an innovative culture in the handcraft industry that encourages employees to adopt new digital practices and tools to address the complex problems that today's businesses face that motivate entrepreneurship [27]. A company ecosystem has emerged as a direct result of innovation management and digital transformation [24]. Key to a company's success in both digital and conventional channels is the innovation process and the management of its initiatives [28].

Companies need to change their strategies to keep up with the current environment and encourage innovation. New digital channels and the digital ecosystem in unorganized industries are undeniably emerging as crucial strategies for propelling business transformation [31]. Privacy of user data, the malleability of digital channels like social media, and the role of digital marketing in propelling digital transformation and innovation management are all topics of conversation in today's digital ecosystems [35]. Digitalization in any industry provides a forum for research on the most effective advanced technologies and cultures in organizations, all of which have the potential to manage information better and make easy life of human beings depend on it, especially in small industries in which handmade product sari papered but not popular due to lack of digital awareness [30].

Four aspects can influence the stage of entrepreneurship, namely environmental, organizational, sociological, and personal aspects. The most important aspects in the process of entrepreneurship growth are organizational aspects, personal aspects, and environmental aspects. In the environmental aspect, there are elements including opportunity, role models, and creativity [19]. One of the elements in the environmental aspect that has the most influence on the process of entrepreneurship growth is opportunity. The digital analysis of the transformation of an institution into an innovation system in the development of the carpet industry [29]. Again, many studies [21, 25] have focused on and described the strategies for the development of the handcraft sector in India and also given a separate proposal about the global handcraft index for the promotion and digital handcraft index in India as well as the world [26]. This shows a good opportunity that an entrepreneur must take advantage of. The term business utilization through the Internet is known as Business

digitization, namely the application of digitization to business processes [31, 32].

In business digitization, the entrepreneurship processes that occur are enterprise resource planning, customer relationship management, selling-chain management, supply chain management, enterprise application integration, and e-procurement, which are then used as indicators of measurement for research. Businesses that have experienced entrepreneurial growth (entrepreneurial growth) can be seen through the following dimensions: opportunity domain, execution, capabilities, organizational resources, and leadership.

"Making do by applying combinations of resources at hand to new difficulties and possibilities" is the essence of the Bricolage Theory of entrepreneurship [35]. The bricolage theory postulates that in areas of low economic development or scarcity of resources, entrepreneurs are more likely to create something new out of nothing by repurposing parts of existing businesses. As a result of the unpredictability of this epidemic, new ways of doing business have emerged. For instance, due to nationwide lockdowns and government restrictions during the outbreak, individuals' purchasing habits shifted to Internet venues [36]. As a result of the situation, new firms sprang out as people sought possibilities to start their own businesses, redirected the direction existing companies were headed in, and used a "bricolage" approach to address the problems they faced. The micro and unorganized firm's capability to construct, correlate, and external competencies and internal re-modification to handle rapidly changing conditions is defined by the Theory of Dynamic Capabilities [37, 38]. This notion has connections to the bricolage method of entrepreneurship. Absorptive capability [30] refers to the fundamental organizational and strategic procedures via which entrepreneurs shift their resource base (by incorporating new resources, discarding old ones, or recombining existing ones) to develop novel methods of producing value. To deal with the environmental shifts caused by the Pandemic, many small firms are pursuing the transformation in dynamic capacities linked with adopting digital skills and modern technologies [10]. By fusing these many schools of thought, we get the Theory of Digitization, which looks at how digital capabilities are employed to accept new business models, handle uncertainty, and fortify resilience.

2.2 Start-ups centred around handmade products that use a digital or online platform after COVID-19 spread worldwide

Digital entrepreneurship in the handcraft industry is the process of creating value through entrepreneurship by leveraging several socio-technical forces to optimize the gathering, processing, distribution, and consumption of digital information [3]. As technology progresses, businesses across all industries realize the importance of digital transformation to their continued success. This digital revolution [39, 40] affects many areas of business and marketing, from operations and sales to human resources and finances, from finance and customer service to R&D and even marketing. A rise in research funding from universities and other industries is a direct result of the financial impact of digital entrepreneurship. Conceptually, it bridges the gap between technological and ecological fields [41]. Beyond its zenith, digitalization has had a profound impact on how business owners manage their companies [42].

The use of digital and modern technologies has profoundly impacted how Handicrafts company owners manage their operations. Companies with access to digital technologies developed and launched innovative products and processes [40]. Due to the entrepreneur's initiative, backed by their extensive social network and management skills, the MSME sector has experienced rapid digital change as a result [43]. Some industries may have shut down or experienced financial losses during COVID-19, despite continuing to produce new commercial ideas. Entrepreneurship is heterogeneous because different business owners employ various tactics to ensure their continued success and viability. Entrepreneurship is iterative and integrative due to its reliance on external facilitators. Entrepreneurs are the Pandemic's hidden heroes because of their resilience in the face of the destruction they've caused [44]. The creation of new businesses that can gain from resolving environmental and social problems is crucial to the expansion of a sustainable economy, and this is where entrepreneurship comes in [45]. Customers' increasing anxiety over COVID-19 has highlighted the financial benefits of using an online store. More people were likely to shop online than use more conventional methods, such as shopping in stores, for ease and security. The rise of e-commerce and the reduction of consumers' paranoia about contracting the virus have boosted the economy [46]. Similar to past economic upheavals brought on by pandemics, wars, and financial crises on a global scale, the global and Indian handcraft industries were both affected by the recent COVID-19 outbreak. Many countries' economies were negatively impacted. There was certainly a rise in apprehension among entrepreneurs, many of whom feared that new ventures might fail owing to a lack of interest or financial support. The rise in demand for health-related products and services can be attributed to several factors, including the rise of remote work, e-commerce, virtual classrooms, the use of technological knowledge, the effects of web channels, technology solutions development in India for the handcraft sector like the handcraft app, and the emergence of a new digital skill for articles [47].

It has been pointed out that multiple internal and external factors affect the degree to which micro and small businesses apply digital and ICT to innovate by modernizing their craft industries [48]. These factors include digital strategy, employee skills, financial capacity, and information technology to convert the business to digital. Consumer demand patterns, market competition, and the accessibility of digital technologies are examples of external effects. Other economic and ecological disasters, like the COVID-19 Pandemic, also trigger unexpected developments in the digital business. A large body of work has been devoted to studying how COVID-19 has impacted the handcraft industry, particularly as it relates to micro and small-scale enterprises and the transition to electric or AI platforms. For instance, the impact of the Pandemic (COVID-19) on company prospects while focusing on how to go forward with optimism [36]. The research included a review of related literature and multiple regression analyses of the impact of relevant variables on the prospects of new business ventures. According to the results, businesses can benefit from the Pandemic in several ways, including through digitalization and by adapting to digital and sophisticated market structures.

The authors of a recent study [6] used quantitative methods and the existing literature to analyze the interconnections among digitalization, Innovation, entrepreneurship, and digital transformation, as well as their practical ramifications.

Findings suggest that the epidemic has prompted businesses to innovate, digitally alter, and change their customers' preferences in a way that favours stable and environmentally friendly expansion. It was also discovered that COVID-19 hampered corporations' ability to expand over the long run and altered people's relationships with corporations, society, and one another.

DSA, also known as (digital social entrepreneurship), results from collaboration across a wide range of players. Its development was studied as a response to the inability of policymakers to meet stakeholder satisfaction and needed in response to an exogenous event [49, 50]. They analyzed 130 pandemic-related apps available on Google Play and the App Store using a partial least squares structural equation to identify associations between factors and direct and indirect impacts. When governments cannot meet their people's requirements, The research concluded that DSE could catalyze Innovation and a medium for transferring skills and knowledge to the advantage of various parties.

2.3 How the pandemic affects entrepreneurship in India's handcraft industry

The 600 million people who call India's numerous islands home are spread over Southeast Asia. The population's 2.4% annual growth rate and rapid development of the economy have led to an increase in demand for goods and services. Its Gross Domestic Product (GDP) is \$360 billion, and it grew at an annual rate of 8% in the five years before the Pandemic. Sixty-one percent of the gross domestic product comes from services, whereas just twenty-nine percent comes from manufacturing [51].

