PRELUDE
TO THE DIGITAL
FUTURE

Osama Manzar
— Editor —

About the Book

Digital Empowerment Foundation (DEF) in partnership with Facebook (Meta) hosted a series of discussions to explore the trajectories that are changing the scale, scope, complexity of the opportunities, and challenges of the rural economic growth and development, and the indispensable need for a robust digital ecosystem to facilitate the same. This book is a compilation of impactful and inspiring thoughts of 18 revered experts, who opened their hearts and offered diverse and genuine yet simple solutions for creating a digital impetus to empower the MSME sector and the rural economy. This book is a comprehensive answer to several questions like: What hinders the growth of entrepreneurship in rural India? How do we depart from the traditional top-down approaches to creating a citizen-centric digital value system? What would a digital ecosystem look like, which is more relatable and effective, and is based on the needs and sensibilities of the local communities? How do we create a safe and secure digital space for rural women and youth, which would empower them to become confident, competitive, and resilient entrepreneurs? How do we facilitate the digitally integral infrastructure in rural India that is required to meet the demands of the pandemic crisis? Most importantly, how do we cultivate design thinking, and a scalable and inclusive model of digital transformation for a comprehensive economic growth? Dive into the minds of the leading thinkers of our times!

PRELUDE
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FUTURE

CREATING A DIGITAL IMPETUS FOR A ROBUST RURAL ECONOMY

PRELUDE TO THE DIGITAL FUTURE:
Creating A Digital Impetus For A Robust Rural Economy

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Content

Acknowledgement

This book is based on an array of virtual roundtable discussions organized by Digital Empowerment Foundation (DEF) in partnership with Facebook (Meta) between September, 2021 and December, 2021. The discussions were aimed at exploring the trajectories of rural economic development through digital capacity of enterprise and entrepreneurship. We are grateful to all the 18 participants for their enthusiasm and commitment towards the herculean task of building a robust digital-based rural economy, whereby the MSME sector along with an adequate digital infrastructure and digital literacy, is empowered to generate job opportunities at a large scale, and enable a dignified and secure life for all citizens, especially those who are residing in remote parts of India. We thank the participants for sharing their valuable insights and experiences from the field. It is only through this collaborative reflection, action, and partnership among all stakeholders that we can build a resilient and sustainable digital ecosystem, which in turn would boost the Indian economy. To take these efforts forward, we decided to publish this book based on the inputs from the participants. Along with a total of 18 chapters, recommendations for each thematic dialogue have been prepared by DEF. This publication is a step towards creating more dialogue, and devising an action plan to boost the institutional and collective capacities necessary to achieve the vision of Digital India.

This edited volume is shaped by converting diverse views, opinions, and experiences of all the multi-stakeholder collectives, with years of first-hand experiences on the ground, and their significant contributions in the field. This book would not have been possible without the support of the team at DEF, who work

day in and out in the field to enable digital access for economic resilience. We express our deep gratitude to all the 18 stalwarts who gave crucial inputs in framing the dialogues; to the media and communication team at DEF, and the Facebook team, which played a supportive role in bringing all the voices together.

Most importantly, the real motivators for this book are all those communities, who are asking us and challenging us to find ways to facilitate and build strategic policies that empower them digitally, to fight poverty and accelerate the geometric progression of the Indian economy.

- Osama Manzar

Abbreviations

ABC	Academic Bank of Credits
AFI	Action for India
AI	Artificial Intelligence
AIACA	All India Artisans and Craftworkers Welfare Association
AIMO	All India Manufacturers' Organization
API	Application Programming Interface
APTECH	Applied Pavement Technology
ASER	Annual State of Education Report
ATM	Automated Teller Machine
AVPN	Asian Venture Philanthropy Network
AWC	AnganWadi Center
BHIM	Bharat Interface for Money
BMB	Bharatiya Mahila Bank
BRICS	Brazil, Russia, India, China, and South Africa
CCI	Craft Council India
CEA	Chief Economic Advisor
CEO	Chief Executive Officer
CII	Confederation of Indian Industry
CIRC	Community Information Resource Center
CMIE	Centre for Monitoring Indian Economy
CoLive	Covid Livelihoods Coalition
CoS	Committee of Secretaries
CSC	Common Service Center
CSO	Chief Security Officer
CSO	Civil Society Organization
DBT	Direct Benefit Transfer
DEF	Digital Empowerment Foundation
DFID	Department for International Development
DIC	Digital India Corporation
DNA	Deoxyribonucleic Acid
DU	Delhi University

EDII	Entrepreneurship Development Institute of India
ERP	Enterprise Resource Planning
EY	Ernst & Young
FISME	Federation of Indian Micro and Small & Medium Enterprises
FPO	Farmer Producer Organization
FTTH	Fiber to the Home
GAME	Global Alliance for Mass Entrepreneurship
GAP	Global Action on Poverty (GAP)
GDP	Gross Domestic Product
GOAL	Going Online As Leaders
GOI	Government of India
GROW	Grassroots, Resilience, Ownership and Wellness
GSBI	Global Social Benefit Incubator
GSG	Global Steering Group for Impact Investment
GST	Goods and Services Tax
GTT	Global Talent Track
HAIL	Honeywell Automation India Limited
HDFC	Housing Development Finance Corporation
HGS	Hinduja Global Solutions
HHH	Head Held High
I4TS	Innovation for Telangana
IAMAI	Internet and Mobile Association of India
ICICI	Industrial Credit and Investment Corporation of India Bank
IDE-I	International Development Enterprises – India
IDF	India Development Foundation
IDFC	Infrastructure Development Finance Company
IFC	International Finance Corporation
IGST	Integrated Goods and Services Tax
IL&FS	Infrastructure Leasing & Financial Services
ILO	International Labor Organization
IndEA	India Enterprise Architecture
InDEA	India Digital Ecosystem Architecture
INR	Indian Rupee
IPO	Initial Public Offering
ISPP	India School of Public Policy
IT	Information Technology

IVR	Interactive Voice Response
JAM	Jan Dhan-Aadhaar-Mobile
KYC	Know Your Customer
LCF	Lighthouse Communities Foundation
LEAD	Leveraging Evidence for Access and Development
MD	Managing Director
MeitY	Ministry of Electronics & Information Technology
MIC	Make India Capable
MIS	Management Information Systems
MSME	Micro, Small and Medium Enterprises
MUN	Mahila Udyam Nidhi
NAD	National Academic Depository
NASSCOM	National Association of Software and Services Companies
NeGD	National e-Governance Division
NeGP	National e-Governance Plan
NEP	National Education Policy
NERL	National E-Repository Limited
NFBC	Non-Banking Financial Company
NGO	Non-Governmental Organization
NHA	National Health Authority
NMP	National Mentorship Platform
NOFN	National Optical Fiber Network
NSDC	National Skill Development Corporation
NSDL	National Securities Depository Limited
NSFI	National Strategy of Financial Inclusion
NSSO	National Sample Survey Office
OCEN	Open Credit Enablement Network
ONDC	Open Network for Digital Commerce
PCC	Pune City Connect
PHC	Primary Health Centers
PM WANI	Prime Minister Wi-Fi Access Network Interface
PMGDISHA	Pradhan Mantri Gramin Digital Saksharta Abhiyaan
PMJDY	Pradhan Mantri Jan Dhan Yojana
PMMY	Pradhan Mantri Mudra Yojana
PMRPY	Pradhan Mantri Rojgar Protsahan Yojana
PPP	Public-Private Partnership

QR	Quick Response
RBI	Reserve Bank of India
S&P	Standard and Poor's
SAIL	Steel Authority of India Limited
SBI	State Bank of India
SDG	Sustainable Development Goal
SEBI	Securities and Exchange Board of India
SEWA	Self-Employed Women's Association
SGST	State Goods and Services Tax
SHG	Self Help Group
SIDBI	Small Industrial Bank of India
SMB	Small and Midsize Businesses
SME	Small and Mid-size Enterprises
SNG	Strategic Networks Group
SSG	Special Service Group
TASK	Telangana Academy for Skill and Knowledge
TiE	The Indus Entrepreneurs
UMANG	Unified Mobile App for New-Age Governance
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UPI	Unified Payments Interface
USAID	United States Agency for International Development
USD	United States Dollar
WAG	Whole-of-Government
WHO	World Health Organization
W4C	Wireless for Communities

