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Vikas Kumar, Pooja Nanda

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Determinants of the success of MSMEs in India: a policy vs. technology perspective

Vikas Kumar

Central University of Haryana,
Jant-Pali, Mahendragarh-123031, Haryana, India
Email: prof.vikaskumar@gmail.com

Pooja Nanda*

Sushant University,
Sector 55, Golf Course Road,
Gurugram – 122011, Haryana, India
Email: poojan73@gmail.com
*Corresponding author

Abstract: The Indian micro, small and medium enterprises (MSMEs) sector is extremely diverse in terms of size, variety of products, service areas, and types of technology being used. It supports the industrial development of rural and backward areas, decreasing provincial discrimination, and ensuring better, unbiased delivery of national revenue and capital. This paper explores the various aspects of the development of MSMEs in India from the perspectives of technology and policy. Specific roles of technology along with domestic and international policies have been analysed to identify their impact on the development of MSMEs. Internet, e-commerce, mobile communication, online payment systems, computer aided designing and social media have been identified as the most important technological determinants of the success of MSMEs. Whereas the impact and provisions of a number of government schemes and initiatives have been presented along with their role in the development of specific categories of MSMEs.

Keywords: MSMEs; micro, small and medium enterprises; technology integration; government policy; digital India; export lines of credit.

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Biographical notes: Vikas Kumar received his MSc in Electronics from Kurukshetra University, Haryana, India. This was followed by MSc in Computer Science and further PhD from the same university. He is a life member of Indian Science Congress Association, Computer Society of India, IETE, ICEIE, IPA, VEDA, IVS and Magnetic Society of India. Along with 15 books, He has more than 100 research papers to his credit in various national and international conferences and journals. He is serving at Central University of Haryana, Mahendergarh, India and is a visiting Professor at the Indian Institute of Management, Indore and University of Northern Iowa, USA.

Pooja Nanda is currently working as Associate Professor at Sushant University, Gurugram, India. She has been in the education sector for more than 17years. She has done her PhD in Management. She received her Master's in Business Administration in Information technology from Punjab Technical University, Punjab, India. She has published research papers in Scopus indexed international journals and presented many research papers in various national and international conferences. She is a life time member of Centre for Education Growth and Research (CEGR), Society for Education and Research Development (SERD) and Computer Society of India (CSI). Her areas of interest include: Information systems, Data Sciences, Technologies of MSMEs and Business Analytics.

1 Introduction

It has been internationally acknowledged that micro, small and medium enterprises (MSMEs) are like the spinal cord of any economy (Mohanty, 2018). As per World Bank, MSMEs are responsible for maximum businesses in the world and they are significant employment generators along with worldwide economic development. They constitute about 90% of businesses and more than 50% of employment universally (World Bank, 2020). Also, in developing economies, it was recognised that MSMEs contribute up to 40% of the GDP (https://www.worldbank.org/en/topic/smefinance). Due to the growth of small businesses in India, the service sector has expanded rapidly, ranging from caterers to car cleaners, yoga teachers to music groups, fabricators, interior designers to shipping companies (Economic Times, 2019a). Indian MSMEs contribute around 6.11% of the manufacturing GDP of the country and 24.63% of the GDP from service activities (CII, 2021). With an approximate number of 63 million MSMEs (Financial Year, 2020), this sector has become a significant pillar of growth and development of Indian economy (Statista, 2021). They remain scattered throughout the country and consist of undertakings like handloom, khadar, sericulture, coir, bidi-making, embroidery, knitting, wood carving and other handicrafts. The items incorporate hosiery products, instant papers of clothing, engine parts, gadgets, sports merchandise, elastic products etc. A Small Scale Industry unit has been defined by Reserve Bank of India as an unconventional enterprise in which the expenses for fixed assets in plant and devices are less than INR one crore (Mohanty, 2018).

MSMEs in India have faced significant unparalleled challenges over the past few years, including the roll-out of the GST regime and growing foreign competition. These obstacles also gave them the chance to step into the digital ladder and ride through the difficult conditions. The inherent capacity of the MSMEs to expand coupled with the adoption of digital business modes will undoubtedly help to realise this sector's true potential. MSME sector has typically been one of the main drivers of the Indian economy. In 2019, the Indian MSMEs sector contributed about 29% of GDP through domestic and foreign trade (IBEF, 2019). A total 30% of the GDP in Indian economy is contributed by the MSME. Out of the total exports by India, 48% is from MSMEs. Also, till 2020, MSMEs have created 11 crore jobs (Financial Express, 2020). This has been possible because of a significant role being played by MSMEs in the Indian economy

(KPMG, 2016). The expansion and growth of MSMEs is very critical for generating good number of jobs across urban and rural areas in the country. MSMEs foster the development of young entrepreneurs having high potential for creating a worldwide competitive business for India. The new MSME movement has facilitated the development of a business environment in national as well as global markets. It was stated in a study that the government has anticipated a contribution of USD 2 trillion from micro, small and medium-sized enterprises, as India projects to become a USD 5 trillion economy by 2024 (Economic Times, 2019d).

Bala Subrahmanya (2004) illustrated the effect of globalisation on small-scale division and domestic reorganisations. This study showed that small industry underwent a lot of changes in advancement of units, occupation, profitability and exchange. The research emphasised that the policy alterations opened new chances and commercial centers for the small scale business segment, and hence are very much critical to the growth of this sector. The research also recommended that emphasis should be made to advance innovation and develop the monetary system to make small-scale Indian industry suitable for promoting a commitment to increase national income and jobs. The causative relationship between the three SSI variables, namely GDP, output, and exports, was examined by Bargal et al. (2009). The study related the performance of some SSI factors in the era of pre- and post-liberalisation. Their investigation focused that the yearly average development pace of different parameters of SSIs had weakened in the time of nineties in contrast to the pre change years. Venkatesh and Muthiah (2012) recognised that small enterprises were contributing fast to the industrial region, which would turn out to be an important aspect for the upcoming growth. The research also stressed that expansion of MSME sector is necessary for the good economic fortune of a nation. Also, they focused that entrepreneur with the help of government support need to prioritise and take necessary steps for future development.