According to data submitted by the Department of Industry Innovation Programs (DIIP) in 2020, there are 13,57,620 businesses officially recognized as being in operation across the country. Of these, 80.51 percent are classified as Micro, small, and medium enterprises (MSMEs), while 19.49 percent are classified as large businesses. The breakdown of these medium-sized firms (MSMEs) is as follows [51]: 10.25% are tiny businesses, 88.71% are microbusinesses and 0.49% are medium-sized businesses. About 83.77% of all MSMEs, which includes the Indian handcraft sector, are engaged in the following five industries: (1) Heavy industry including Manufacturing, Wholesale (120,916); (2) Retail Trade; (3) Service Activities (100,386); (4) Motor industry (98,376); (5) Food Service and Accommodation Activities (89,046); and (6) Banking, insurance, (103,558) along with and Financial Activities. Approximately half of the nation's workforce, or 44.38 million people as of COVID-19, were employed in the handcraft industry as unorganized artisans. Market share was divided as 20.38% among unorganized or micro-organizations, 25.78% among small and medium-sized enterprises, and 7.50% among large enterprises [51]. The COVID-19 pandemic has significantly altered the business climate in India's handcraft sectors. Losses have been especially severe in the handmade goods sector of the micro Industry, which is more vulnerable than larger manufacturing firms in times like these. Researchers and academics in the sector looked at the impact of Pandemic restrictions on the handcraft industry and the methods used to revive it. Examples of works that are considered part of the academic literature are:

Graduates of the DIIP's programme for micro Businesses, focusing on the handcraft industry in the province of Uttar Pradesh MP, Bihar, were surveyed to assess the impact and

current status of COVID-19. Using a semi-structured online survey and a descriptive approach, we were able to learn about the demographics of the graduates and the wider effects of the epidemic, particularly during the period of community quarantine. According to the findings, operations continued normally at their company despite the Pandemic. They emphasized the importance of government initiatives for the maintenance of MSMEs. Participants were optimistic because they had been trained in business continuity and had made efficiency improvements in preparation for economic downturns. Using a phenomenological approach, a study looked at the real-world experiment that Indian professionals went through when transitioning from 9-to-5 office work to freelancing online gigs [21]. Eleven of the interviewees discussed the difficulties they had encountered, such as interruptions at home and a lack of respect, in-depth. Multiple groups of advantages have been identified, such as liberty, professional options, and increased family time. The research concluded that freelance employment has more upsides than drawbacks and has opened up numerous new career paths. Researchers in these publications examined how to quarantine rules prevented certain small businesses from going digital. This Study illustrates the challenges that young digital entrepreneurs face by employing bricolage, resilience, the concept of effectuation, and dynamic skills.

The primary objective of this research is to analyze how economic downturns encourage MSMEs in the handicraft industry to adopt and innovate with digital technologies in the workplace.

2.4 Rationale of the study and an action strategy

The theoretical underpinnings of the Study's preposition (Pr) and research framework may be seen in Figure 1; they are based on the aforementioned debates of entrepreneurial and the digitalization of craft businesses in the midst of economic upheavals, which are depicted in Table 1.

Table 1. The six prepositions

Code	Prepositions
Pr1	Changes in the economy could spur young company owners to persevere.
Pr2	Young business owners would have a tough time keeping their companies afloat if the economy were to experience any disruption.
Pr3	A slowdown in economic activity would result in the closure of businesses due to the associated difficulties.
Pr4	The handicraft business will be pushed to go digital by external factors.
Pr5	Because of these issues, the handmade market will shift toward digital alternatives.
Pr6	Technological progress, handicraft production might become more efficient.

Source: Authors' compilation

Young business owners would either be encouraged to keep going despite the economic disruptions brought on by the COVID-19 epidemic, or they would be forced to shut down their operations. The handicraft industry /or micro industry (Pr4/Pr5) will be forced to go digital / online to avoid the spread of Pandemic infection and to quickly recover from the losses caused by disruptions in the business of handicraft products with correct operations. This is especially true if the human resources at craft companies allow for such a shift. The tenacity of today's youthful business owners means that this

technological advancement will boost the efficiency of business practices (Pr6). However, if business owners cannot adjust and thrive, they will be forced to close their doors due to the problems caused by economic upheavals (Pr3). The methodology developed for this research allows for a deeper dive into the prepositions, yielding more substantial findings.

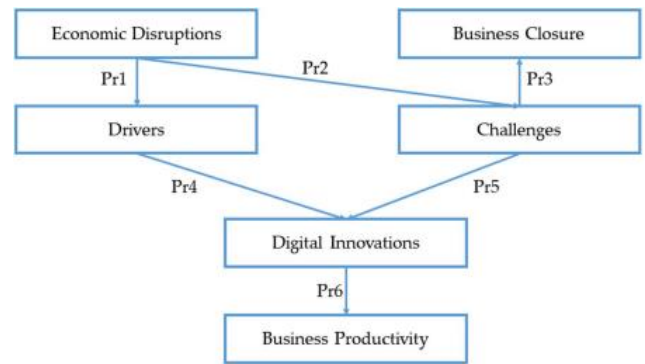


Figure 1. Prepositions and research structure of the study
Source: Authors' compilation

3. OBJECTIVE

The project aims to (1) take into account the experiences of new business owners as they run their businesses online during the Pandemic crisis; (2) investigate the difficulties of making the transition from traditional handicraft marketing to internet platforms; and (3) assess the ramifications of these findings as a foundation for national laws and digital, cutting-edge strategies aimed at bolstering the economy through online handicraft entrepreneurship. Using India as a case study, we conducted in-depth interviews with young craft entrepreneurs to gain their insight into the topics at hand. The collected data were analyzed using a qualitative inductive content analysis approach. The study's findings shed light on the factors that drive (intrinsic and extrinsic) and impede the incorporation of digital innovation into the production of handmade goods in the face of calamities like the global Pandemic and the worldwide economic downturn. Based on the findings, policymakers and other stakeholders, such as cooperative societies and Nongovernmental Organizations (NGOs), are advised to promote the best entrepreneurship to aid in economic recovery efforts during and after the epidemic. You can summarise this article as follows. Section 2 provides a literature analysis of the theoretical foundations of the epidemic, the handicraft market, and their digitalization. Section 3 explains the steps involved in doing inductive content analysis. The summary of the analysis's results, along with the relevant responses from the participants, may be found in Section 4. Section 5 discusses the results and their theoretical, managerial, and policy implications in light of the preceding research. In Section 6, we summarise our findings and discuss the limitations of the study as well as potential avenues for future study.

4. RESEARCH METHODOLOGY

4.1 Research approach

In this article, we looked at the actual situations that young online entrepreneurs faced throughout the Pandemic. Instead

of focusing on generalizations or graphical representations, it aimed to gain a thorough understanding of a single topic. We employed the qualitative method [52, 53] to learn about the history, sketch out the participants' attitudes and behaviours, identify the procedures, and look into their actual lives. This means that it seeks to explain and understand the intangible components of reality and the complex dynamics of interpersonal relationships [54]. Participants in this Study were called "participants" because they provided detailed answers to the researcher's questions during a virtual interview. A small population size enabled more in-depth comprehension rather than statistically significant. Researchers can gain a deeper understanding of the challenges by conducting online interviews with individuals [55]. In light of the current scenario, this is the safest and most appropriate method in the case country during COVID-19 [56].

4.2 Data collection

For context, we did the research in India in the fourth quarter of 2021, well than a year after various group quarantine measures had been implemented across the country. The participants in this Study were 46 young people involved in the handicraft industry; the ages of the participants ranged from 15 to 50, with a median age of 30. The young business owners I spoke with had diverse professional backgrounds, including voice-over work (5%), writing/editing (8%), YouTube, LinkedIn, Lox, Facebook, Hangout, etc., sales and resale on the Internet (63%), social media management (13%), and online coaching and instruction (7%). Sixty-one percent are self-employed, while twenty percent work for enterprises with five to ten employees, primarily in the handmade goods industry. Small enterprises are employing 10 to 49 craftsmen or workers in the handicraft sector (11%), and large-scale industries employ 50 to 100 regular workers (2%) in the United States.