Introduction

Let's create digital value systems

Osama Manzar

At a time when the country is witnessing major shifts in all the sectors of Indian economy, there are several efforts by both state and non-state actors towards developing a robust digital governance system and building the necessary digital infrastructure for a coordinated and seamless transition that will facilitate an effective implementation of policies and schemes targeted at improving the living conditions of the marginalized communities in India. The socio-economic growth and development in rural India, which occupies the greater part of India, play a determining role in building India's economy; agriculture being its largest sector followed by the overlapping informal and organized sector[1]. With the agrarian crisis deepening in the country[2], more so because of the Covid-19 pandemic situation, most people, including landless and small farmers, rural proletariat, etc., have been pushed to more precarious forms of informal employment[3]. With the rising rate of inflation and the socio-economic inequalities, the people in the informal sector and rural economy[4] as a result,

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1 "Future of unemployment and the informal sector of India", accessed on May 5, 2022, https://www.orfonline.org/expert-speak/future-of-unemployment-and-the-informal-sector-of-india-63190/

2 "Covid-19 and some contours of India's ongoing agrarian crisis", accessed on May 5, 2022, https://journals.sagepub.com/doi/10.1177/1942778620985194

3 "India's informal sector is in distress, and it needs urgent reform", accessed on May 5, 2022, https://www.thenewsminute.com/article/opinion-india-s-informal-sector-distress-and-it-needs-urgent-reform-149003
4 "A recipe to deepen the distress in rural economy", accessed on May 6, 2022, https://www.livemint.com/opinion/online-views/a-recipe-to-deepen-the-distress-in-rural-economy-11643741618202.html

have almost always suffered setbacks vis-à-vis the access to resources and basic necessities of life, livelihood opportunities, and Government welfare schemes. In the wake of the pandemic crisis, many hundreds of thousands of people, especially migrant workers originating from rural parts of the country, have suffered severe losses of income and livelihood, which pushed them into a cycle of debt, displacement and distress[5]. Over the past two years of consecutive lockdowns, the rural economy has hit rock bottom[6], thereby furthering the disparities of income and regional imbalance. It is amidst this worsening economic crisis in India that the Micro, Small and Medium Enterprises (MSME) sector[7] has consistently been directing its efforts towards boosting the socio-economic development of the country, especially to revive the rural economy that has slowed down in the aftermath of the pandemic. This sector has allied with other public and private sectors, Civil Society Organizations (CSOs), tech industry, Governments and other collaborators, to facilitate support to enterprises, which are already operational, and help create new enterprises with the potential for high-growth entrepreneurs. The MSME sector operationalises several schemes and provisions to achieve the same, using digital technology, development of infrastructure, training and skill development, adopting a market-oriented approach to inculcate a spirit of competitiveness, and the necessary financial assistance required to accelerate and enhance the overall growth of MSMEs. To take forward these initiatives and implement them on the ground, the Government has also been working towards developing a dynamic, scalable, and sustainable ecosystem to

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5 "Migration data relevant for the COVID-19 pandemic", accessed on May 6, 2022, https://www.migrationdataportal.org/themes/migration-data-relevant-covid-19-pandemic

6 "Rural India, a cause no one worries about: fall in real wages, unemployment, food price rise hit hard", accessed on May 6, 2022,
https://economictimes.indiatimes.com/news/economy/indicators/rural-india-a-cause-no-one-worries-about-fall-in-real-wages-unemployment-food-price-rise-hit-hard/articleshow/90972966.cms
7 "Annual Report 2021 - 22", Ministry of Micro, Small and Medium Enterprises, accessed on May 7, 2022, https://msme.gov.in/sites/default/files/MSMEENGLISHAN-NUALREPORT2021-22.pdf

What Is The Future Of Jobs?

2.5L Jobs
Common Service Centre(CSC)

200 Centres 600 Jobs
Community Information Resource
Centre (CIRC)

38 Networks 171 Jobs
Village Of India Network
(VOIN)

25 Centres 75 Jobs
Soochna Seva Kendras (SSK)

10 Clusters 75 Jobs
Digital Cluster Development
(DCDP)

Jobs That We Don't Know

2.5L Panchayat 3 JObs In Each
GOVERNANCE

2000 Clusters 5 Jobs In Each
BUSINESS

14 L Government Schools
2 Jobs in each
EDUCATION

1 L 84th 69 Health Centres
3 Jobs in each
HEALTH

~ 2.5 L   ~ 36 L

~ 36 L

Are There Enough Training Institute,
Universities, Organisations, Schools
TO MEET THIS DEMAND?

digitally enable the entire MSME ecosystem, as well as to cater to the ever-changing demands of the local and global economy, and knowledge production.

It is in this context that flagship initiatives such as the Digital India programme[8], Digidhan Mission[9], etc., have been taken by the Government in line with the recommendations of Government of India's (GOI) Committee of Secretaries (CoS) and the Ministry of Electronics & Information Technology (MeitY), to digitally empower India and accelerate the knowledge economy.

Aligned with the national mandate of democratizing technological innovation and creating an impetus for widespread dissemination of digital literacy, the Government and its allied partners in CSOs and tech industry have formed collaborative partnerships to ensure digital empowerment for all its citizens, which would in turn, guarantee that the Government schemes, policies, and initiatives of MSME sector become accessible to all citizens equally and seamlessly. The CSOs have played a significant role at local, regional, national, and international levels to co-construct various models of inclusive digital ecosystems and knowledge systems. Concerted efforts have been taken in the past decade to facilitate entrepreneurship awareness amongst people in rural India, and hand-in-hand redress and bolster the digital ecosystem, to ensure a robust MSME ecosystem that bridges the gap between the reality and vision of a self-reliant India. For example, Microsoft, Confederation of Indian Industry (CII), Amazon, Google, Facebook, Accenture, etc., have on record partnered with Digital Empowerment Foundation (DEF) to enable digital entrepreneurship, digital functional skilling and capacity-building, as a means to create a geometrical progression of rural economic acceleration at the micro-level of MSMEs.

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8 "Digital India is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy." https://www.digitalindia.gov.in/content/introduction

9 "The Government of India in the Union Budget for 2017-18, announced the setting up of a Mission for promotion of digital payments with a target of 2,500 crore digital transactions during the financial year through UPI, USSD, Aadhaar Pay, IMPS and Debit cards." https://www.meity.gov.in/digidhan-mission

In reality, however, there are several impending challenges that include the prevalent gender divide, disproportionate socio-economic positions, unequal access to healthcare, technology and public transportation, lack of connectivity, a top-down approach to policy-making, etc., all of which act as impediments to the transformative vision of New India and Digital India. It is thus our responsibility to address these concerns and rethink policy frameworks, to find innovative ways to develop a design that inculcates the perspectives and sensibilities of the local communities, and its diverse subjectivities in its framing foci. These efforts, when complemented by adopting a human-centered design approach[10], which integrates the needs of people specific to their socio-cultural settings, the technological requisites and possibilities, and the institutional and infrastructural requirements for business innovations, would catalyze the revival of rural economy[11].

It is increasingly important in these times to do all we can to create an impetus for digital transformation and empowerment, which would complement the efforts of the MSME sector and help generate employment opportunities at a large scale. To achieve the same, there is an urgent need to devise a practical framework that will enable problem-solving and innovation.