MSMEs in India still have a lot of difficulties like suboptimal scales of procedures, technological outdatedness, ineffective resources, aggravating national and international competition, fund scarcities, alteration in manufacturing strategies and unsettling ambiguous market situation (FICCI, 2012. The rapid changes taking place in the context of our economy's digitalisation have started to present significant challenges to MSMEs in recent times, as they struggle to keep up with the same pace. To cope-up with these problems and due to struggle with large and global enterprises, MSMEs must be capable of adopting innovative approaches in their functioning. It is essential to create an efficient and cooperative innovative ecosystem for improving access to knowledge and rapidly converting that knowledge into valuable products. A few focus areas that need to be worked upon to improve the status of MSMEs are Technology and Policy. Adoption of technology can foster innovation, whereas the policy support from the Government can lead to over-all growth of the MSMEs.

2 Technology

Technology has always been important everywhere including economy, business and enterprises. However, the technological obsolescence is a big challenge in developing countries like India, impacting the MSME market (Mukherjee, 2018). While India has a

huge collection of technical talent with well-established intellectual skills, it still scores less in terms of designing, marketing, and implementing new and innovative technologies. After the implementation of 11th Five Year Plan by Government of India (GOI), although technology adoption has considerably increased, the usage of technology especially in MSMEs still takes a back seat (Planning Commission of India, 2008). To overcome many challenges, MSMEs need to update technology and modernise through policy interventions and financial incentives. The high speed of change in technologies is quickly motivating the customers, businesses and technology firms to merge with upcoming technologies. Consequently, there exists a strong requirement for speeding up technology acceptance in the small business community also (Singh and Singh, 2014). According to a survey carried out by Tally and Kantar among 2250 MSMEs from various vertical industries in 34 cities across the country, 35% of MSMEs have already implemented applications for business management and over 40% of MSMEs use digital banking and payment services, with another 40% likely to implement digital banking and payment services in the near future (Economic Times, 2019b). Information and communication technologies (ICTs) can help a company's business strategy by overcoming barriers of entry into competition, building of suppliers and consumers' negotiation and selling specialised and low-cost commodities (Laudon and Laudon, 2015; Kumar and Gupta, 2021).

In recent years, the rapid development of ICTs has opened up a medium for MSMEs to meet global customers (Neirotti et al., 2018). ICT lets businesses manage customer information and determine the target business segments (Zhang et al., 2008). Practically, there is no match or alignment between large corporations and MSMEs that can implement the adoption of technology in MSMEs. Organisations such as the Common Service Centers (CSC), Entrepreneurship Development Institute (EDI) etc. have started to bring MSMEs into the digital network to provide them with a digital identity (RBI, 2019). The Ministry of Micro, Small and Medium Enterprises has decided to establish 20 technology centers in the next 3–5 years, along with extension centers nationwide. There is a proposal to have approximately 100 extension centers, each with an investment of 20 crore (The Hindu, 2019). The technical aspects can be divided into different factors, which have an individual impact for MSMEs to embrace and enforce. Such factors include:

2.1 Internet

The internet based industrial processes are increasingly being adopted by economies, resulting in a globally linked economic environment (Gibbs and Kraemer, 2004). However, many MSMEs use internet for a very limited number of purposes, e.g., email, as a faster and more affordable way to contact suppliers or access services, or as a tool for information gathering. MSMEs need to compete more effectively in an increasingly competitive and globalised environment to improve domestic economic activity and contribute to growing export earnings. Usage of internet offers companies new opportunities in terms of foreign trade, improved supply chain management and improved customer and supplier relationship management. Mittal and Kumar (2018) were of the opinion that the adoption of internet and related technologies would allow small enterprises to find new investment opportunities in local and overseas markets so that they can be profitable and competitive.

2.2 Ecommerce

E-commerce is emerging as a modern way to help businesses compete on the market and thus lead to their economic performance (Kumar and Ayodeji, 2021). It also provides numerous market advantages such as faster access to its customers, better customer support for efficient customer relationship management, enhanced product visibility and services. Use of e-commerce for MSMEs can take many forms, varying from online product sales, contacting suppliers via e-mail, promoting and selling their products to international clients through their own websites. Though, all MSMEs in India may or may not have an online presence, however 43% of them participate in online sales (https://mydukaan.io/blog/ecommerce-msme-sector-india/). Van and Cavaye (1999) claimed that e-commerce enhances the capacity of a MSME to compete with bigger organisations and operate globally. It can help small businesses introduce themselves to the world and manage their business processes with less investment. MSMEs are increasingly eyeing the advantages of e-commerce as increased geographical reach that offers them a greater potential market, where they can sell their goods and services. E-commerce can serve as a platform for providing efficient ways for small and medium-sized businesses to connect to other businesses, introduce new products, develop communications, gather data and create potential business partners. It has proven advantageous to MSMEs over typical trade, as it provides cost-reduction advantages such as lower travel costs, inventory costs, marketing and delivery costs, sales costs and promotes effective supply chain management. MSMEs could offer their customers electronic purchases, timely delivery and numerous other service options. Hence, the use of e-commerce helps small companies to gain similar efficiencies as big business.