This Study used a purposive sample strategy based on three primary survey instructions and questions to collect data from new handicraft entrepreneurs in India who were launching online and new handicraft start-ups or enterprises for production and marketing during COVID-19. When deciding on the sample size, we considered the concept of "data saturation," which characterizes the point at which responses become repetitive and further data collection provides no new insights. Therefore, the researchers performed data collection and analysis simultaneously to avoid information overload. Data was collected via an online survey conducted by the researchers. The questionnaires included (a) background information regarding the study, such as its purpose, participants' anonymity, and the confidentiality of their responses, and (b) the respondents' own suggestions for improving the questionnaire, (d) three primary questions, all of which encourage free-form responses, and (c) participant-specific information. Based on the study's hypotheses and methodology, the following questions have been formulated: (1) What happened to you during the Pandemic that made you decide to start a business selling handmade goods or go sailing? (2) When selling your handmade goods online during COVID-19? (3) What kinds of problems or obstacles did you face? (4) What kinds of lessons did you take away from those situations? (5) What kinds of government support for new and existing handicraft businesses should be in place for young people during and after COVID-19? The ICMR, Tata Institute of Social Science (staffed by experts in the field), and the

Department of Skill Development on Small-Scale Industries (which includes the Handmade Industry) together assessed the reliability of the Industry's comprehensive surveys. The experts rated the items on their clarity, presentation, suitability, adequacy, and ability to accomplish their goals. After then, changes were made to the surveys based on the feedback they provided.

Codes were used in the survey questionnaire to protect the anonymity of the respondents, and the coded data was sent back to the respondents so they could double-check their responses. The research was conducted in accordance with the Declaration of Helsinki and was reviewed and authorized by the micro, small, and medium enterprises department, the Tata Institute of Social Science (staffed by experts in the field), and the ICMR Ethics Committee. Researchers assured participants that their involvement in the study was entirely voluntary and that they could stop participating at any time if they so desired. Researchers also ensured the confidentiality of responses because only academics and social scientists had access to the data.

4.3 Data evaluation

The qualitative research in this study used inductive content analysis, which is suitable for studies with an inductive beginning or with topics that are only weakly connected after employing open data collection methods. In qualitative analysis, themes and hypotheses are developed and identified through an inductive content analysis of written and spoken sources. This technique is advantageous since it is content-aware, flexible in its application, and capable of evaluating different kinds of qualitative data [57]. Unlike other qualitative research studies, content analysis allows researchers to deliberately and objectively characterize study procedures at the core parts that may be used in a wide variety of research papers. Approaches, themes, and clusters of related ideas can be generated, and from these, more elaborate models, maps, and frameworks can be constructed to characterize the subject of the study [58]. Since (deductive content analysis), commonly known as DCA, is typically employed for either an unconstrained or confined vector of assessment depending on the study objective, in this case, an assessment of inductive content was utilized to generate categories, themes, and concepts from the data.

The steps of qualitative inductive content analysis are shown in Figure 2. In other words, it's all about the three Ps: preparation, execution, and reporting. One step in getting ready was deciding how to gather data or what method to use for sampling. Researchers reviewed the data several times before diving into the analysis. After then, the researchers developed the Q-IA 'unit' on their own. Figure 2 is included for your perusal.

The second stage of data organization involved sorting, abstracting, and analyzing the information, as well as determining whether or not the data collected was truly representative. In the second stage, open codes were used to express the raw data using phrases that were either literal translations or radically altered copies of the original codes. When deciding whether or not the various programmes might be categorized together, researchers looked at their shared features and unique distinctions. The open codes were analyzed to generate subcategories, which were then incorporated into generic categories and primary categories as part of the data abstraction procedure. Scientists created

groups based on shared data characteristics to determine if the summarising process should be continued.

Scholars conducting studies on digital handicraft entrepreneurship should double-check the raw data to ensure that the problems contained in the identified open codes have been investigated. Researchers could properly name the underlying and overarching notions once they had been defined.

It was only once the analysis was complete that the reporting phase began, and the results were presented in a well-organized fashion. However, the researchers who conducted the study cited sources reliably, making it possible to follow the trail of evidence from the study's findings to the facts on which those findings are based. The selected quotations should present a range of perspectives from the various analysts involved in the study.

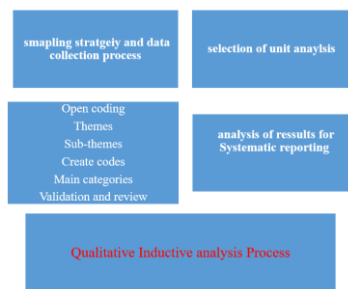


Figure 2. Procedure for conducting a qualitative inductive research content analysis
Source: Authors' compilation

5. RESULT

The results of the content analysis were partitioned into three classes. In the first Section, we looked at what led first-

time and young handicraft business owners to shop online around COVID-19. In the second, we looked at the problems the participants had when trying to start a digital business; in the third, we looked at some of the policy ideas that could help them.

5.1 Individual paths to digital entrepreneurship of young craft makers

Table 1 summarises this data for people's entirely digital business experience during the COVID-19 crisis, broken down into 7 subcategories, 25 codes, 1 main category, and 2 generic categories. Participants proposed two generic categories, external and internal motivations, that stimulate digital innovation in the handicraft sector during times of financial crisis.

Table 2 shows the results of young entrepreneurs' real-world experiences with digital entrepreneurship during the Pandemic. These are frequency-wise.

During COVID-19, young entrepreneurs in the handicraft industry can use the introduction of cutting-edge technology for handicrafts as a response to external factors like social concerns. To halt the spread of the coronavirus, the government enacted several community quarantine measures, including restrictions on group travel and the prohibition of physical contact between people. Some examples of these challenges are seen in the idioms for fourth and fifth place, which refer to the market's volatility, the financial stability of households, and the limitations of travel (Pr4 and Pr5). Numerous facets of daily life and the economy were disrupted.

Many businesses are closing, there has been a huge shift in consumer preference toward online channels, and competition is severe among businesses offering similar wares, as the focus group participants reported. Consistent with these conditions are the third, fourth, and fifth prepositions (Pr3, Pr4, and Pr5). Company closures resulted in the loss of employment for many people, which had a negative effect on family incomes.

Table 2. For the summary of generated codes and the related responses

Serial number	Main section	Simple section	Subsection	Frequency code
1	Pandemic Instigators of Digital Craft Innovations	Strict Observance of Health Guidelines	Changing Market Conditions	Restriction on Travel (3) Face-to-Face Transactions Are Prohibited (3)
2		Observed Social Changes		Customers' Changing Preferences (2) Companies that sell similar goods or services compete for customers (2) Use a Wide Range of Social Media (4)
3	As upper given	Change in the income of households	Industry collapse	Closing of Shop (4) Changes in advertising focus radically toward the web (12) An Increasing Appetite for Online Shopping (5) Problems in Digital Marketing
4		Individual Driving Force	Job problems	People who have lost their jobs (4) have financial difficulties (8) have suffered income loss (10)
5		Changing Market Conditions	Commercial Motives	Making the most of idle time (4) Earning Extra Income (22)
6		Concerns on Welfare of Fellow Citizens	Individual Motives	Support the Family's Needs (3) Obtain Education Funding (1) Managing Stress (2) Acquire e-Commerce Experience (2) Displaying Skills, Talents, and Capabilities (1) Real-World Implementation of Intellectual Understanding (2)

Source: Authors' compilation

On the flip hand, respondents cited intrinsic motivations like professional growth and social responsibility as prime examples of why they started their own (online) internet-based businesses (Pr1). Wanting to supplement the family income, improving one's mental health, and expanding one's horizons are all examples of personal motives. Despite their youth, internet and epidemic entrepreneurs saw room for growth in their fields.

A surprising number of young entrepreneurs have the "Bahamian mentality" when it comes to starting up online businesses. This Indian AI quality means "helping each other out, having community spirit, or being solidly united." Conforming to the sixth preposition, this collaborative endeavour (Pr6). To help the guy in India who was hit hard financially by the COVID-19 issue, participants saw digitalized firms (enterprises) as a solution to guarantee safer products and service delivery.

5.2 Problems faced by new digital businesses in the handmade goods industry

The challenges young entrepreneurs face while launching a digital business can be abstracted into the nine subcategories,

twenty-eight codes, three generic categories, and one overarching category shown in Table 2. Considering these concepts, the second hypothesis is consistent (Pr2). Problems with participants' entrepreneurship skills, the market, and the Pandemic business climate were discussed.

In Table 3, we see the results of an investigation of the difficulties young people faced while trying to create digital enterprises during the Pandemic, as written in the main section, subsection and code frequency wise.

Young and upcoming professionals in the handicraft industry sometimes lack the essential entrepreneurship skills related to conducting business online, mastering personal administration, and utilizing IT. Young business owners faced new challenges due to the nature of the digital marketplace. Start-up capital, digitized markets, transactional issues online, legal hurdles in obtaining necessary licences and permits, copyright issues in content creation, and so on (e.g., YouTube).

The economic climate during the epidemic also challenges new business owners as they attempt to convert their small businesses digitally. These challenges include the lack of a reliable telecommunications network, strict quarantine regulations inside communities, and power outages.