Design Thinking is one such human-centered approach to business innovations[12], whereby a creative toolkit is designed in a way that identifies the requirements of people across caste, class, gender, etc., among other social locations, and incorporates them into the decision-making process of policy formulation and its implementation. This approach entails a feasible and viable

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10 "New narrative: Taking a human-centric approach to digital transformation", accessed on May 8, 2022, https://www.financialexpress.com/industry/technology/new-narrative-taking-a-human-centric-approach-to-digital-transformation/2449296/

11 "The rural economy can jump-start a revival", accessed on May 8, 2022, https://www.thehindu.com/opinion/lead/the-rural-economy-can-jump-start-a-revival/article62105895.ece

12 "Digital transformation: 3 ways a culture of innovation can drive your strategy", accessed on May 8, 2022, https://enterprisersproject.com/article/2022/5/digital-transformation-culture-innovation

model of technology and a financial plan that enables commoners to create entrepreneurial models of self-sustenance and profit. For instance, women, especially those who are working in the lower rungs of informal work neither get any protection under labour laws, nor are beneficiaries of social welfare policies and safeguards. Whereas a major part of the workforce employed in the informal sector in South Asia are women[13], the recognition and capacity-building of women for taking job responsibility has largely been devoid socially, politically, and even professionally.

We would like to share here from DEF's learning that if our goal is to work in the rural areas to strengthen its digital ecosystem, which would in turn help revive the rural economy, we must increasingly engage, employ, and empower women. With a minimum investment and an economically sustainable model, hundreds of thousands of women, especially in rural India will get access to knowledge and resources, which will enable them to seek opportunities in the entrepreneurial field, and get economically empowered and self-reliant. This is the most crucial need of the hour because when more women work and get empowered, more economies and societies grow[14]. DEF has more than 2,000 digitally enabled Community Information Resource Centers (CIRCs) across India, and 80% of them are run entrepreneurially by women, where they not only work towards socially empowering the local communities with digital access, but also sustain themselves reasonably well without compromising on ethics and accountability. Let us have a look at how DEF's initiatives, including SoochnaPreneur[15], Digital

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13 Women in informal economy", UN WOMEN, accessed on May 8, 2022, https://www.unwomen.org/en/news/in-focus/csw61/women-in-informal-economy

14 "Facts and Figures: Economic Empowerment", UN WOMEN, accessed on May 9, 2022,
https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures

15 "SoochnaPreneur is an ambitious programme of Digital Empowerment Foundation (DEF) and QUALCOMM launched in April 2016. The project is designed to serve various information services needs of citizen consumers, especially at Village, Panchayat and Block levels in each of the 25 administrative development blocks in 6 backward districts in India." http://soochnapreneur.in

Sarthak[16], etc., are empowering millions of people in rural India through collaboration with women digital entrepreneurs.

In India, the Common Service Center (CSC) scheme[17] has been operational across the country as a significant step towards digital empowerment of its citizens[18]. Today, CSCs, which are being run by entrepreneurs, are success stories of sustainability. However, there are serious limitations with its very formulation and functionality, as these CSCs are located mostly among urban populace, and are not accessible to the people in remote areas, who suffer from digital exclusion, and continue to remain unconnected. While the segment of people who are classified as connected are able to access the digital, the challenge still remains to ensure that those connected are able to benefit from the digital ecosystem in its true sense. The other serious impending issue at hand, is to find ways and means to connect those who continue to remain unconnected.

The Government has taken several important initiatives in this direction, including the PM WANI scheme that aims at creating an entrepreneurial mechanism to use, sell, buy, and leverage connectivity; and BharatNet, the world's largest rural broadband project, which aims to build an efficient infrastructure to provide broadband connectivity to all, among others. Now that the efforts to build e-governance are largely paying off, the next important step is to work towards creating a model of citizen governance, to determine an optimal solution to complete the last mile. Moreover, the discussions about the urban entrepreneurship landscape have been more prevalent, and hence, the need of the hour is to

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16 http://digitalsarthak.defindia.org

17 Digital Empowerment Foundation (DEF) along with Infrastructure Leasing & Financial Services (IL&FS) co-drafted the CSC scheme, which was launched by MeitY in 2007.

18 "Digital Sarthak is a national digital entrepreneurship and empowerment programme of Digital Empowerment Foundation supported by USAID and DAI. The main objective of the project is to increase the digital capacity of the Women entrepreneurs and community development organizations in marginalized and underserved regions in India by providing them with digital up-skilling support and strengthening their ability to engage on digital and ICT policy issues." https://economictimes.indiatimes.com/news/india/common-service-centres-log-more-than-80-informal-workers-registrations-on-e-shram-portal/articleshow/87828544.cms

bring attention to rural entrepreneurship, its challenges, and the technological impediments that overall hinders the objectives of digital inclusion, and digital ecosystem.

With the stated objectives, DEF in partnership with Facebook (Meta) curated and hosted a series of roundtable discussions, through the formats of interactive conversations and dialogues with the leading thinkers from the tech industry, Governments, CSOs, and academia. The aim has been to dissect every link in the value chain, right from the policymakers to the empowered entrepreneurs, to develop result-driven strategies focused on achieving desired sustainable outcomes. The discussions focus on topics of national and regional importance under four pillars: agriculture, handicrafts, tourism, and retail. The sessions were organized to mainstream the public-private dialogue and collaboration at the national and regional level through consortia and advisory councils. The discussants deliberated on the following themes:

1.   Economic Recovery and Resilience Post the Pandemic,

2.   Digital Citizen, Rural Consumer & Ease of Governance,

3.   Accelerating Digital Inclusion for the Unconnected,

4.   Emerging Dimensions of Rural Women Entrepreneurship, &

5.   Digital Financial Inclusion in Rural Economy

The central question, which the participants in the discussion engaged with is: How do we create an ecosystem that embodies the digital value system? One of the key takeaways from the conference was to factor in indicators to measure the success of digital inclusion, and digital empowerment: its impact, in terms of contextual linkages of digital infrastructure to each sector, and ensuring it being implemented on the ground; to transform, from being an electricity transformer-based service provider to a more efficient service provider; and overall providing meaningful digital connectivity, which advances digital literacy, converts itself into digital value, and extends life-changing benefits to the last person in rural India.

The discussants, through their experiences and observations,

listed what constitutes the building blocks of a digital value system, right from the infrastructure, access, skills, and education to its conversion to create an efficient life. While the Indian economy is growing fast, it continues to face a few economic challenges. It, therefore, seems important to work collectively to find resilience and devise solution strategies that help attain the digital value system, and bridge the gap between the vision and the reality on the ground. The collective effort will impact effectively at a large scale since we have access to policy-making, capacity for large-scale implementation, a professional expertise in diverse fields of technology, and insights about the limitations and challenges identified by the experts in the field.

Safety, security, and digital or financial inclusion are the most important steps essential to attain a sustainable digital ecosystem. In India, people are accustomed to the physical currency and coins as the standard means of economic transaction, and thus digital money is still not as popular as the currency notes. The task at hand is to imbibe the culture of redeeming a sense of security in making digital transactions. The infrastructure and institutional support to ensure the same is in place, but however, there is a need to customize the support model specific to the requirements of people and their socio-cultural settings. The experiences and observations of the discussants can be broadly categorized under three headings: rural economy, technology, and women entrepreneurship, more specifically to address the impending questions and challenges faced by rural India. The participants also addressed the new set of challenges that the Covid-19 pandemic and the ensuing lockdowns brought to the lives of people working in MSMEs, especially women entrepreneurs residing in rural India.

It was further stressed that digital and financial literacy are important, because it imbibes you with knowledge, and at the same time, gives confidence that allows one to believe that he / she / they can pursue a career in entrepreneurship. However, despite being digitally, or financially literate, people faced many practical barriers, which included being unable to access credit because of being used to the non-digital medium, bureaucratic reasons, lack of decision-making skills, and lack of trust. Another main takeaway

from the discussion is that the last mile can only be attained when finance is integrated with digital, and an ecosystem is formed out of it. The participants also talked about the need for a design-thinking approach, whereby technology becomes more humane, and culturally acceptable among the masses. It is clear from all the insights provided by the stakeholders in the field that we need an economic engine with a sturdy technological infrastructure, but this time with a bottom-up approach, which engages with the questions of digital technology and digital economy at a cultural and behavioral level. This whole system approach will help achieve the objectives of digital inclusion, and the digital ecosystem.