2.3 Mobile communication

Due to the rapid proliferation of mobile communication in emerging countries, the use of the mobile phone network has grown for businesses, even more than voice and SMS communication (Kumar and Saurabh, 2020). Researchers suggest that in developing countries, where infrastructure is restricted and land is distant, mobile phones can build a collaborative connection with knowledge, that increases opportunities for the poor and rural (Rotberg and Aker, 2013). Some studies also show that the impact of mobile phone growth can be applied to rural MSMEs, a sector of great importance in most developing countries (Chew et al., 2013). For several developing countries, the usage of cell phones has significantly advanced economic growth by growing consumer performance (Ahad, 2016). Technology is changing our lives at a pace faster than ever. Businesses and societies are being shaped by the new technological advancements. Even sensitive information such as agricultural information, employment opportunities, business opportunities connecting labour demand and network supply can be accessed by cell phones (Dannenberg and Lakes, 2013). They help micro, small and medium-sized businesses to cover broader geographical areas and attract new customers (Saurabh and Kumar, 2017). As mobile phones are the only technology in many villages, government can use this medium to communicate information about the business needs of local and foreign markets. As users have access to their phones practically at all times, mobile app usability makes purchasing more convenient and time-saving (Holzinger et al., 2012). People in today's busy world are connected through a variety of ICT devices, including laptops, tablet computers, PDAs, iPads, and smartphones, which are more portable and

vital for keeping in touch with work, family, and friends. MSMEs that struggle with current businesses can turn into a profitable company using mobile phones. Ahad (2016) explored the use of cellular phones for social and economic progress through MSMEs in order to meet the Government of India's Vision 2020 goals. According to his research, mobile phones can help developing-country governments achieve Vision 2020 by offering a distribution channel for good governance, poverty reduction, health, education, human resource development, and empowerment programs. The research addressed the socioeconomic development opportunities for the rural SMEs. Mobile phones are now at the core of extreme national interest for emerging MSMEs in countries such as South Africa, Kenya, the Philippines, India and recently Bangladesh among others. Furthermore, in developing countries, mobile phones can serve as a new interface between the government and citizens, facilitating access to public services (Ojo et al., 2013).

2.4 Online payment systems

Globally, MSMEs have entered the 4.0 era in which big data, artificial intelligence technology and the Internet of Things have been used for optimisation (Wahlster, 2012). The ease and benefits of different modes of payment, such as BHIM, UPI, and Bharat QR code, have been promoted to MSMEs registered under UAM (MSME Annual Report, 2020-21). During such an era, advancement of technology plays an important role in the development of goods or services. Goods or services are measured not only by their functionality and purposes, but also by their ease of usage, performance and delivery time. In several developed countries, the digital payment system is seen as the newest method of payment (Mustapha, 2018). MSMEs operate in countries to compete internationally, attract clients, improve vendors, consumers, trading partners and government ties. The Indian Government has been making efforts to foster a cashless economy and to provide all Indian people with a convenient facility for seamless digital payment. The initiative has enforced businessmen to accept payments made by customers using digital banking in the form of NEFT, RTGS, and other E-wallet services. During the 2020–2021 fiscal year, digital transactions increased by 92.02% in value and 90.19% (MSME Annual Report, 2020–2021). "The use of mobile banking and online shopping inspires consumers to spend more, regardless of the amount of cash they have on hand at the time of purchase" (Farida and Subroto, 2019). Another study was conducted by Neog (2019) among 100 rural people in India's Sivasagar district to examine the acceptance of digital banking services and other related issues.

2.5 Computer aided designing

The advancement of manufacturing technologies is not only motivated by the evolution of manufacturing systems, it is also encouraged by the growth of technology in other fields, in particular, the science of information technologies and materials (Bi et al., 2008). Manufacturing systems are becoming increasingly complicated in terms of number of system parameters, system parameter dependencies and their dynamic characteristics over time. Only engineers with the sophisticated expertise and skills in one discipline cannot meet the criteria of product design or product life cycle design optimisation as CAD has largely replaced manual drafting among engineers, architects, and project managers. It allows users to create designs in 2D or 3D in order to imagine

the finished product. The growing importance of cloud computing can easily be understood when it comes to 3D Design technology in the cloud computer-aided design, computer-aided technology and computer-aided engineering. The effective use of all knowledge boosts efficiency in the long run. Electricity, plumbing, and other elements can all be considered with CAD, resulting in a more detailed design. The new technology of Fusion 360 aggregates CAD/CAM simulations, which enable small businesses to calculate the production run time. This can be very useful for scheduling, as well as the planning of quantity, material supply and delivery (http://www.advice-manufacturing.com/CAD-Manufacturing-Benefits.html).

2.6 Social media

Online presence is now a necessity for companies and the industry have been profoundly influenced by social media (Ayodeji and Kumar, 2019). There is a radical shift in how people interact and connect (Kumar and Nanda, 2019). Globally, over 3.6 billion people use social media and the number is only projected to increase to 4.41 billion in 2025 (https://sproutsocial.com/insights/social-media-statistics/). 96% of small businesses say they use social media in their marketing strategy and there are over 60 million active business pages on Facebook (https://www.fundera.com/resources/small-business-marketing-statistics). Small companies also use a number of social media tools to promote their business growth besides advertising. In addition to a simple website; customers are searching for a blog, a Facebook page, a shopping cart, e-brochures, etc. The most critical benefit of social media for marketing in micro, small and medium-sized businesses is to reach a broader audience and engage them (Ayodeji and Kumar, 2020). With enhanced customer interaction, companies can gain insights through relationship building and keep their customers up-to-date to establish a positive word of mouth that helps in growing the brand (Kumar and Pradhan, 2016). Gümüş and Kütahyali (2017) stated that social media provides MSMEs significant selling and cost advantages, as well as contact and sharing benefits. Social media is helping a lot of small businesses to broaden their sales and marketing methods. They mostly advertise and promote their items on social media sites. Facebook, LinkedIn, YouTube, Twitter, and Instagram, among other social media platforms, are used by the organisations (Kumar and Nanda, 2020). Small and medium businesses might benefit from using social media platforms to expand their reach. With the proper use of social media platforms, these companies can embrace a born-global business strategy. Social media can be used often by small businesses because it is about socialising and sharing views. In the form of blog posts or comments, video presentations and votes, these views can be conveyed as written entries on social media platforms. Such views are straight and unfiltered (Shabbir et al., 2016). While social media platforms offer two-way connection with customers rather than one-way dominant communication through traditional media, they also increase customer relationships. Customers can remark on advertising films and images of products and services using social media technologies (Ainin et al., 2015). Customers' input can help businesses improve their products and services. Companies can modify marketing strategies based on details of their rivals found in social media feeds. Through checking up on the rivals, their strengths and weaknesses can be measured in their marketing strategies. Additionally, social networking makes it possible for company to become more transparent.