Table 3. For the summary of generated codes and the related responses

Serial number	Main section	Simple section	Subsection	Frequency code wise
1	Business Skills for craft entrepreneurs	Export and import	While transportation fees are being raised	Marketing strategy/Creativity in posting ads for craft products (4)
2	Kill Challenges in craftpreneurship Community restriction	Health risks, quarantine in a rural area as well as in all parts of the country	Mobility constraints	Establishing good client relationships/trust (3) Giving quality service to entrepreneurs
3	Product protection management skills of individuals	Copy right intentions for handmade products	IPR and WIPO	Self-confidence in live selling for handicraft products (2)
4	Barriers to Digital Innovation	Patience/resilience in doing business	Copy right content for handicraft products	Clients/customers/subscribers are in short supply (5) Small profits for handicraft newcomers (2)
5	Market Challenges in Starting up Online Business	Issues a Business permit, DTI, and BIR applications in the handicraft industry artisans and entrepreneurs	Vendor legitimacy for craft entrepreneurs	Variety of targets in markets An Availability of supplies (5) Pressure/mental breakdown Time management (5)
6	Challenges in the craft business environment	Online transactions for artisans	Cashless working of MFI	Strong competition among sellers (6) Non-payment for supplied items and rejected orders (3) Order quality (2)
7	Challenges in Starting up an Online Craft Business	Availability of Quality Technology in the handicraft sector	Banking hours are being reduced for small and unorganised industry	Clients/customers/subscribers are in short supply (5) Small profits for newcomers (2) Variety of targets in markets

Source: Authors' compilation
Supporting Digital Entrepreneurship from the Perspective of Young Makers

5.3 Supporting digital entrepreneurship from the perspective of young makers

Table 4 displays the 11 codes found in the abstracts for Question 3. There are 7 smaller categories, 3 more general ones, and 1 larger one. The broad categories include government support for start-up businesses, training for young entrepreneurs, and improved infrastructure for digital start-ups.

Table 4 shows the results of a data abstraction of the policy recommendations made by young entrepreneurs to encourage

the digitalization of the handmade goods sector.

In a discussion about helping young entrepreneurs get their businesses off the ground, 18 people agreed that having access to capital is crucial. Loans with low-interest rates, government aid during lockdowns, and temporary reductions in or elimination of taxes are all examples of such measures. Additionally, young entrepreneurs are concerned about the necessity to use the Internet to promote their wares to a wider audience of consumers and to help them legally establish their enterprises. On the other hand, citizens and entrepreneurs should have access to legal recourse in fraud cases [59].

Table 4. For the summary of generated codes and the significant responses

Serial number	Main section	Simple sections	Subsection	Frequency statement
1	Government support for start-up businesses in the handmade industry	Policies that help the digitalization of the handicraft industry	Financial support	The subsidy, loans, tax incentives/deductions in the craft industry (18)
2	Add and mark policy local to vocal and glocalization	Administration support for the handicraft sector	Marketing digital and administrative support	Marketing, business permits, etc.) DIIP, MSME, BIR, (15)
3	Legal support	Support Skills Enhancement Financial, support for entrepreneurs		Protection for sellers and IT
4	Legal protection for sellers and IT support for handmade products	Entrepreneurship skills in the craft industry	Entrepreneurship Education for the handicraft sector	Localized online ‘tinge’, marketing, products expo (6)
5	Infrastructure Development for craft park	Improving internet connectivity	Digital knowledge training for artisans	IT (7)
6	Infrastructure and energy with information technology	Energy and technical improvement	Improve GPS for raw material and digital marketing infrastructure	Improve energy infrastructure (3)
7	Economic support for craft entrepreneurs	Financial	Create an account for craft entrepreneurs	Accounting, IT

Source: Authors' compilation

The government should provide programmes that build entrepreneurial abilities to keep small-scale enterprises competitive during the Pandemic and economic changes. The participants recognized accounting, finance, digital entrepreneurship, and information technology as talents. Classes covering the basics of entrepreneurial growth, including skill training and capacity building, should be available as electives at both colleges and ITIs. Finally, stakeholders recommended that the government implement laws to increase competition among telecommunications companies to lower costs while providing greater quality internet connectivity. A more reliable electrical supply system should be built, especially in rural regions [60].

6. DISCUSSION

This research analyzed how young business owners made the switch to online channels during the Pandemic. Three interesting debate points emerge from the findings. In the first bullet point, we list the most important findings and highlight how novel they are compared to previous studies. In the second part, suggestions are made for how the research of digital progress could influence policy in the midst of economic turbulence. The corporate world and potential managerial applications are covered in the final section.

6.1 Factors pushing and pulling against digital innovation in small and medium-sized businesses

Using qualitative inductive content analysis on real-world data from young company owners led to two surprising findings. At a time when the economy is in crisis, digital innovation is being driven by both internal and external factors. Psychologists use the term "external impulses" to describe the motivation to act in response to an external demand (such as a rule or a reward) [61]. Survey participants attributed these limits to the community's shutdown, marketing and consumer demand shifts, and the unexpected change in household financial conditions due to the COVID-19 outbreak. Recent studies [62, 63] reveal that micro, small,

and medium-sized firms (MSMEs) were hit especially hard by the financial crisis caused by the Pandemic. These companies have problems with funding, supply chain interruptions, dwindling demand, declining sales, and declining profits. A person's access to finance, their capacity to think creatively about problems, and their network are all examples of the types of entrepreneur qualities and talents that can be used to characterize what motivates people to start businesses during times of economic uncertainty [64].

Meanwhile, Lopes et al. [65] found that throughout the epidemic, students' career preferences changed as they learned to value the freedom that comes with being their own boss. This shows that after the COVID-19 epidemic, people began to place a higher importance on entrepreneurialism as a career option due to the increased need for individuals with unique skill sets. Many different types of entrepreneurial theories, bricolage, resilience, and dynamic capacities, such as effectuation, can be seen in the responses of young entrepreneurs to the external factors pushing digital advances. When people are driven more by internal rewards and incentives than by external pressures or rewards, they are said to be intrinsically motivated.

Conversely, when people are intrinsically motivated, they perform an action because they enjoy it. Participants in this study cited personal growth as an emerging entrepreneur, the opportunity to help others, especially those who were hardest hit by the Pandemic, and an intrinsic desire to engage in virtual commerce as the primary motives for their participation. Our research disproved the conclusions drawn by previous studies [62-64], which focused solely on external aims as the primary motivation for digital innovation in India's handicraft industry [66].

This demonstrates the uniqueness of findings about the internal and external factors influencing digital entrepreneurship. The limitations of the quantitative technique, such as its reliance on closed-ended surveys, are highlighted here as reasons to choose the qualitative approach instead [67, 68]. Corruption and inadequate institutional support (in the form of policies and regulations, start-up funding, skilled labourers, and digital infrastructure), as well as these factors, are found to be impediments to the success of

new business owners [6, 69]. One's ability to be an entrepreneur can be hampered by several factors, including fear of failure, a lack of financial security, a lack of job security, and an uncertain environment or income stream [64]. Internal restrictions (digital literacy toward digital implementation and lack of awareness) and environmental reasons were identified by Costa and Castro [70] as the two main barriers to the digitization of MSMEs. This research provided an extra buffer against catastrophic monetary events like the COVID-19 blackout. Mobility concerns, health risks associated with delivering online orders of goods and services, reduced hours for conducting business transactions and banking, and increased operational costs due to stricter motor vehicle restrictions are just some of the challenges young entrepreneurs face today face. During the epidemic, people stayed home from work out of fear of spreading the disease or out of necessity [52]. This has resulted in a dramatic increase in online sales of both consumer goods and a wide variety of services provided by individuals, putting pressure on traditionally offline businesses to adapt to the online marketplace [71]. Government restrictions also make it challenging for business owners to help society by enlisting the aid of their peers, advisors, and consultants [72]. The theoretical foundation for digital entrepreneurship emphasizes efficacy, dynamic capacities, flexible capacity, and resilience in times of economic crisis, all of which young entrepreneurs will need to overcome these obstacles.

Three major barriers to digital entrepreneurship were recognized by COVID-19 attendees (stakeholders), confirming findings from previous research on the difficulties of digital artisanship: a lack of entrepreneurial skills, a declining business climate, and insufficient digital platforms. Regarding digital innovation, one might look at the study of Xing et al. [73], which describes the challenges and limitations faced by the handicraft sector (a subset of small-scale enterprises) regarding business, information, skills, supply - chain management, and innovation. The unorganized industry's organizational framework, shifting markets, IT infrastructure, unforeseen risks, novel business models, and technical ambiguity (like Google or Facebook) are also mentioned in previous research as barriers to digital entrepreneurship in India's MSMEs.