The participants shared their insights, suggestions, and recommendations with Facebook (Meta), from their respective organizational standpoints, and the communities they have been working with.

Let us dive into the book and immerse ourselves with the ideas of those who passionately contributed to this significant and transformative initiative.

PART I

Economic Recovery and Resilience Post the Pandemic

Due to the Covid-19 pandemic, rural communities in India have faced a plethora of socio-economic forces of change. The rapid spread of Covid-19 and the consequent lockdowns caused massive disruptions of normal economic factors at the bottom of the pyramid. According to Ernst & Young India's report (2020)[1], 81% of Small and Midsize Businesses (SMBs) surveyed reported

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1 "Tapping into the globally-competitive Indian manufacturing Opportunity", EY, accessed on May 18, 2022 https://assets.ey.com/content/dam/ey-sites/ey-com/en_in/webcast/2020/05/tapping-into-the-globally-competitive-indian-manufacturing-opportunity.pdf

that they had ceased operating at some point since the outbreak of the pandemic; 71% of SMBs reported that they had to reduce their workforce due to the pandemic. It is in this context that this session delved into the role of the digital ecosystem in accelerating economic opportunities in the post-pandemic world, and creating a more robust and inclusive economy, especially in rural India. The objective of these discussions has been to integrate digital tools and pave the path for potential initiatives within the digital space, to enhance social and economic resilience in the post-pandemic economy. There were five experts who shared their insights on how digital innovation and entrepreneurship would help in stimulating economic opportunities in rural communities, especially among women and youth, and create an impetus for the overall economy, which is still recovering from the adverse impact of the pandemic crisis. **Muzaffar Ansari** sheds light on both the nature of businesses, and their outcomes in Chanderi, Madhya Pradesh prior to the pandemic, and in the post-pandemic market. He talked about the sudden need for digital technology to cope with the demands of the pandemic crisis, and further explained how rural women and youth weavers/entrepreneurs are adopting different strategies to mitigate the economic shocks caused by the pandemic. **Arun Maira** spoke about the ways in which policy-makers can support technological development and generate economic opportunities without stifling innovation. He also stressed on the need to leverage the access to digital technology and build adequate infrastructure as important steps towards empowering the rural youth to pursue a career in the entrepreneurial field. **Shubhashis Gangopadhyay** held the Government accountable for implementing the programmes and initiatives across rural India, and to make an inclusive model of the digital ecosystem. He further insisted on the need for design-thinking that helps formulate policies, which departs from the top-down approaches to a citizen-centric model that caters to the needs of the rural people in its true sense. **Gita Ram** detailed the impact of the pandemic on the small women entrepreneurs in the handloom industry. She also talked about how these women entrepreneurs used digital technology to overcome the hurdles in the wake of the pandemic. She believes that if women are not held back by domestic work, child care, lack of resources, etc., they

would emerge as successful entrepreneurs. **Vrundan Bawankar** explained how technology can help in reducing the regional imbalance, and creating a more robust and inclusive economy. She talked about the impact of the pandemic on the paper sector, especially with a focus on how the demand and supply chains were affected by the pandemic crisis. She also shared about the work of De'Haat Foundation, which engages with women weavers and rural artisans from the marginalized communities, in facilitating them to revive and become sustainable entrepreneurs and resilient market leaders.

> *As Chanderi is a small town without much connectivity with the economic centers, the training sessions conducted digitally using mobile phones, were easier for the people to attend and learn from.*

Chapter 1

Reviving Market Using Digital Technology: The Case of Chanderi

Muzaffar Ansari

Chanderi, a small town in the state of Madhya Pradesh, is a center of handloom textiles and is known for its globally popular fabrics of the same name. The majority of the population of the town comprises of bunkars (weavers) and a total of 5,000 households have set up handloom units in their homes. This town and its weaving industry in particular, were caught unawares when the national lockdown ensued with the advent of Covid-19 pandemic. For a few months, the author of this chapter, a barefoot historian and weaver himself, narrates from his first-hand experiences how people were clueless about everything that was unfolding during this period. All the services were forced to shut down; thus, basic survival became a challenge. The initial phase of the lockdown was very difficult for the handloom industry as the middlemen withdrew from production operations, and for the lack of capital and demand, the industry was virtually shut down as well.

In collaborative partnership with the DEF, an on-ground assessment was carried out by visiting the industry, and interviewing 1,248 weavers associated with the industry. The weavers were asked about the current state of operations and the impact that the consecutive lockdowns had on their businesses. They found that almost half of the household looms were shut down while operations in some others were derailed. The withdrawal of the middlemen took away the agency of the weavers to connect with

their consumers and their ability to sell their products. The solution embarked upon by entrepreneurs, including the young weavers of Chanderi, was to utilize technology and sell their products online. Two training sessions were conducted, wherein around 200 weavers attended to learn about selling products online, using mobile phones and laptops. Few of these trainees implemented the learnings from the workshop and started using platforms like WhatsApp, Instagram, Facebook, and email to share the product images and description, and market their products.

This exercise was soon followed by other household looms and led to two major interrelated outcomes. The middlemen withdrew from the production operations thus giving the weavers more freedom. This also entailed that there were no intermediary charges thus benefiting both the producers and the consumers, which eventually led to the recovery of businesses. The shift seen in the way Chanderi fabrics and other such products have been marketed in digital platforms post-pandemic, has led to the establishment of a direct relationship between the producer and the consumer. It has also given the weavers freedom to work from their homes. This was made possible primarily because the youth of Chanderi became proactive in helping the seasoned weavers in their adoption of digital technology. As Chanderi is a small town without much connectivity with the economic centers, the training sessions conducted digitally using mobile phones, were easier for the people to attend and learn from.

These training sessions and the subsequent adoption of digital technology for marketing of products were crucial for the handloom industry to recover economically from the impact of Covid-19 pandemic. This is also suggested by data that in 2010, Chanderi was a 600 million INR producer market and through the use of digital interventions and other organizations like the DEF, it has now grown up to 1,500 million INR. Due to such persistent efforts, the current situation is better than earlier, as concerns of basic sustenance, the future of their businesses and even their desires have been addressed. While 1 out of 10 persons in Chanderi own smartphones worth Rs. 100,000; 1 household out of 20 households own a laptop. This transition has resulted in younger generations

getting an opportunity to become entrepreneurs themselves, and has put some checks on the earlier migration from Chanderi to other metropolises. Moreover, the youth is now more interested in promoting their ancestral weaving tradition.

Chapter 2

The Access to Digital Technology and Infrastructure

Arun Maira

The impending challenge that confronts the Indian economy especially with respect to Small and Midsize Businesses (SMBs) is the shrinking of their markets. One of the solutions suggested for their recovery is digital technology with adequate technological infrastructure that would allow more efficient market functioning. It is assumed that such technological penetration would solve the predicament of the SMBs and Micro, Small and Medium Enterprises (MSMEs). In my experience as a former member of the Planning Commission, it is necessary to state a word of caution; technology by itself cannot solve the problems faced by the majority of the population. It is important here to address how power and social inequalities play determining roles in deciding whose benefit technological solutions are designed for.

Many enterprises, including both small and big businesses bore the brunt of the Covid-19 lockdown. While discussing the economic recovery post the consecutive lockdowns, the tendency of economists, particularly those who advise the Government and big businesses, compared the Gross Domestic Product (GDP) post and pre-lockdowns to understand the overall health of the economy. The conversations about measuring economic recovery thereby got limited to GDP and the overall size of the economy, whereby there is no regard for internal fault lines that act as barriers to achieving the goal of democratizing technology. It is here important to keep

this predilection in check and also look inside the economy for various cracks and fissures that, although had always existed, have now become more pronounced.