3 National policies

In the last six years, India has worked remarkably on the business related policies and it has been ranked at 63rd position in the ease of doing business as per a report published by The World Bank (2020). The "Make in India" campaign focused on attracting foreign investment, boosted the MSME private sector and improved the overall competitiveness of India. In 2015, Government of India aimed at joining the 50 top economies on the 'Ease of Doing Business' ranking by 2020 and lot of work was done to support the Industry with clear and concise policies. The reform measures by the Indian Government raised India's Ease of Doing Business ranking from 130 in 2016 to 63 in 2020. In addition to the new technologies, the policies played an important role to contribute to the success of the MSME sector. Few important policies include:

3.1 Prime Minister's Employment Generation Program (PMEGP)

The largest employment creation initiative of the Indian Government, called as the Prime Minister's Employment Generation Program (PMEGP), was implemented by the Ministry of Micro, Small and Medium Enterprises in 2008–2009 (https://msme.gov.in/11-prime-ministers-employment-generation-programme-pmegp). The objective of this policy is to grant work openings in rural and urban regions through independent self-employment efforts. This scheme received a highest budget allocation of Rs.2327 crore for 2019–2020 (Business Standard, 2019). It reaffirms the Government's emphasis on generating sustainable jobs in the non-farm micro enterprise market. The policy intends to arrange for uninterrupted and enduring employment to a large section of potential skilled workers and jobless youth. 4.55 lacs micro-enterprises were funded with Rs 9,564 lacs margin money subsidy which has provided employment for an estimated 37.98 lac individuals from its inception until 2018 (Economic Times, 2018). The Prime Minister's Program for Job Generation (PMEGP) budget has been increased from Rs 2327.10 crore in 2019 to Rs 2500 crore this year. (https://smefutures.com/budget-2020–2021-hits-and-misses-for-msmes-and-entrepreneurs/).

3.2 Technology Center Systems Programme (TCSP)

This Policy was launched in 2014 with an aim at promoting technical skill development among youth by trained manpower and offering opportunities to people of all stages from school dropouts to graduate engineers (http://www.dcmsme.gov.in/tcsp/TCSP%20-%20Concept%20Note.pdf). Emphasis of this policy is on supporting MSME sector through exposure to advanced manufacturing technologies. In addition, providing entrepreneurs with technological and business consulting assistance (http://www.dcmsme.gov.in/tcsp/TCSP%20-%20Concept%20Note.pdf). At an estimated cost of Rs. 2200 crore, including USD 200 million from World Bank Loan Assistance, the MSME Ministry launched the Technology Center Systems Program (TCSP) and developed 15 new Tool Rooms and Training Centers (TCs), along with upgradation of currently 18 training centers across the country. (https://pib.gov.in/Pressreleaseshare.aspx?PRID = 1597315). These TCs are expected to provide businesses with technical support for tool design and manufacture, precision parts, moulds and dies etc. As a rigorous national effort towards technology development, a mission called Technology Development Mission (TDM) was started by all the IITs and IIScs with uninterrupted

participation and involvement of industries. It involves strengthening of R&D competence of Indian Industry. The objectives comprise of development of innovative technologies, products, and processes relevant for socio-economic development of the country. Small businesses are becoming rapidly alert and innovations such as social media, automation, analytics, and cloud computing are joining together to bring tremendous value and potential to light (Kumar and Vidhyalakshmi, 2012). This technical merger known as social media, mobility, analytics, and cloud computing (SMAC) is expected in the coming years to allow good business. In the Indian MSME sector, the urban enterprises have accepted SMAC slowly across sectors like IT, Electronics, Manufacturing, Pharmaceuticals and Biotechnology (Mukherjee, 2018). It is essential for Institutes to collaborate with the business, especially the MSME business, to inquire about activities and help them in innovating on popularising new item and administration structures. The government has also increased a total of Rs 200 crore outlay from Rs 125.12 crore earlier for the growth of new technology centers in the budget 2020 (https://smefutures.com/budget-2020-21-hits-and-misses-for-msmes-and-entrepreneurs/).

3.3 Marketing assistance and technology upgradation scheme for MSMEs

There are many initiatives taken by the ministry to facilitate and enhance market access for MSMEs inside and outside the country (Economic Times, 2019e). This scheme offers to recognise, encourage and assist the clusters of MSMEs who have good production and export capability (http://www.dcmsme.gov.in/schemes/MarketingAss&Techup.htm). The goal of this scheme is to identify and promote the MSME clusters with the potential to produce and export quality, and to help them achieve competitiveness on domestic and foreign markets. Several organisations affiliated to the Ministry have provided opportunities for MSMEs to display their products through organisation of exhibitions and fairs or buyer-seller meets across the country. Activities organised under the program include creativity, skills related to ongoing promotional methods, focused feedback on endangered products, identification of potential opportunities in various states and territories, and exhibition of business strategies of executives. Some of the other tasks strengthened under this scheme include support for approval of bar code, technology up-gradation in storage and packing, and skill improvement for recent marketing techniques. These can be accomplished by improving packaging technology, improving skills, designing new marketing methods, examining competition, setting up marketing hubs etc. The aims of the scheme include supporting micro, small and medium enterprises (MSMEs) in their efforts to access and expand domestic/foreign markets and the implementation of bar coding on goods. This scheme has gained an expenditure of Rs 150.00 crore till 2020 (MSME Annual Report, 2020-21).