7. IMPLICATION OF THE RESEARCH

7.1 Policy implications of the research

It is more difficult for companies to attract and retain customers in today's digitized marketplace without introducing novel products and services. However, there were several challenges that young entrepreneurs faced when trying to make digital advances. Several policy implications emerged from this Study that might help them get their internet businesses off the ground during and after economic downturns, despite the challenges they face.

The first step is for the government to back the burgeoning handicraft industry with resources like technical know-how, financial backing, promotional efforts, and the completion of the necessary registration paperwork. Subsidies, tax breaks and credits, grants, and other similar instruments have all been used by governments to foster technological innovation in MSMEs, which can help enterprises enhance productivity [74].

Due to the vulnerability of small businesses to

macroeconomic shocks [74-76]. After COVID-19, the priority of the first round of policies prioritizing more funds was to address issues related to the recovery phase that lessen the likelihood of cash flow difficulties and the number of jobs lost. Connections exist between the government's assistance (soft skills) and technical support (mentoring, consulting, networking, awareness raising, training, collecting learning capabilities and problem-solving skills) [62, 77].

Secondly, the federal government should support new and aspiring handicraft business owners in developing their technical, financial, and promotional competence. Small-scale industries, such as those involved in handicrafts, were shown to be more resilient to the effects of the Pandemic thanks in large part to their ability to adopt new technologies and adapt to changing market conditions [78]. Another study found that MSMEs' performance during the Pandemic was significantly improved by training in financial and management accounting through the use of digital technology to provide more exact, efficient, and effective financial reporting and financial data [79]. It is important for policies to address the challenges of digital entrepreneurship by providing frameworks that encourage the growth of digital and entrepreneurial skills through formal and informal learning opportunities [23]. Some in the education sector may see cybersecurity as essential to digital education because of the rise of mobile banking apps, online shopping apps, and contactless payments. It is also important to help new business owners build their networks so that they may more easily gain access to resources like funding, customers, and potential business partners [80]. There needs to be public-sector cooperation in helping the handicraft industry overcome its technological and financial hurdles.

Finally, the government should act swiftly to improve the country's information technology infrastructures so that the handicraft sector can more quickly incorporate technological developments and contribute to the economy. Given the current state of the market, this is essential. India's Internet infrastructure is behind the times compared to those of other contemporary growing countries in Asia. It discourages people from trying new things, which slows down progress toward a more equitable society and the development of a more comprehensive information economy [81]. Worse yet, the country's proclaimed and unscheduled power outages made the disruptions and inadequate Internet much more frustrating [82]. This was due to problems with rural electrification and energy security. Slow and expensive internet connectivity is exacerbated by a lack of market competition [81]. Solutions to these problems require addressing the rising cost of internet access, fostering the growth of a solid IT infrastructure, and supporting the positive competitiveness of the energy sector. The government should make available new satellite systems that can improve connectivity given by fibre technology today, especially in isolated and rural areas that lack standard options for reliable broadband connectivity, such as in the past. To make digital businesses more competitive and to increase the number of handmade products and services offered online, it is important to promote training programmes in technology and communication skills on current technology [14].

7.2 Study implications for managers in the commercial sector

While the Study's findings initially had policy implications, those effects quickly expanded to include managerial and commercial sectors. Companies and the Industry as a whole

would better understand the dynamics of the digitization of the handicraft sector as they adjust to the new standard of doing business. To thrive in today's dynamic business climate, entrepreneurs need to hone two important information technology (IT) skills: (1) the ability to create a flexible IT infrastructure, which provides a technological basis for both current and future IT assimilation and IT applications; and (2) the ability to routinize or diffuse applications of IT within the business system. The transition from offline to online commerce in the handmade goods sector is less daunting for companies with a firm grasp on the advantages and disadvantages of going the digital route [70]. With the proliferation of digital mediums, their customers would benefit more from a switch to online purchasing. It appears that digital technology is the answer to minimizing corporate strategy shifts, especially in the industries hit hardest by the Pandemic [13].

Many nations' internet infrastructures have seen dramatic upgrades recently, resulting in unprecedented accessibility to the web. There has been much development in the handicraft industry in recent years, especially on e-commerce platforms, thanks to the preparedness and planning of businesses. Human resource management (evaluation of employee performance, flexible working arrangements, marketing, advertising, and sales) and financial management (salary, financing, working capital, product design, material handling, production, and quality control) are just a few examples of the many business processes that rely on digital tools [12]. Management needs a better understanding of e-commerce to restore their brand's reputation and win back customers [83, 84]. Updating their digital presence, such as their website and logistical services, is one way for SMEs to serve their customers better. In addition, business owners need to know how crucial Internet connectivity is to the success of their operations since this directly impacts how much it could cost the company and how much it could charge customers for data protection. Blockchain technology can speed up this digital transformation by eliminating obstacles like inefficient data management [85]. Business owners should also have someone on hand who can manage the MSME's digital presence and respond to customers' inquiries about products and services they've purchased.

Sociological studies of social networking suggest that corporations use social power via digital connection to get an advantage in the online marketplace. Platform. Those just starting out in the handmade goods market might acquire access to resources that would otherwise be difficult or impossible to attain [86] using a variety of online marketplaces and social media channels as test beds. Furthermore, for businesses that offered a wide range of services before the Pandemic, an entrepreneur's actions and judgements regarding developing a brand would have an impact on the various growth and transactions of the organization [21]. For this reason, investing in research and development of new technologies is essential for educating budding entrepreneurs on how to promote novel products and services to specific demographics. Linking diversification, rapid firm reactivity, and innovative solutions can help reduce risk despite the face of massive economic shocks like the Pandemic [59].

8. CONCLUSION

The economic situation caused by the Pandemic pushed

business owners of MSMEs to adopt new technologies, and the rate of digitalization in these companies increased as a result. Numerous studies on entrepreneurship have been conducted, each using a slightly different theoretical lens. This study examined the notions of adaptation, endurance, open Innovation, and dynamic skills related to Innovation during economic downturns. This study employed an inductive qualitative research analysis [59] to investigate the factors that motivate and hinder online entrepreneurial Innovation in the handicraft industries following COVID-19. According to the research, the current economic crisis was caused by factors both internal (professional development, individual, and societal factors) and external (market demand, supply constraints). Because of its relative lack of capital, management, and technology compared to larger corporations, India's handicraft industry was hit particularly hard by the Pandemic restrictions.

The industry was also unprepared for the disruption, which lasted longer than expected and was more severe than expected. With the rise of digital technology and the increased online demand for services, lodging, and supply of commodities during the state-wide shutdowns, new and incoming entrepreneurs in the handicraft sector have found a way to grow in industry innovation despite little government assistance for MSMEs. These technical advancements represent effectuation, resilience, bricolage, and dynamic capacities, all of which are crucial during times of economic volatility and disruption. The use of specific crafts apps, Olx, Facebook, q app, mobility constraints, and the availability of the infrastructure for high-quality Internet presented difficulties for new business owners.

8.1 Contribution and consequences

There were two major advancements made possible by the study's findings. To begin, both external and internal forces motivate the development of new digital tools for artisans in the handmade goods sector. To elaborate on the second point, it will be impossible for the transition to go smoothly if the traditional and online market, communications economy, other stakeholders, and businesses are not ready for the changes. Disruption in the economy can be seen as both an internal barrier to Innovation through digitalization and an external enabler of this trend.

To help new handicraft entrepreneurs succeed, the government should (a) provide fiscal incentives and economic assistance in the form of monetary support or an easy loan; (b) promote public-private partnerships to assist micro, small, and medium-sized enterprises in running more efficiently and at lower costs; (c) start educating and make people aware among new handicraft entrepreneurs to help them gain good financial literacy and technical knowledge; and (d) supply them with the resources they need to get started.

8.2 Limitation and future scope of the article

During the period of COVID-19, this study analyzed the thoughts and feelings of up-and-coming handmade business owners on the growth of digital commerce. This results in a wide range of study limitations. To begin, we use qualitative data analysis, which relies on respondents' first-hand accounts but yields no numeric data useful for supplementary statistical examination. The results cannot be generalized to a large population with the same degree of precision as is possible with the quantitative research approach. In this qualitative

Study, a semi-structured questionnaire was used to encourage open discussion among participants. This information is not obtainable via quantitative methods, like questionnaires with predetermined questions and answers, and qualitative methods, such as focus groups and in-depth interviews. Potentially, in the future, researchers will blend qualitative and quantitative approaches to research to reap both benefits and minimize the negatives of each.