The economic inequalities, which have been prevalent in society even prior to the pandemic, worsened because of consecutive lockdowns. The gap between the rich and the poor is increasing, and the small businesses are struggling more than ever before. Macro-economists and large businesses assume the economy to be a machine. They assume that the machine is in good shape if there are many transactions taking place. If that is not the case, they concern themselves with the issue as to how to make more transactions happen and make the process more efficient. Technology plays a crucial role in this regard. The number of transactions taking place between accounts situated in short and long distances using technology, and the frequency of these transactions are more because of the increased efficiency. However, it has also widened existing inequalities, whereby the people who are able to use technology are gaining while those who are unable to, are falling behind.

That main issue that should concern policy makers and economists while planning for economic recovery is the nature of technologies that are being built. Over the last few years, the gig platforms have enabled a lot of services and helped to move things despite the overall economic slowdown. They have enabled people to ride their motorcycles and earn their income. The issue that should be taken note of in this situation is: Who is actually making money out of this system, and by how much? Security is enhanced for people who are already economically well-off; they are the ones who have wealth in their banks, and in their stock values. Whereas the workers who run this gig economy are living transaction to transaction, each done very efficiently but making them more insecure. If the economy is considered as a machine, it then needs to be repeatedly asked as to who controls the machine; who has the power to design the machine that ensures that the design efficiency is high; and where does the wealth generated by this efficiency go?

We have to go back to the principles enunciated by Mahatma Gandhi and J.C. Kumarappa who argued for a decentralized economic system that ensures that the people who actually create wealth are also the owners of their enterprises. They need to have the freedom to design the machine. If the basic problem of power differential between those who design the enterprise and those who work on it exists, then technology is not going to solve the problem of the majority of the population. Layering technology would help the super-rich accumulate more wealth and make the people who are working for them, and delivering products on their motorcycles, ever more dependent. Economy is not a machine with inanimate parts; it is a community where people reside and make relationships. It is a community and has to be considered as such while designing solutions for economic growth and development. To reiterate and conclude, the primary concern should be to first recognise and then address the issues of power as to who decides how technologies are being used and for whose benefit.

Chapter 3

What is the Need of the Hour?

Shubhashis Gangopadhyay

In order to recover from the economic slowdown caused by the pandemic, technology is being treated as a kind of magic wand that would solve all our problems. In reality, however, technology per se is not going to resolve our predicament. It is still not a way of life for the majority of the population. It is not the locus of our operations, and is rather used and understood as an appendage to our core business practices. This is the present state of affairs; nevertheless, technology is affecting people in a myriad of ways, and thus it is important to learn about it and use it in a way that benefits the population. Technology has enabled many businesses to perform better. It has helped many small businesses, but it is not the solution to our general problem, whereby large sections of the population are at the edge of not being sure about basic daily sustenance and livelihood.

If we want to be part of the global world and want to work towards creating value for citizens in its true sense, we would have to then take the issue of technology more seriously than we hitherto have. Technology is not just something that reduces the cost of doing business. It has to be understood in its totality. Our policy programs have to be designed in such a way that technology is not treated as an appendage, wherein it is incorporated after the policies are designed. Policies have to be designed in a way that

technology addresses the core issues of inequality and exclusion. Policies and in turn technology can only address the needs of the society. Here, it is important to note that the pandemic has only aggravated the fault lines that were already present. Pandemic is not the root cause of the problem. If we identify the pandemic as the reason for economic downturn and inequality, it would be a wrong premise to start with. If the formulation of the problem is itself wrong, the solution designed would then inevitably fail to meet the desired results.It is the Government that has to address the problems of technology as it is they who are responsible towards the citizens. Besides, we also need to think about the role the Government should play in a society that needs to be digitized. This would entail addressing many issues like public policy, businesses, Government services, cyber security, etc. Just as we cannot do without private players, we cannot move ahead without having clarity regarding the role of the Government. It is the Government that helps in transforming societies through facilitating the transformation and reducing the cost of change.

A wall is being built, whereby those who are going digital due to their own resourcefulness are benefitting, whereas those who are unable to go digital are excluded, and are being pushed to struggle for access to resources. This can be only resolved by the Government, by providing people with the necessary digital infrastructure and digital services at affordable prices. The aspects of technology, which are in the superstructure, can be addressed by the private entities. Similarly, the policies of digitization can be left to the discretion of individual resourcefulness. However, the construction of technological infrastructure should be treated by the Government in a similar fashion as physical infrastructure such as the roads and highways where anyone who wishes to travel can do so. Digital infrastructure should also be constructed for everybody, and the discretion whether it should be used or not should be left to the individual. With regard to the issue of providing education to children for instance, the Government has to address the issues of access to data, digital devices, connectivity, etc. In this context, if an individual household considers digital mode of education as more valuable, they should be empowered to use it.

Chapter 4

Empowerment of Women Weavers in the Wake of Covid-19 Pandemic

Gita Ram

It is crucial that the markets open up again because the artisans and weavers are entirely dependent on local markets, and the ensuing feedback mechanism. Since the sellers come face-to-face with the customers in local markets, it becomes easy to gauge customer needs and preferences. There are many weavers, particularly in Andhra Pradesh whose products are sold only in the local markets. The artisans customize their products, depending on the demands of customers, and catering to the interests of the local market. Now that the local markets have largely collapsed in the face of Covid-19 pandemic, the sellers are left with no option but to move the old stock to markets located in the metro cities. However, the sellers are running in loss because the products are meant for a targeted population. The main challenge faced by the artisans these days is to sell their products in markets, where there is no demand for it. Chanderi fabric is one such artisan product, which has been selling in the markets in metro cities.

There is a divide triggered by the pandemic of need-based purchases and desire-based purchases. Moreover, the desires have lowered because of the affordability and availability factor. Although the desire-based market is still thriving, it is not enough to sustain the needs of the artisans. Moreover, both the need-based purchases and desire-based purchases are customized for a target population. For instance, there are many kinds of handloom sarees,

originating from different states, with their respective cultural specificities. Weavers from West Bengal or Odisha weave fish on the border of the fabric. A customer from Tamil Nadu might not appreciate it. There is not much of a taboo when people in West Bengal or Kerala wear white or black-colored fabric, but the rest of South India might have objections to it. The customer base for Durga statues that are made using Dhokra Art will be largely confined to West Bengal. All in all, one shoe size cannot fit all; it is more complex than that. Perhaps, digital empowerment will be an important breakthrough, and will facilitate artisans to diversify their options in marketing.

We worked with a group of 40 mat weavers based in Tamil Nadu. A team from DEF organized training to teach these women weavers to access google, browse the internet, and use their mobile phones in more than one way, all of which broadened their minds. With the onset of pandemic and the collapse of local markets, the main challenge before us is to find a solution that facilitates these women weavers to overcome the hurdles and continue their businesses. Here, the role of technology is very important, but it has been difficult to gauge how useful it has been for people. One may be trained to become mobile savvy, or be helped in approaching an e-commerce platform, but learning these skills is a slow process. Some people have managed to learn it, while some are finding it difficult. Moreover, most families in rural India have only one smartphone, which is usually used by the male members of the family. The first step to empowering women, is equipping them with smartphones, and internet connectivity. The other important aspect is meeting the education expenses of their children. It is high time we address all these multifaceted challenges on a war footing.

Chapter 5

Undoing the Regional Imbalance: The Future Ahead

Vrundan Bawankar

At DeHaat Foundation, we have been running a school in a village for the past 13 years. In the last 3-4 years, we have ventured into the livelihood sector, and worked in close association with farmers. We have enrolled around 700 students in our school, most of whom are children of farmers. This initiative has been taken with the aim to provide opportunities, especially for single mothers. We started with one mother in 2017, and within a short period of 6 months, we had 60+ women working with us in centers spread over 5 different locations. DeHaat Foundation has extensively worked with women from marginalized communities. The project facilitated these women to pursue a profitable paper goods business. Due to the Covid-19 pandemic national lockdown[1], however, these women had to move from paper products to textile products, as the market for paper goods did not carry the desired potential as before. At present, there are around 200 women associated with us in various capacities; ranging from designing and weaving sarees, dupattas, etc. to selling them.