3.4 Infrastructure development program

This cluster creation scheme initiated by MSME Ministry has been introduced to boost efficiency and competitiveness along capacity building for MSMEs. (https://msme.gov.in/sites/default/files/Programees%20for%20MSME%20Final%20Title_0.pdf). The scheme offers financial support for processes involving the establishment and implementation of Common Facility Centers (CFCs) that may be involved in testing, training, research and development and often serve as storehouses of raw materials.

These centers also support the development and improvement of infrastructural facilities (IDs) in MSMEs' new and existing industrial areas such as telecommunications, pollution control facilities, highways, banks, other basic services and technical backup services. Common Facility Centers (CFC) have led to creation of Common Processing Centre, Design Centers, Testing Centers, Training Centers, Research and Development Centers, Emission Treatment Plant, Marketing Centers, Common Logistics Center, Common Raw Material Bank or Sales Depot, etc. (http://www.msmedibangalore.gov.in/MSE-CDP.html). On the whole, the program intends to provide unique business facilities and infrastructure support programs for MSMEs in new or existing industrial sectors. The program has given a total of 1018 interventions in different clusters in 29 states and 1 UT in the country (https://msme.gov.in/schemes/infrastructure-development-program). During 2020–2021, Rs. 6.19 crore has been disbursed to 50 Khadi Institutions; under Strengthening of Infrastructure of Existing Weak Khadi Institutions. With a fund allocation of Rs. 6000 crores, the government plans to create 20 hubs and 100 spokes in the form of Tool Rooms for Technological Upgradation across the country. For Technology Centres (TCs) and Extension Centres, model DPRs will be created (ECs). In addition, under the Assistance for Marketing Infrastructure Programme, Rs. 2.88 crore has been spent to renovate 20 Khadi Institutions sales outlets. (MSME Annual Report, 2020-21).

3.5 Digital India

The Digital India movement implemented by the Government of India has been started to ensure that all government facilities are available for everyone with the help of electronic means (https://digitalindia.gov.in/). Digital India could ensure the electronic availability of government offerings to the people. In addition, it could convey public transparency through authorised shipping, electronic presidential services; a unique identity and e-Pramaan focused entirely on true and widespread interoperable and integrated government packages and data framework. The program launched in 2015 (Venkatesh and Kumari, 2018) emphasises on better online infrastructure by improving internet connectivity or by digitally empowering the country. MSMEs can use digitisation to set themselves apart from the competition. E-commerce platforms, according to the 2019 APEC SME Ministerial Statement, allow MSMEs to have more access to diversified global markets while also reducing risk within supply chains. Digitisation enables businesses to use digital technology to expand their geographic reach and acquire new customers, improve customer engagement, run cost-effective business operations, increase business profitability, increase and improve access to finance, and manage customer credit more effectively. (https://www.microsave.net/2021/04/20/digitizing-the-operations-of-msmes-a-big-step-to-strengthen-their-resilience/). All Ministry of Micro, Small and Medium Enterprises offices, including its affiliated offices, have been digitally enabled, according to the Annual MSME Report (2020–2021). The ease and benefits of numerous forms of payment, such as BHIM, UPI, and Bharat QR code, have been promoted to MSMEs registered under UAM. Digital transactions have expanded to 92.02% in terms of value and 90.19% in terms of quantity for the Ministry and its associated offices (KVIC, Coir Board, NSIC, MGIRI, NIMSME, and O/o DC(MSME)) for the year 2020–2021. A possibility of forward movement of MSME firms can also be created with adoption of digital lending systems. Digital lending is the use of online technologies for creating and renewing loans to make quicker and more accurate

decisions. Digital lending can begin as simple as an application for online loans provided by a bank or credit union on its website (Mishra, 2019). Digital loans are simpler for MSMEs to receive compared to conventional methods. They are able to disburse credit instantly based on a MSME entity's expenditure summaries, bank exchange background and e-commerce transaction actions (https://finezza.in/blog/digital-lending-small-medium-enterprise-growth). The need for the hour is to ensure that digital lending channels are extended and small business owners are motivated (Financial Express, 2020). By 2025, the Digital India strategy could increase GDP up to $1 trillion (The Hindu Business Line, 2020). It is capable of playing a key role in macro-financial factors like GDP rise, employment technology, productivity exertions, and government rise in corporate quantities and sales leakages.

The Digital India program focuses on pleasurable 3 vision areas across 9 'pillars' or areas of awareness that set goals in regions like skills growth, e-governance, mobile/broadband connectivity. These 9 foundations are supplemented by activities that can be carried out at different stages. All tasks have been launched and are in different phases of implementation, though strong progress has been made on a number of these projects, consisting of smart cities, Jandhan, PAHAL, etc. (https://digitalindia.gov.in/content/programme-pillars). Under the government's smart city mission, 5151 projects worth more than Rs 2 lakh crores are being introduced in 100 towns (Economic Times, 2020; Lata and Kumar, 2021). Millions of Indians are gaining new livelihoods, services, and wealth as a result of the digital India initiative's explosion in mobile connectivity, the iconic BharatNet program's nationwide permeation of internet infrastructure, the exponential growth of data consumption, and the emergence of start-ups in the digital transformation space. (https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/a-refreshed-digital-india-programme-will-play-critical-role-in-the-pursuit-of-5-trillion-economy/articleshow/70067053.cms).