Forty-six young entrepreneurs in the handmade goods industry responded to our online poll for this research. Online qualitative surveys have several advantages over traditional survey methods, such as the lower risk for researchers due to a lack of direct participant contact, shorter data collection and analysis times, more convenient interview scheduling for participants, and more time for researchers to focus on analysis [87-89]. Online surveys have many advantages, but they also have several drawbacks, such as low response rates, unrepresentative samples, internet restrictions, and a lack of follow-up data. Due to the constraints of limited face-to-face contact, the researchers' and participants' safety were prioritized throughout this study. Importantly, this study's findings, based solely on the participants' viewpoints and personal experiences during the Pandemic, cannot be extrapolated to all entrepreneurs in the case country because of the limited sample size. Future research might expand to include young entrepreneurs from other industries, such as business process outsourcing, digital solutions, online event management, microfinancing, and so on. In addition, the opinions of young business owners were sought out in this poll. Studies have shown that a more thorough examination of various stakeholders' perspectives is required before making policy decisions. In the future, researchers may look into additional stakeholders in digital entrepreneurship, such as local government units, support units, politicians, and consumers, to make more well-rounded decisions for programmes that benefit the economy at large and young entrepreneurs in particular conventional business owners who rely on the Internet [90, 91].

The participants' individual reactions to the Pandemic were also explored in this Study. It's important to note that several humanitarian issues compounded the Pandemic's consequences in several countries, including the Philippines. Terrorist attacks, wars, and other armed conflicts, as well as natural and man-made disasters, all fall under this category. More study is needed into the frequency with which disasters strike businesses, especially in the digital economy, and how young business owners cope with the ensuing setbacks.

ACKNOWLEDGMENT

I acknowledge that all information given in the article is correct, and I thank full to all contributors, along with editorial board members who have supported the revision of the article.

REFERENCES

- [1] WHO. (2021). WHO coronavirus (Covid-19) dashboard. World Health Organization. <https://covid19.who.int/>.
- [2] Dannenberg, P., Fuchs, M., Riedler, T., Wiedemann, T. (2020). Digital transition by covid-19 pandemic? The german food online retail. *Tijdschrift Voor Economische en Sociale Geografie*, 111: 543-60. <https://doi.org/10.1111/tesg.12453>
- [3] Sahut, J., Iandoli, L., Toulon, F. (2019). The age of digital entrepreneurship. *Small Business Economics*, 56: 1159-1169. <https://doi.org/10.1111/tesg.12453>
- [4] Steininger, D.M. (2019). Linking information systems and entrepreneurship: A review and agenda for IT-associated and digital entrepreneurship research. *Information Systems Journal*, 29: 363-407. <https://doi.org/10.1111/isj.12206>
- [5] del Olmo-García, F., Crecente, F., Sarabia, M. (2020). Macroeconomic and institutional drivers of early failure among self-employed entrepreneurs: An analysis of the Eurozone. *Economic Research-Ekonomska Istraživanja*, 33: 1830-1848. <https://doi.org/10.1080/1331677X.2020.1754268>
- [6] Gavrilă, G.S., De Lucas Ancillo, A. (2021). Entrepreneurship, innovation, digitization, and digital transformation toward sustainable growth within the pandemic environment. *International Journal of Entrepreneurial Behavior & Research*, 28(1): 45-66. <https://doi.org/10.1108/IJEBr-05-2021-0395>
- [7] Coppola, D. (2021). Worldwide e-commerce share of retail sales 2015-2026. <https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-Worldwide/>.
- [8] UNCTAD. (2021). How Covid-19 triggered the digital and e-commerce turning point. <https://unctad.org/news/how-covid-19-triggered-digital-and-e-commerce-turning-point>.
- [9] Igbinakase, I. (2021). Determinants for SMEs and Entrepreneurship Success Post-Pandemic. Hershey, PA: IGI Global.
- [10] Priyono, A., Moin, A., Putri, V.N.A.O. (2020). Identifying digital transformation paths in the business model of SMEs during the Covid-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 6: 104. <https://doi.org/10.3390/joitmc6040104>
- [11] Mukhoryanova, O., Kuleshova, L., Rusakova, N., Mirgorodskaya, O. (2021). Sustainability of micro-enterprises in the digital economy. In 1st Conference on Traditional and Renewable Energy Sources: Perspectives and Paradigms for the 21st Century (TRESP 2021), 250: 06008. <https://doi.org/10.1051/e3sconf/202125006008>
- [12] Muhamad, S., Kusairi, S., Man, M., Majid, N.F.H., Kassim, W.Z.W. (2021). Digital adoption by enterprises in Malaysian industrial sectors during COVID-19 Pandemic: A data article. *Data in Brief*, 37: 107197. <https://doi.org/10.1016/j.dib.2021.107197>
- [13] Mohapatra, B., Tripathi, S., Signal, D., Saha, R. (2021). Significance of digital technology in manufacturing sectors: Examination of key factors during Covid-19. *Research in Transportation Economics*, 93: 101134. <https://doi.org/10.1016/j.retrec.2021.101134>
- [14] Jorge-Vázquez, J., Chivite-Cebolla, M.P., Salinas-Ramos, F. (2021). The digitalization of the European agri-food cooperative sector. Determining factors to embrace information and communication technologies. *Agriculture*, 11: 514. <https://doi.org/10.3390/agriculture11060514>
- [15] Massaro, M. (2021). Digital transformation in the healthcare sector through blockchain technology. Insights from academic research and business developments. *Technovation*, 120: 102386. <https://doi.org/10.1016/j.technov.2021.102386>