Coming to the role of technology, a lot has been spoken about how digitization has impacted people's lives, in terms of how one can have digital access without having to go anywhere, and that

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1 "Post-pandemic, paper sector on the path to recovery", accessed on May 21, 2022, https://www.thehindubusinessline.com/markets/commodities/post-pandemic-paper-sector-on-the-path-to-recovery/article35093670.ece

one does not need a physical store anymore, to display and sell products; but, the reality points to the contrary. With the onset of Covid-19 pandemic, the school had no choice, but to go online and adjust with technological advancements. A survey was conducted among the students studying in the nursery to high school, to check how many of them owned smartphones, and used them to join the online classes. The data revealed that only 22% of students were having smartphones, which enabled them to avail online education. While talking to the parents, most of them had lost their bread and butter during the pandemic lockdown. When asked if the parents could afford the costs of internet connection, only 7% of parents were able to do so. The figures are marginal, and showcase the extent of the gap between the vision and the current reality.

A recurring challenge that we are facing is rooted in our conversations, which largely revolve around what is happening in Urban India. It is true that almost everyone in metro cities owns a smartphone, but such an understanding does not apply to rural India. It is from my immediate experience of working in a remote area that I can tell you – until 2019, there was no supply of electricity in the village. We got the connection in March 2019, however, the three-phased connection is still not operational as of today. The connection, moreover, is operational only at night and three days a week. Organizations and individuals working in this field are aware of this situation, and should, therefore, focus on finding remedies for the problems faced by the most vulnerable population. Even today, 90% of the workforce is employed in the informal economy and yet, there is no track or record of these people, and the challenges faced by them. Platforms such as Facebook and other organizations should come up with initiatives that provide opportunities to these people to work for them.

It is often reiterated that if weavers, artisans, and small-scale garment and textile workers, or Self Help Groups or Special Service Groups (SSGs) manufacture their products and post it on social media, they will get their customers and run profitable businesses. However, in reality, people struggle to use social media despite receiving the training. Moreover, advertising is an integral factor to attract customers; not everyone is skilled at selling products

online. The challenge before us is to take into consideration these limitations of the online medium, and figure how to reach out to the masses in a consistent and sustainable manner. One needs money for the advertisement and without it, it is not possible to pursue any business. To reiterate, there is also an overall need to work towards providing electricity, internet connectivity, and many other basic necessities in the rural areas. Once they are compensated enough, the divide between urban and rural India will reduce, whereby everyone will be able to avail the facilities and opportunities uniformly. These are the challenges today, and we would have to find ways to overcome them on an urgent basis.

Strategic Recommendations

Economic Recovery and Resilience
Post the Pandemic

During the pandemic, India's Micro, Small & Medium Enterprises (MSME) sector was one of the worst affected sectors. A survey by the All India Manufacturers' Organization (AIMO) has revealed that 35% of the MSMEs reported their future to be "beyond recovery", that they had "no chance of recovery", and had begun "shutting down their operations[1]."

According to a survey[2] by Leveraging Evidence for Access and Development (LEAD) at Krea University in association with the Global Alliance for Mass Entrepreneurship (GAME), 57% of the 1,500 micro-enterprises surveyed had no cash reserves, and 65% of the entrepreneurs had to access finances from their personal savings to continue operations[3]. According to GAME (2020), the total loss to the MSME sector was estimated to be USD $10,667 million to USD $ 16,000 million in profits - in a sector that employs 40% of India's non-farm workforce.

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1 "Nearly 35% MSMEs close to winding up: AIMO", CMIE, accessed on May 23,2022,https://www.cmie.com/kommon/bin/sr.php?kall=warticle&dt=2020-06-02%2015:40:07&msec=706
2 "Impact of COVID-19 on Microenterprises in India", accessed on May 23, 2022, https://dashboard.massentrepreneurship.org/
3 "Micro enterprises optimistic about post-pandemic recovery", accessed on May 23, 2022, https://www.tpci.in/indiabusinesstrade/news_buzz/micro-enterprises-optimistic-about-post-pandemic-recovery/

Digital interventions in marketing and management are being identified as one of the ways to kick start the MSME sector post the devastation caused by the pandemic. There is no doubt that digital technology has helped many businesses to revive and perform better. One of the examples of SMBs utilizing digital technology to revive their businesses is the Chanderi model. Chanderi is a small town in Madhya Pradesh known for its handloom fabrics of the same name. Majority of the population in this town consists of weavers and around 5,000 households in a town of around 30,000 people according to the 2011 census have set up handloom units in their homes. This traditional industry, like many other industries in the country, was very severely hit due to Covid-19 induced lockdown and its aftermath. Almost half of the household looms were forced to shut down as the middlemen withdrew themselves from production operations leaving the weavers in lack of capital and demand. Here, digital technology came to their rescue. The weavers took training to use platforms like WhatsApp, Instagram, Facebook pages and e-mails to sell their products online, and revive their business. This has also enabled the weavers of Chanderi to establish direct connections with the customers. At present, most of the looms are operational and now there is no worry among the weaving households of Chanderi for their economic sustenance.

The question, however, remains: Can this example be replicated across industries and regions in the MSME sector? Chanderi is a globally popular fabric that is in demand in all the major markets. This is not the case with other locally produced commodities. Most of the products by micro-enterprises cater to specific demands and have limited markets. They cater to particular designs, colors, and aesthetic senses of different regions and cultures. It is, therefore, not easy to bypass the local physical markets through digital means. For instance, if there is a lack of demand in West Bengal for locally produced sarees, the weavers cannot sell their sarees to far off places like Tamil Nadu and Kerala using digital means because the consumers in these states have different market demand that does not share the aesthetic sense of the customers in West Bengal.

Prior to the issue of different products having particular markets is the question whether micro and nano-entrepreneurs

even have access to digital means to market their products. India lacks the infrastructure that is needed to enable entrepreneurs, particularly rural entrepreneurs to scale up. The Government is not constructing the infrastructure required to participate in the digital world. For instance, in the context of digital education, a survey done by De'Haat Foundation found that only 22% of the students had access to smartphones in their school. Similarly, many villages in India do not have access to consistent electricity supply. Digitization seems a far-fetched goal in this situation. In order to overcome this predicament, the Government needs to build infrastructure and ensure its cheap accessibility. The construction of technological infrastructure should be treated in a similar fashion as physical infrastructure like roads and highways where anyone who wishes to travel on it can do so, digital infrastructure should also be constructed for everybody and then the discretion whether it should be used or not be left to the individual.

Another issue that confronts micro and nano-entrepreneurs in India is the nature of existing industrial and economic models that ensures that the big digital players reap the benefits of value creation at the expense of smaller entities. The fault lines between the rich and the poor, and economic inequality was prevalent prior to the pandemic, but it further worsened during and after the pandemic. The large digital platforms are interested in digitization to accumulate ever more wealth while the people who run such a gig economy are living more precariously than before. The people who work on layering technology, and are delivering products on their motorcycles, are even more dependent as they are earning based on transaction-to-transaction payments. It is thus important to explore rural cooperative models and other decentralized economic forms to ensure that the production process is restructured in a way that equally distributes the surplus.

If we are to overcome the devastation caused by the pandemic in the MSME sector, we need to first map the different MSMEs involved in traditional home-based production to understand their regional patterns and markets. There is also a need to conduct a survey to understand the issues in infrastructural access like access to electricity, access to digital devices, and access to the internet.

Accordingly, interventions can be designed to the specific needs and challenges in different industries and regions, and digitization can be incorporated in a way that actually helps develop these economies.

PART II

Digital Citizen, Rural Consumer & Ease of Governance

Rural India has emerged as a large market for numerous goods and services such as financial and governance services, and telecommunications. This thematic session provided a deeper understanding of the buying behavior, awareness, adoption, and usage patterns of the rural population in India, and how the use of digital technology would help in the consumption of governance related citizen-centric information and services. This session comprised ground-building dialogue on the subject followed by a deeper discussion with four distinguished experts from the field of research, business, economics, and public policy. The discussions revolved around paving the path for the potential

strategies within the digital space to increase social and economic resilience, especially in the post-pandemic scenario.