3.6 Human resource management

Although 40% of India's manpower is hired by MSMEs, however very less attention is being paid to human resource management (HRM) by these companies in comparison to day to day business operations (Knnindia, 2018). The National scheme of Apprenticeship Training is an initiative by the Government of India with an objective of fulfilling the requirements for skilled manpower of Industry. The policy recommends collaborating proactively with industry like MSMEs, facilitating a tenfold expansion of the country's apprenticeship programs by 2020 (https://www.apprenticeship.gov.in/Material/NAPS_Guidelines.pdf). This scheme started in 2016 and offers provision of practical training for graduates in engineering stream, diploma holders (technicians) and school vocational pass outs in a lot of industrial establishments and organisations. The scheme intends to fulfil the objective of filling the gaps in practical training of 10+ 2 students, fresh graduates in engineering stream, and diploma holders (https://www.mhrd.gov.in/technical-education-13). The current National Apprenticeship Training Scheme (NATS) has been realigned for post-education apprenticeship, training of graduates and diploma holders in Engineering, with a budget of Rs. 3000 crores. Initiatives for skilling partnerships with other countries, similar to collaboration with other countries, should be pursued. (Press Information Bureau, 2021). Currently more than 6 lakh apprentices are undergoing/completed apprenticeship training in various sectors through organisations. More than 67000 institutions have listed on the apprenticeship portal (FICCI, 2019).

3.7 Skill India program

Access to skilled labour is one of the primary challenges that MSMEs face (Subagyo et al., 2020). To fulfil the growing need in India for skilled manpower across sectors, Government of India has initiated this policy of Skill India program (https://www.msde.gov.in/sites/default/files/2019-09/National%20Policy%20on%20Skill%20Development%20and%20Entreprenurship%20Final.pdf). The goals are to enhance and promote the alignment of private sector skill development programs, updating skills to international standards through substantial industry participation and developing the appropriate standards structure, curriculum and quality assurance, developing easily understandable employability skills and competency standards etc. India's youth will be able to obtain better-paying occupations and a greater level of living as a result of this skill India program. Furthermore, efficient development at the grassroots level will result in equal growth in all sectors of the economy. Also, with these newly acquired talents, one can establish themselves as an entrepreneur and start their own firm. As a result, better outcomes can be obtained at a faster rate, potentially improving the country's economic standing. The overall allocation for entrepreneurship and capability development in the 2020 budget grew from Rs 479.91 to Rs 556.47. (https://smefutures.com/budget-2020-21-hits-and-misses-for-msmes-and-entrepreneurs/). Total 127380 people have been trained in the year 2020–2021. (MSME Annual Report, 2020–2021). The Transformation steps need to include availability of Training Capacity through the NSDC Partner Ecosystem, Implementation of GOI schemes like Pradhan Mantri Kaushal Vikas Yojana (PMKVY), National Urban Livelihoods Mission (NULM), National Apprentice Promotion Scheme etc. for developing competency standards for Job Roles across Sectors.

3.8 Khadi and village industries commission

KVIC has been recognised as one of the main associations to generate sustainable non-agricultural market openings in rural areas at minimal investment per capita (Shaik et al., 2017). The KVIC has taken huge initiatives in 2019 for promoting Khadi in rural areas. The scheme enables the extension of research results at the laboratory level for field level application and the extension of test and service facilities. The GOI recently distributed electric potter wheels to 160 households as well as new Charkhas (spinning wheel) models to 50 eligible Goa women as part of this scheme. For 700 people in Goa, this will result in direct jobs. It also established a Lijjat Papad unit, which will employ 200 local women directly (https://pib.gov.in/Pressreleaseshare.aspx?PRID = 1588692). In the 2020 budget, the Coir Vikas Yojana increased from Rs 70.50 to Rs 103.87, and the Khadi Grant (KG) outlay increased from Rs 308.51 to Rs 383.60 (https://smefutures.com/budget-2020-21-hits-and-misses-for-msmes-and-entrepreneurs/). In India, over 2737 Khadi Institutions make up a large network that carries out KVIC's programs. This operation is carried out by over 4.97 million people. About 80% of the artisans are women (MSME Annual Report, 2021).

3.9 Scheme of fund for regeneration of traditional industries (SFURTI)

SFURTI is a Fund for Traditional Manufacturing Restoration Scheme. In 2005, the MSME Ministry launched this scheme. The Government of India announced this scheme

to make the new industries more productive and competitive, and to illuminate their susceptible evolution. The SFURTI (Scheme of Fund for Regeneration of Traditional Industries) allocation increased from Rs 125 to Rs 464.85 crore in budget 2020–2021 (https://smefutures.com/budget-2020-21-hits-and-misses-for-msmes-and-entrepreneurs/). The aim is to organise small industries and artisans into clusters that would make them competitive and aid them in their long-term survival and economies of scale. It also aims to provide sustainable livelihood opportunities for new craftsmen and rural entrepreneurs. This was achieved to increase the marketing value of products from these clusters by providing support for innovative products, including design and improved packaging, as well as improvements to marketing infrastructure. Direct Reform Assistance (DRA) will be given to 32 clusters (Khadi and Village Industries) between 2020 and 21 under the Khadi Reform Assistance Program (KRDP). In 2020, 275 beekeepers will receive 2,750 beehives (boxes) with bee colonies as part of the Honey Mission programme (MSME Annual Report, 2020–2021).

3.10 Lean manufacturing

This Scheme was launched for implementation through Quality Council of India (QCI) and National Productivity Council (NPC) in 267 clusters of MSMEs across the country (https://pib.gov.in/PressReleseDetailm.aspx?PRID = 1597315). Under the Lean Manufacturing Plan (LMP), MSMEs have been helped to minimise their production costs by better management of their workforce, efficient use of space, technical inventory management, better process flows, shortened engineering period, etc. The scheme also introduces product quality upgrades and reduces costs that are required to compete in domestic and foreign markets. State governments, business groups are also on duty to carry the system to more clusters of MSMEs. The scheme is pilot-based initially approved for 100 mini clusters (http://www.dcmsme.gov.in/schemes/leanmanfucturing 10.pdf). The scheme's pilot phase began with 89 units. 59 Mini clusters have successfully completed the project at a cost of Rs 16.17 crore. The scheme was upscaled in 2013 in response to a study by the Quality Council of India, with a project cost increase to Rs 240.94 crore until 2020. (https://www.grainmart.in/news/lean-manufacturing-competitiveness-scheme-lmcs/).