- <https://doi.org/10.1016/j.technovation.2021.102386>
- [16] Kim, D. (2021). Visualizing the regional patterns of two crises: The Covid-19 outbreak and decreasing MSME sales during three different phases of 2020 in Korea. *Environment and Planning A: Economy and Space*, 53: 1591-93. <http://doi.org/10.1177/0308518X211013033>
- [17] Herrera, D. (2020). MSME Financing Instruments in Latin America and the Caribbean During COVID-19. Discussion Paper N° IDB-DP-771. Washington, DC: IDB. <http://doi.org/10.18235/0002361>
- [18] Sahoo, P., Ashwani. (2020). COVID-19 and Indian economy: Impact on growth, manufacturing, trade and MSME sector. *Global Business Review*, 21: 1159-83. <http://doi.org/10.1177/0972150920945687>
- [19] Yadav, U.S., Tripathi, R., Tripathi, M.A., Rawat, R., Kushwaha, J. (2022). Performance of women artisans as entrepreneurs in ODOP in Uttar Pradesh to boost economy: Strategies and away towards global handicraft index for small business. *Academy of Marketing Studies Journal*, 26(2): 1-19.
- [20] Parilla, E.S. (2021). Effects of Covid-19 pandemic on micro, small, and medium-sized enterprises in the province of Ilocos Norte Philippines. In RSF conference series: Business, management and social sciences, 1: 46-57. <http://doi.org/10.31098/bmss.v1i2.260>
- [21] Tudy, R.A. (2020). From the corporate world to freelancing: The phenomenon of working from home in the Philippines. *Community, Work & Family*, 24: 77-92. <http://doi.org/10.1080/13668803.2020.1809994>
- [22] Hidalgo, D.T., Marquez, F.P.B., Sarmenta, P.B., Alvarez, J.K.N., Ong, D.U., Balaria, F.E. (2021). Impact of Covid-19 on micro and small entrepreneur (MSE) graduates of the Kapatid mentor me program of the department of trade and industry. *International Journal of Advanced Engineering, Management and Science*, 7: 19-26. <http://doi.org/10.22161/ijaems.71.4>
- [23] Reyes, L.G. (2021). Philippine private sector response, strategies, and state-business relations toward economic recovery and growth post-Covid-19. *Business and Politics*, 24(1): 18-35. <http://doi.org/10.1017/bap.2021.13>
- [24] Damoah, O.B.O. (2020). Strategic factors predicting the likelihood of youth entrepreneurship in Ghana: A logistic regression analysis. *World Journal of Entrepreneurship, Management and Sustainable Development*, 16: 389-401. <http://doi.org/10.1108/WJEMSD-06-2018-0057>
- [25] Agoot, L. (2015). DTI chief cites the potential of young entrepreneurs. Republic of the Philippines' Philippine news agency. <https://www.pna.gov.ph/articles/1153616>.
- [26] Frederick, H., Kuratko, D.F., O'Connor, A. (2016). *Entrepreneurship: Theory, Process, Practice*. Victoria, Australia: Cengage Learning.
- [27] Geibel, R.C., Manickam, M. (2017). Analysis of start-up ecosystems in germany and in the USA. In *Leadership, Innovation, and Entrepreneurship as Driving Forces of the Global Economy*. Springer Proceedings in Business and Economics. Berlin/Heidelberg: Springer, pp. 639-49.
- [28] Al Rayes, Z.O., Kayiaseh, H.M.A. (2017). Demand and supply firms' interlock: A youth-based entrepreneurial initiative. In *Leadership, Innovation and Entrepreneurship as Driving Forces of the Global Economy*. Springer Proceedings in Business and Economics. Berlin/Heidelberg: Springer, pp. 619-29.
- [29] Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36: 1019-51. <http://doi.org/10.1111/j.1540-6520.2012.00537.x>
- [30] Belitski, M., Guenther, C., Kritikos, A.S., Thurik, R. (2021). Economic effects of the Covid-19 Pandemic on entrepreneurship and small businesses. *Small Business Economics*, 58: 593-609. <http://doi.org/10.1007/s11187-021-00544-y>
- [31] Sarasvathy, S.D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26: 243-63. <http://doi.org/10.5465/amr.2001.4378020>
- [32] Haneberg, D.H. (2021). SME managers' learning from crisis and effectual behaviour. *Journal of Small Business and Enterprise Development*, 28: 873-87. <http://doi.org/10.1108/JSBED-01-2021-0009>
- [33] Meyer, A.D. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, 27: 515-37. <http://doi.org/10.2307/2392528>
- [34] Zahara, E., Bogoslov, I.A., Stoica, E.A., Georgescu, M.R. (2021). From decision to survival—shifting the paradigm in digital entrepreneurship during the Covid-19 pandemic. *Sustainability*, 13: 7674. <http://doi.org/10.3390/su13147674>
- [35] Baker, T., Nelson, R.E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50: 329-66. <http://doi.org/10.2189/asqu.2005.50.3.329>
- [36] Lungu, A.E., Bogoslov, I.A., Stoica, E.A., Georgescu, M.R. (2021). From decision to survival—shifting the paradigm in entrepreneurship during the Covid-19 Pandemic. *Sustainability*, 13: 7674. <http://doi.org/10.3390/su13147674>
- [37] Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C.A.M., Prochotta, A., Steinbrink, K.M., Berger, E.S.C. (2020). Start-ups in times of crisis—A rapid response to the COVID-19 Pandemic. *Journal of Business Venturing Insights*, 13: e00169. <http://doi.org/10.1016/j.jbvi.2020.e00169>
- [38] Teece, D.J., Pisano, G., Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509-33. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z)
- [39] Antonizzi, J., Smuts, H. (2020). The characteristics of digital entrepreneurship and digital transformation: A systematic literature review. In *Responsible Design, Implementation and Use of Information and Communication Technology*. Lecture Notes in Computer Science. Berlin/Heidelberg: Springer, pp. 239-51.
- [40] Nambisan, S. (2017). Digital entrepreneurship: toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 41: 1029-55. <http://doi.org/10.1111/etap.12254>
- [41] Sussan, F., Acs, Z.J. (2017). The digital entrepreneurial ecosystem. *Small Business Economic,s* 49: 55-73. <http://doi.org/10.1007/s11187-017-9867-5>
- [42] Kraus, S., Palmer, C., Kailer, N., Kallinger, F.L., Spitzer, J. (2018). Digital entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 25: 353-75. <http://doi.org/10.1108/ijeb-06-2018-0425>

- [43] Li, L., Su, F., Zhang, W., Mao, J.Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28: 1129-57. <http://doi.org/10.1111/isj.12153>
- [44] Maritz, A., Perenyi, A., de Waal, G., Buck, C. (2020). Entrepreneurship as the unsung hero during the current Covid-19 economic crisis: Australian perspectives. *Sustainability*, 12: 4612. <http://doi.org/10.3390/su12114612>
- [45] Lopes, J., Antunes, H., Rodrigues, R. (2018). Comparative entrepreneurship between western Europe and Latin America. *Entrepreneurship Research Journal*, 8: 20170058. <http://doi.org/10.1515/erj-2017-0058>
- [46] Tran, L.T.T. (2021). Managing the effectiveness of e-commerce platforms in a pandemic. *Journal of Retailing and Consumer Services*, 58: 102287. <http://doi.org/10.1016/j.jretconser.2020.102287>
- [47] Liñán, F., Jaén, I. (2020). The Covid-19 pandemic and entrepreneurship: Some reflections. *International Journal of Emerging Markets*, 17(5): 1165-1174. <http://doi.org/10.1108/ijoem-05-2020-0491>
- [48] Eller, R., Alford, P., Kallmünzer, A., Peters, M. (2020). Antecedents, consequences, and challenges of small and medium-sized enterprise digitalization. *Journal of Business Research*, 112: 119-27. <http://doi.org/10.1016/j.jbusres.2020.03.004>
- [49] Wiliandri, R. (2020). A conceptual approach to identify factors affecting the digital transformation of micro, small and medium-sized enterprises (MSMEs) during the Covid-19 pandemic in Indonesia. *Ekonomi Bisnis*, 25: 66-85. <http://doi.org/10.17977/um042v25i2p66-85>
- [50] Ibáñez, M.J., Guerrero, M., Yáñez-Valdés, C., Barros-Celume, S. (2021). Digital social entrepreneurship: The N-Helix response to stakeholders' COVID-19 needs. *The Journal of Technology Transfer*, 47: 556-579. <https://doi.org/10.1007/s10961-021-09855-4>
- [51] DIIP. (2021). 2020 MSME statistics. Department of Industry, innovation programme. Available online: <https://www.dti.gov.ph/resources/msme-statistics/>, accessed on Oct. 30, 2021.
- [52] Yadav, U.S., Tipathi, R., Tripathi, M.A. (2020). Strategies for developing handcraft sector (rural Industry) in India. *Small Enterprises Development Management and Extension*, 47(3). <https://doi.org/10.1177/09708464211037466>
- [53] Batac, K.I.T., Baquiran, J.A., Agaton, C.B. (2021). Qualitative content analysis of teachers' perceptions and experiences in using blended learning during the Covid-19 pandemic. *International Journal of Learning, Teaching and Educational Research*, 20: 225-43. <http://doi.org/10.26803/ijlter.20.6.12>
- [54] Queirós, A., Faria, D., Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, 3: 369-87. <http://doi.org/10.5281/zenodo.887089>
- [55] Lobe, B., Morgan, D.L. (2020). Assessing the effectiveness of video-based interviewing: A systematic comparison of video-conferencing based dyadic interviews and focus groups. *International Journal of Social Research Methodology*, 24: 301-12. <http://doi.org/10.1080/13645579.2020.1785763>
- [56] Cueto, L.J., Agaton, C.B. (2021). Pandemic and typhoon: Positive impacts of a double disaster on mental health of female students in the Philippines. *Behavioral Sciences*, 11: 64. <http://doi.org/10.3390/bs11050064>
- [57] Kyngäs, H. (2020). Qualitative research and content analysis. In *The Application of Content Analysis in Nursing Science Research*. Berlin/Heidelberg: Springer, pp. 3-11.
- [58] Kyngäs, H. (2020). Inductive content analysis. In *The Application of Content Analysis in Nursing Science Research*. Berlin/Heidelberg: Springer, pp. 13-21.
- [59] Mazreku, I., Morina, F., Misiri, V., Spiteri, J.V., Grima, S. (2018). Determinants of the level of non-performig loans in commercial banks of transition countries. *European Research Studies Journal*, XXI(3): 3-13. <http://dx.doi.org/10.35808/ersj/1040>
- [60] Yadav, U.S., Tripathi R, Tripathi M.A. (2022). Digital analysis of the transformation of institutions in the knowledge and innovation system of the handmade carpet industry. *Small Enterprises Development Management and Extension Journal*, 49(1). <https://doi.org/10.1177/09708464221096903>
- [61] Hennessey, B., Moran, S., Altringer, B., Amabile, T.M. (2015). Extrinsic and intrinsic motivation. In *Wiley Encyclopedia of Management*. London: John Wiley & Sons Ltd., pp. 1-4.
- [62] Asiati, D., Ngadi, N., Aini, Y.N., Purba, Y.A. (2021). Sustainability of MSMEs in Indonesia. In *Handbook of Research on Sustaining SMEs and Entrepreneurial Innovation in the Post-COVID-19 Era*. Advances in Business Strategy and Competitive Advantage. Hershey, PA: IGI Global, pp. 504-26.
- [63] Shafi, M., Liu, J.R., Ren, W.J. (2020). Impact of Covid-19 pandemic on micro, small, and Medium-sized Enterprises operating in Pakistan. *Research in Globalization*, 2: 1000178. <http://doi.org/10.1016/j.resglo.2020.100018>
- [64] Išoraitė, M., Gulevičiūtė, G. (2021). A study of online entrepreneurship education under conditions of a pandemic. *Entrepreneurship and Sustainability*, 8: 179-92. [http://doi.org/10.9770/jesi.2021.8.3\(10\)](http://doi.org/10.9770/jesi.2021.8.3(10))
- [65] Lopes, J.M., Gomes, S., Santos, T., Oliveira, M., Oliveira, J. (2021). Entrepreneurial intention before and during Covid-19—A case study on Portuguese university students. *Education Sciences*, 11: 273. <http://doi.org/10.3390/educsci11060273>
- [66] Özen, E., Grima, S. (2018). Analysis of the influencing factors on the farmers' take-up of greenhouse agricultural insurance cover: A case study. *International Journal of Economics and Business Administration*, VI(4): 14-33. <http://dx.doi.org/10.35808/ijeba/172>
- [67] Agaton, C.B., Cueto, L.J. (2021). Learning at home: Parents' lived experiences on distance learning during Covid-19 pandemic in the Philippines. *International Journal of Evaluation and Research in Education*, 10: 901-111. <http://doi.org/10.11591/ijere.v10i3.21136>
- [68] Cai, Q.Q., Man, M.M.K. (2021). The challenges and solutions for digital entrepreneurship platforms in enhancing firm's capabilities. *International Journal of Business and Management*, 16: 21-25. <http://doi.org/10.5539/ijbm.v16n11p21>
- [69] Samara, G., Terzian, J. (2021). Challenges and opportunities for digital entrepreneurship in developing countries. In *Digital Entrepreneurship. Future of Business and Finance*. Berlin/Heidelberg: Springer, pp. 283-302.