The participants talk about the need for integrating digital tools through digital innovation and entrepreneurship, for creating a more robust and inclusive economy. The discussions delved on the following questions:

- How can the organized efforts of public-private partnerships protect rural consumers from policies and practices that infringe consumer rights to pursue fair business practices?

- How do we facilitate digital access to support rural communities and businesses?

- How can the Government reforms build an enabling environment for rural consumers and businesses?

The insights from the experts helped learn about the drivers of digital entrepreneurship, understand the challenges faced by digital entrepreneurs and rural consumers, and obtain insights on e-governance policies and potential long-term strategies.

Neelam Chhiber talked about the need to devise digital toolkits and leverage digital technology to empower both the Small and Midsize Businesses (SMBs), especially those owned by women entrepreneurs, and the primary producers, who are the backbone of these business innovations. **Anil Bharadwa**j pointed out that the SMBs are not a homogenous unit, and need different approaches depending on their varied scope and capacities. He identified the issue of compliance burden among other systemic reasons for the large number of small or sub-optimal SMBs in India. **Naghma Mulla** detailed the two initiatives - Grassroots, Resilience, Ownership and Wellness (GROW) Fund and UdyamStree, undertaken to empower micro and nano women entrepreneurs. She stressed on the point that rather than putting the onus on the local communities to find solutions, the big and established NGOs should engage more with smaller and struggling NGOs, and help facilitate their growth and sustainability. **Madan Padaki** highlighted three of his initiatives - Global Alliance for Mass Entrepreneurship (GAME), Head Held

High (HHH) Foundation, and 1Bridge, all of which work towards the same goal of building a mass entrepreneurship movement in India.

Chapter 6

Integrating Primary Producers into the Value Chain

Neelam Chhiber

In the conversations that take place in policy circles amongst various stakeholders on ways to kick-start the economy during the Covid-19 pandemic, especially with respect to Small and Midsize Businesses (SMBs), the issue of technology comes to the forefront. There are various ways and means suggested to leverage technology among the SMBs for them to scale up. Digital technology, in this context, is considered one of the most important technologies that is capable of providing immense opportunities to people, especially in rural India. It is the only way people can continue to live in rural India without having to migrate to the cities for livelihood. Digital technology can be an important tool to handhold aspiring entrepreneurs to set up their enterprises. Through training, people can be empowered to be able to own and run their enterprises.

Furthermore, digital technology also instills confidence among women entrepreneurs to engage with their communities as an equal participant. For instance, a woman who owns a smartphone and conducts her business online is perceived very differently in her own household. There are multiple examples of collectives that used digital technology to keep businesses afloat during the pandemic. One such platform is Creative Dignity, which is a voluntary network alliance that has brought together artisans, creative producers, small enterprises, NGOs, and market players like Okhai and iTokri on the same platform. During the pandemic,

this collective took the assistance of students to help artisans create digital catalogs. These catalogs were then showcased on all the platforms of these market players. It has allowed consumers to access the catalogs and interact with the producers directly.

Another platform is Covid Livelihoods Coalition (CoLive), which is a multi-sectoral engagement of 84 grassroots organizations that was launched during the second wave of the pandemic, to catalyze the activation of coordinated emergency response systems that can transition to economic recovery. The organizations that are part of the collective are farm-based, which includes creative manufacturing, oceans that comprise fishing communities, and forests inhabited by the indigenous forest dwelling communities. These grassroots organizations have a total reach of 25 million households. However, it must be noted that not everyone wants to be part of a collective, and thus the network has also started to focus on value addition. It has started with six value chains - spices, non-timber forest produce, bamboo, herbal and personal care, and handlooms. It is found that the primary producer needs access to value addition, which the entrepreneur often does not provide; digital technology becomes important in this situation.

In a global marketplace, digital technology provides traceability for the customers. The consumer expects to know where and how the products are manufactured and secured. They are interested in having access to a traceable supply chain. Here, digital technology comes in handy, and ensures direct access of the consumer to the manufacturer, which has been the modus operandi earlier for instance, in Dastkar bazaar. It filters out the intermediaries, and thus the value reaches the primary producer, who are economically vulnerable, especially the women, artisans and manufacturers directly. Digital technology is the easiest way for traceability or rather traceability is only possible because of digital technology.

One issue that remains to be resolved, however, is that once one begins to work with a large pool of primary producers, say in millions, using digital technology; marketing for them separately, and promoting them through Facebook or Instagram pages for all the artisans becomes a tiresome process. There is thus a need

for some kind of aggregation that would cut down the costs of marketing for millions of artisans, which would in turn be more user-friendly and efficient for the consumers. The digital catalogs that are made for different artisans should be located in one platform instead of creating millions of separate Facebook pages. The other challenge is to build inclusive digital toolkits that would ensure traceability so that the primary producers are compensated adequately by the entrepreneurs for their work.

About 2 years ago, a total of 25 entrepreneurs were funded and taught a digital marketing course, out of which half of them dropped out midway because they were unable to foresee how the said course would benefit their businesses.

Chapter 7

The Impact of Small and Medium Enterprises on Indian Economy

Anil Bhardwaj

The Indian economy has a very large number of Small and Midsize Businesses (SMBs). However, not all these enterprises are of equal size or have equal access to resources. So, whenever there is a discussion on the SMBs, there is a need to look at different segments of the SMBs to arrive at interventions that would be beneficial for their particular requirements. Out of 10 million enterprises, which are registered with the Goods and Services Tax (GST) or 60 million enterprises that are referred to as Micro, Small and Medium Enterprises (MSMEs), only 2% or around 200,000 odd enterprises use technologies in all their operations like designing, accounting, Enterprise Resource Planning (ERP), etc. This is a very small segment at the top of the pyramid. Furthermore, these are the enterprises, which are comparatively better organized, have their own place of work and are registered at least with the local authorities, or with the buyer-supplier chain, or with a bank account if not with the GST. The rest of 30-40 million enterprises sit at the bottom of the pyramid, and are either excluded from using formal technology, or due to circumstances like lack of access to electricity, finance, markets, etc. These enterprises have been unable to scale up and continue to work at the sub-optimal level.

One of the reasons for enterprises in India to remain small is the regulatory and compliance burden. Most of these enterprises that are located in urban or semi-urban areas find it extremely difficult

to find affordable and approved commercial/industrial spaces. The zoning laws in most Indian cities assign different areas for different activities, namely residential, commercial, industrial, etc. Start-ups typically sprout from home (even garages); it is not feasible to set-up an enterprise in authorized approved areas because the space is too expensive. However, the authorities treat doing business from home as if the property were 'commercial' and impose commercial property tax. Similarly, the electricity suppliers also treat these activities as 'commercial' and charge higher rates. To avoid the excessive burden, most micro-enterprises try working in incognito mode. Even in cases where they find an authorized space and intend to scale up, other regulatory challenges confront them. The compliance burden laws like the Companies Act, Income Tax, GST, Labour Laws, etc. become onerous. The micro-enterprises, therefore, mostly prefer to remain small. The other reason is gender bias or patriarchal bias that exists in our society. Most of the properties in our society are in the name of the male members of the family, and thus women find it extremely difficult to raise funds without collateral security. It so happens that if a banker is to give funds among two similar aged people of two different genders, the banker assumes that the woman would get married and the debt might not get recovered, and thus would decline the application filed by the woman. Here, we need an efficient and ubiquitous system, wherein there is a need for behavioral change in the society as well.

Due to these structural, social and attitudinal reasons, most of the enterprises in India remain very small or sub-optimal. It is in this context that the Chief Economic Advisor (CEA) in his report in 2019 is said to have stated that most of the MSMEs in India are 'dwarfs,' and that most remain very small compared to global standards. However, it does not mean that there are no opportunities for the SMBs to scale up. Technological and social media platforms like Facebook are promising in reducing the costs of reaching out to potential customers. The service sector enterprises offering higher customization can scale up in a short span of time. While the rate of scaling up is not fast in the manufacturing sector, they could even expand their markets with better outreach and customization.