3.11 Incubation centres

The scheme is for funding to creative ideas that have business plans. This component is intended to promote new business concepts that could be placed on the market within a year Under the scheme, seed capital of up to Rs. 1 Crore is given to the startups. There were over 270 incubators and accelerators in the country until November last year, operated by academic bodies, private companies, government and corporations. Over the last two years, more than 70 incubators in India have received financial support from the respective governments (Financial Express, 2019) (https://www.financialexpress.com/industry/sme/big-startup-boost-government-to-set-up-51-incubators-for-aspiring-entrepreneurs/1610241/). Under this section, for each new idea or invention, various institutions such as Engineering Colleges, Management Institutions, Research Laboratories, etc. are allocated funds up to Rs. 30.00 crore. The incubators would provide technical direction, workshop and laboratory support and collaboration with other organisations to set up the company effectively and guide the entrepreneur. Rs. 5.88 crore

expenditure has already been incurred till 2020 in this scheme. 86 Lively Business Incubators (LBIs) and 18 Technology Business Incubators (TBIs) have been approved until 2020, with 49 LBIs and 8 TBIs already open for business (MSME Annual Report, 2020–2021).

3.12 Design clinics

Under the Ministry of Human Resources Development (MHRD), a design clinic scheme was developed by Industry Organisations, Social Enterprises, and Self-Help Groups, for various professional institutions to provide design assistance to MSMEs including rural and art-based enterprises. This scheme improves the understanding of industrial design and innovation. A total of Rs 73.58 crore has been allotted as budget for the scheme till 2020 (https://www.grainmart.in/gm-demo/design-clinic-scheme-for-msmes/). This scheme improves the understanding of industrial design and innovation. Financial assistance of Rs. 15 lacs are available for individuals or up to three Micro units, and Rs. 25 lacs are available for more than three Micro units. Small and medium businesses would get up to three units for Rs. 25 lacs and more than three units for Rs. 40 lacs until 2019. (http://www.dcmsme.gov.in/SAMACHAR/MSME%20booklet_English_7_Nov.pdf). The scheme elevates the competitiveness among the units through skill development and as a result improve the production rate to produce sustainable designs for MSMEs. In addition to four design centres currently run by the National Institute of Design (NID), above 80 new design centres have been opened at different locations in 2019 (https://pib.gov.in/Pressreleaseshare.aspx?PRID = 1597315). Both MSMEs and students are invited to apply their design proposals under this scheme for funding.

4 International policies

It is very important to improve the business environment especially for MSMEs. The main factors responsible for the same are the regulatory uncertainties, complexities, and inconsistencies, including differences in principles and guidelines across countries, that affect MSMEs excessively more than larger firms. In financial year 2019, almost half of India**'**s exports came from MSMEs, up from 7.5% in 2018. In 2020, 48% of the exports are from the MSME sector. (https://economictimes.indiatimes.com/markets/expert-view/in-2-years-time-msmes-will-contribute-60-to-indias-exports-nitin-gadkari/articleshow/76783949.cms?from = mdr). A strong regulatory environment, which is beneficial for all businesses, is specifically important for smaller businesses. Some of the other components of the business environment such as contract implementation, civil justice systems, bankruptcy rules, and corruption in the public sector also particularly affect smaller companies. The foreign policies have been introduced to boost the MSME sector**'**s manufacturing capabilities and have reinforced the quality of its products and increased exports. The Indian MSME can deliver superior quality products and maintain itself in the competitive global market with the aid of better technology, considerable sales, advertisement investment, and marketing. Such strategies, including market promotion strategies, would enable the Indian Coir industry to survive in the long term (Mukherjee, 2018).

4.1 Export lines of credit

Some MSME subdivisions like leather, gems and jewellery, textiles, etc. are intensely reliant on exports. The export credit share has fallen in recent years from Rs 39,000 in 2017 to Rs 22,300 in 2018 (Business Standard, 2018). Maximum export credit disbursement was 7.38 lakh crore in 2018 which decreased by 20% in a year. There was also a drop in PSU banks' share of total export credit expenses from 65% in 2016 to 45% in 2018 (Economic Times, 2019c). India's exports (both goods and services) totalled $290.66 billion in 2020, resulting in a $13.59 billion trade surplus. (https://www.theiashub.com/newspaper-rainbow-series/the-economic-times/2021-03-27). The Government planned to expand exports of goods and services to USD 1 trillion over the next five years (Economic Times, 2019c). The government of India has opened Export Facilitation Centers (EFCs) which would offer any kind of services required for MSMEs that may be interested in exporting their products and services. These centers will provide point-to-point facilitation and all support to MSME exporters already dealing with overseas exports or trying to access foreign markets. The objective of opening these centers involves assistance for businesses targeting international clients and enhanced understanding of international markets. It has been proposed by the Ministry of MSME in 2018 to launch 100 Export Facilitation Centers (EFCs) having a team of International Trade Advisors (ITAs). These advisors would be responsible for providing professional advice to MSMEs (http://dcmsme.gov.in/Export_promotion_strategy(MSME).pdf). The range of services that will be offered by EFCs include information dissemination, Documentation and Procedures, Market Access and other necessary support involving facilitating legal assistance, reducing logistics cost, achieving highest product standards etc. The Niryat Bandhu Scheme has been initiated by Indian Government with the aim of reaching out to new and potential exporters including exporters from small scale industries (http://niryatbandhu.iift.ac.in/2.0). According to Knowledge and News Network, an MSMEs-focused media channel, 108 micro, small and medium enterprise (MSME) clusters have been listed to help India reach its $900 billion export goal by 2019–2020. It aims at mentoring MSMEs on various aspects of foreign trade through programs for orientation, counselling meetings, individual facilitation, etc. to encourage them to enter universal trade and enhancement of exports from India. Walmart's Vriddhi program was expanded to Uttar Pradesh in 2021, with the establishment of an e-institute to assist small businesses in gaining access to skills and competencies through online and offline channels like Flipkart's marketplace and Walmart's global supply chain. This new e-institute, according to the organisation, would help 50,000 MSMEs across the country grow both domestically and internationally. In another instance, Mastercard and Razorpay have partnered in 2021 to help Indian small businesses and entrepreneurs adopt digital payments. Razorpay's payment processing services have been integrated with Mastercard's digital banking systems and card products as part of this collaboration services (https://www.ibef.org/industry/msme.aspx)