- [70] Costa, J., Castro, R. (2021). SMEs must go online—e-commerce as an escape hatch for resilience and survivability. *Journal of Theoretical and Applied Electronic Commerce Research*, 16: 3043-62. <http://doi.org/10.3390/jtaer16070166>
- [71] Reuschke, D., Mason, C., Syrett, S. (2021). Digital futures of small businesses and entrepreneurial opportunity. *Futures*, 128: 102714. <http://doi.org/10.1016/j.futures.2021.102714>
- [72] Meurer, M.M., Waldkirch, M., Schou, P.K., Bucher, E.L., Burmeister-Lamp, K. (2021). Digital affordances: How entrepreneurs access support in online communities during the Covid-19 pandemic. *Small Business Economics*, 58: 637-663. <https://doi.org/10.1007/s11187-021-00540-2>
- [73] Xing, K., Cropley, D.H., Oppert, M.L., Singh, C. (2021). Readiness for digital innovation and industry 4.0 transformation: Studies on manufacturing industries in the city of Salisbury. In: *Business Innovation with New ICT in the Asia-Pacific: Case Studies*. Springer, pp. 155-176. https://doi.org/10.1007/978-981-15-7658-4_8
- [74] Quimba, F.M.A., Rosellon, M.A.D. (2019). Impact of government incentive on MSME innovation. <https://www.econstor.eu/handle/10419/240978>.
- [75] Kee, H., Mui, D., Yusoff, Y.M., Khin, S. (2019). The role of support on start-up success: A pls-SEM approach. *Asian Academy of Management Journal*, 24: 43-59. <http://doi.org/10.21315/aamj2019.24.s1.4>
- [76] Pu, G.L., Qamruzzaman, M., Mehta, A.M., Naqvi, F.N., Karim, S. (2021). Innovative finance, technological adaptation and SMEs sustainability: The mediating role of government support during Covid-19 pandemic. *Sustainability*, 13: 9218. <http://doi.org/10.3390/su13169218>
- [77] Juergensen, J., Guimón, J., Narula, R. (2020). European SMEs amidst the Covid-19 crisis: Assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47: 499-510. <http://doi.org/10.1007/s40812-020-00169-4>
- [78] Anggadwita, G., Martini, E., Hendayani, R., Kamil, M.R. (2021). The role of technology and innovation capabilities in achieving business resilience of MSMEs during Covid-19: Empirical study. In *2021 9th International Conference on Information and Communication Technology (ICoICT)*, Yogyakarta, Indonesia, August 3-5, pp. 1-6.
- [79] Apriyanti, H.W., Yuvitasari, E. (2021). The role of digital utilization in accounting to enhance MSMEs' performance during Covid-19 pandemic: Case Study in Semarang, Central Java, Indonesia. In *Complex, Intelligent and Software Intensive Systems. Lecture Notes in Networks and Systems*. Berlin/Heidelberg: Springer, pp. 495-504.
- [80] OECD. (2015). *The Missing Entrepreneurs 2015*. The Missing Entrepreneurs. Paris: OECD
- [81] Salac, R.A., Kim, Y.S. (2016). A Study on the internet connectivity in the Philippines. *Asia Pacific Journal of Business Review*, 1: 67-88. <http://doi.org/10.20522/APJBR.2016.1.1.67>
- [82] Collera, A.A., Agaton, C.B. (2021). Opportunities for production and utilization of green hydrogen in the philippines. *International Journal of Energy Economics and Policy*, 11: 37-41. <http://doi.org/10.32479/ijeep.11383>
- [83] Liu, G., Fei, S.Q., Yan, Z.C., Wu, C.H., Tsai, S.B., Zhang, J.L. (2020). An empirical study on response to online customer reviews and e-commerce sales: From the mobile information system perspective. *Mobile Information Systems*, 2020: 1-12. <http://doi.org/10.1155/2020/8864764>
- [84] Farooq, Q., Fu, P.H., Hao, Y.H., Jonathan, T., Zhang, Y.N. (2019). A review of management and importance of e-commerce implementation in service delivery of private express enterprises of China. *SAGE Open*, 9: 2158244018824194. <http://doi.org/10.1177/2158244018824194>
- [85] Grima, S., Asllani, G., Spiteri, J., Daka, N. (2019). The cost and information management effect in SMEs: An empirical analysis. *European Research Studies Journal*, 22 (3):360-369. <http://doi.org/10.35808/ersj/1477>
- [86] Liu, H.F., Ke, W.L., Wei, W.W., Hua, Z.S. (2013). The impact of IT capabilities on firm performance: The mediating roles of absorptive capacity and supply chain agility. *Decision Support Systems*, 54: 1452-62. <http://doi.org/10.1016/j.dss.2012.12.016>
- [87] Rice, S., Winter, S.R., Doherty, S., Milner, M. (2017). Advantages and disadvantages of using internet-based survey methods in aviation-related research. *Journal of Aviation Technology and Engineering*, 7(1): 5. <http://doi.org/10.7771/2159-6670.1160>
- [88] Braun, V., Clarke, V., Boulton, E., Davey, L., McEvoy, C. (2020). The online survey as a qualitative research tool. *International Journal of Social Research Methodology*, 24: 641-54. <http://doi.org/10.1080/13645579.2020.1805550>
- [89] Kaur, B., Bansal, R. (2021). Examining behavioural intentions of practitioners to use forensic accounting technique as fraud detection and prevention mechanism. *SPAST Abstracts*, 1(1): 3080.
- [90] Švadlenka, L., Bošković, S., Jovčić, S., Simic, V., Kumar, S., Zanne, M. (2023). Third-party logistics provider selection for sustainable last-mile delivery: A case study of e-shop in Belgrade. *Journal of Urban Development and Management*, 2(1): 1-13. <https://doi.org/10.56578/judm020101>
- [91] Mittal, A., Aggarwal, A., Mittal, R. (2020). Predicting university students adoption of mobile news applications: The role of perceived hedonic value and news motivation. *International Journal of E-Services and Mobile Applications (IJESMA)*, 12(4): 42-59. <http://dx.doi.org/10.4018/IJESMA.2020100103>

ABBREVIATION

DCA	Deductive content analysis
ICMR	Indian medical council research
MSME	Micro small and medium enterprises
DSA	Digital social entrepreneurship
GDP	Gross domestic product
DIIP	Department of industry innovation programs