4.2 Memorandum of understanding with international agencies

MSME sector has entered into long-term agreements, memorandums of understanding, and joint action plans with 19 nations, including Tunisia, Romania, Rwanda, Mexico, Uzbekistan, Lesotho, Sri Lanka, Algeria, Sudan, Cote d'Ivoire, Egypt, Republic of South

Korea, Mozambique, Botswana, Indonesia, Vietnam, Mauritius, Sweden, and the United Arab Emirates. (MSME Annual Report, 2020-21). There have also been numerous discussions between the Ministry of MSMEs, the NSIC and international delegates on strengthening the two-sided cooperation for the mutual benefit of MSMEs in both countries (Mukherjee, 2018**).** Two major agreements have been signed by the Ministry of Skills Development and Entrepreneurship (MSDE) with the Federal Ministry for Economic Cooperation and Growth, Germany, in 2019. The proposed cooperation placed particular emphasis on improving the quality of trainees. This would enable them to acquire and apply additional technical skills and ultimately help them find jobs in creative, sustainable sectors and technologies such as renewable energy, e-mobility and energy efficiency (https://pib.gov.in/newsite/PrintRelease.aspx?relid = 194179). A MoU was also signed between Government of India and Government of Vietnam for promoting partnership projects and cooperation between institutions in both countries as well as between business enterprises. It also focused on providing training for improvement of managerial and technical skills for MSMEs (https://msme.gov.in/sites/default/files/MoU%20on%20MSMEs-Vietnam.pdf). Invest India and Business France signed an MoU in 2018 to collaborate for facilitating ecosystem association between businesses and start-ups through joint initiatives and exchange of experiences to enhance institutional expertise and recognise opportunities between businesses in the French and Indian private sectors (https://pib.gov.in/Pressreleaseshare.aspx?PRID = 1540161). The aim of the MoU has been to encourage direct foreign investment by providing realistic information on investment to companies and to assist companies in seeking those opportunities that contribute positively to both countries 'economic development. Reforms, such as the automatic route's outright 100% ownership provision in most industrial sectors, have yielded positive results, increasing India's FDI per capita from around 16 dollars in 2000 to 285 dollars in 2018, as well as raising India's global ranking on the ease of doing business to 63 out of 190 economies in 2019, placing it 79 places higher than it was in 2014 (Bhattarai and Negi, 2020). India's foreign exchange reserves were US$ 542.02 billion in 2020, enough to provide a safe buffer to cover an increase in imports following an acceleration in economic activity. Strong net FPI inflows and flushed global liquidity are partly to blame for the high reserve accumulation. Exports have rebounded for the first time since March, and the trade deficit has narrowed, with exports recovering faster than imports (Monthly Economic Review, 2020). A Memorandum of Understanding (MoU) between National Small Industries Corporation Ltd. (NSIC) and JSC-Russian Small & Medium Business Corporation (RSMB Corporation), Russia was approved in 2018 by the Union Cabinet of India. The MoU aimed to foster collaboration between the two countries' Small and Medium Enterprises (SMEs). It would provide the two countries' MSME sectors with a standardised framework and allow environment to understand each other's strengths, economies, technology, policies etc. This aimed at firming a business cooperation and helping to develop sustainable business alliances between the two countries in terms of technology transfer, joint ventures and business collaborations in the MSME sector (https://pib.gov.in/newsite/PrintRelease.aspx?relid = 183937). India and United Arab Emirates (UAE5) have signed a MoU for collaborating with Small and Medium Enterprises. This is expected to benefit Indian MSMEs for an impartial and comprehensive development. This opportunity of getting exposure to the new and innovative practices in the SME sector globally would definitely help the Indian MSMEs innovate and improve further. It would also facilitate a mutually beneficial relationship with other MSMEs of the world

by exploring their markets. A MOU has been signed between a Spanish company MCU Coatings and an Indian company Hi-Tech Engineers for technology transfer and a joint investment of USD 10 million to build a Puducherry factory.

5 Conclusion

With the current market demands, need for the fundamental modifications at enterprise level and awareness of various policies have become very much important for the MSMEs. Benefits of new processes, innovative methods of production, administration and promotion processes, and other innovative measures of running a business must be practiced by the MSMEs to cater to the emerging needs. Indian MSMEs have limited resources and it is difficult for them to spend directly on any fresh technology. Nevertheless, through knowledge of technology and support from the new policies, the technology integration can be acheived in an economic and effective way. With the usage of new policies, tools and technologies, MSMEs may overcome the scale diseconomies in comparison big companies. However, a proper strategy adoption along with technology assessment is required if the firms want to accomplish their goals. Hence, MSMEs need to react fast to modifications and grow their processes and products repeatedly to strive and flourish. To make the above measures work, their implementation status needs to be administered at regular intervals through proper policy design and implementation.

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