Social media plays an important role in the sectors where customization is the key, and an entrepreneur is able to introduce products and services to satisfy the particular needs of different segments of the population. It has enabled many entrepreneurs to scale up at an unprecedented speed. It is, therefore, not enough for policy makers and multilateral agencies to just fund development projects. There is a need to allot and generate a separate fund for technical assistance as well. This would enable capacity building for both the entrepreneurial class and the institutions.

> *The reality is that almost every woman, or every small entrepreneur in rural India, does not have exclusive access to a smartphone because one phone is shared within most families.*

Chapter 8

Enhancing Participation of Women Entrepreneurs in Rural India

Naghma Mulla

There are two initiatives that were taken in 2021 – one is, preparation for the Grassroots, Resilience, Ownership and Wellness (GROW) Fund, and the other is called UdyamStree. The latter initiative addresses the requirements of the women entrepreneurs, who run micro and nano-enterprises. A landscape study[1] was conducted to understand – what are the impediments, and the reasons for lesser participation and growth of women entrepreneurs? The data revealed that only 18% of India's entrepreneur business market includes women, and they earn as little as Rs. 5,000 per month. The survey and landscape study were carried out by speaking to 1,200 women, with the aim to understand what deters them from becoming entrepreneurs, and what helps those who are able to succeed. Additionally, we spoke to small Non-Governmental Organizations (NGOs) and social enterprises for the GROW Fund, to understand what holds them back from pursuing a career in entrepreneurship. There were remarkable similarities when it came to understanding what hinders the growth and participation of women entrepreneurs in rural India.

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[1] "To address the burgeoning problems that hinder women's entrepreneurial journeys and initiate dialogues on the urgency of developing a progressive ecosystem for women entrepreneurs, the EdelGive Foundation curated an exclusive webinar for the launch event of 'Landscape Study on Women Entrepreneurship' -- 'Women's Role for an Atmanirbhar Bharat - The Untapped Potential and Role of Women's Entrepreneurial Spirit'.", accessed on May 20, 2022, https://udyamstree.in/landscape-study-on-women-entrepreneurship/

The expectation from the Small and Medium Enterprises (SMEs) and small NGOs has been that the entrepreneurs should have a grip on their team, have an understanding of budgeting, should be digital savvy, and have the required skill set for a business to grow. The challenges that appear when we are thinking in terms of this segment of people as well as institutions are: First, the lack of ability; and second, the specificities of social norms and cultural contexts that govern them. Most of them are battling complexes because of what they are being told every day; because there is a constant tension within families, with the neighbors, and the Government while trying to lead a life one day at a time. This is a crucial aspect, which must be factored in when we expect them to show results in relation to our objectives. To achieve the vision of an ecosystem, we must have clarity on how the food chain moves, or how the ecosystem itself is responsible for contributing to their challenges.

The women respondents pointed to the ways that would promote change and growth: First, the role of a peer group is crucial. When you bring two or three people together, especially women; they learn and share from each other on a real time basis, which no other ecosystem can provide; second, there is a need for a role model or a mentor, who has already crossed the hurdles. Women will gain confidence this way, and learn without having someone tell them what to do; and third, the awareness of the market in terms of what is already available out there, which is mostly lacking at present. Most women are not aware that there are schemes that cater to them. Out of 1,200, only 10% of the women respondents knew that there was a facilitation from the Government, out of which only 1% of the women respondents acted on it; the same is the case with the non-profit sector.Coming to technology, the concept of what technology looks like is so vague and far-fetched that people get intimidated by it. Most people, therefore, find makeshift ways to do the work offline, in order to compensate for the inability to work online. The reality is that almost every woman, or every small entrepreneur in rural India, does not have exclusive access to a smartphone because one phone is shared within most families. Given this context, when we think of small enterprises or small NGOs in any form, the onus

of bringing change and growth should not fall on them. Moreover, a limitation arises when we club similar people together. It is high time that we break away from segments and bring on board those who have crossed a certain hurdle, and pump that energy back into the ecosystem. It is also important to ask: How many large NGOs are in conversation with the smaller NGOs? The acquired knowledge is not imparted to the rest of the community, be it in small enterprises, or small NGOs. The outcome is that we are left with 10 large NGOs and 80,000 small NGOs; the same is the case with the field of entrepreneurship.

The two experiences have been remarkable in terms of the extent of success whether it is one's pursuit of a career in entrepreneurship, or in the non-profit sector; because it is finally going to impact the lives of people we are all talking about, i.e., the most vulnerable population. When we were planning for growth, we ensured that English was not used as a medium of communication. While the paperwork was in English, we communicated in 10 different regional languages. We organized webinars in Hindi as a medium of communication, and few other regional languages to get people on board thus making it relatable for them. The biggest learning out of launching the GROW Fund is that no matter how well structured you are, the people are so used to being ignored that they will not believe that something good will come out of it. We had to organize 12 micro-webinars, repeating the same thing three times a week, stating that the fund is for them, and that if they faced any problem, we would readily help them in resolving it. We had to make 700 calls to people who thought that the form was too difficult to fill. After repeated attempts to convince people to take the fund and start their career in entrepreneurship, we managed to get 2,300 registrations done. We started with 13 outreach partners and by the time it ended, we had 20 of them. The value of enablement, therefore, needs to be prioritized over technology, and when that is achieved, technology can enable dissemination and communication. It should not be the case that while we are thinking in terms of using Management Information Systems (MIS), the imagination of people is limited to Facebook. To take an example, during the Covid-19 pandemic

national lockdown, the small NGOs had no idea about the large NGOs such as Ketto, Milaap, or GiveIndia. In the first week, they noticed that a fundraising campaign was set up in the neighboring village by Ketto or GiveIndia, where a sum of Rs. 50,000 was raised in two days. Consequently, in the next two months, the small NGOs had many fundraising campaigns lined up. It never struck their imagination earlier whether this option was available or feasible for them. It is, therefore, needless to say that technology is extremely important and is useful for people, however, it will reach its full potential only when we focus on making people in rural India believe that it is good enough for them, and that it will bring change and growth in their lives.

Coming to how Facebook can address these challenges, this platform can provide people the scope to feel pride in being identified as competent and capable beings with achievable goals. Once we spoke to 1,200 women as part of the landscape study, we went through a few NGOs and identified around 8-9 women micro-entrepreneurs. I had a 20-minute conversation with one of these women, and posted it on social media, which received a lot of traction because this woman micro-entrepreneur became the uncontested hero, which lifted her story, and led to her getting more followers and viewership. It is important that women are part of groups, wherein they can highlight stories as the story of the month, and make it accessible for their families, communities, and clients to watch. The biggest accomplishment for those who are deprived and have lesser opportunities, is to provide them with the feeling of pride; they will run miles with it! The social media industry provides that opportunity, and Facebook especially, knows how to do it better than anyone else. This would push people to participate more, as it reinforces confidence in them to pursue a career in entrepreneurship. To take another example, when Brut creates a 3-minute video, no matter how unknown the person is, it changes the world for them; it is a smart way of storytelling. Social media is a powerful means to enable these stories of success, which in turn will inspire many others from the margins, to pursue realistic goals either in the field of entrepreneurship or the non-profit sector.

Chapter 9

Building a Mass Entrepreneurship Movement in India

Madan Padaki

The Global Alliance for Mass Entrepreneurship (GAME), which is a network of people from the Government, civil society, and business field, works towards building a mass entrepreneurship movement. The Head Held High (HHH) Foundation focuses on initiatives aimed at transforming rural youth into work-ready entrepreneurs. The 1Bridge is a platform that engages with village-based Kirana store owners and other entrepreneurs alike, with an aim to facilitate these small entrepreneurs with access, choice, and convenience. The approaches and perspectives adopted in all these endeavors are strikingly similar. It is a well-known fact that more than 95% of the Small and Mid-size Enterprises (SME) registered are less than 3-member shops, which is one of the main challenges the GAME is trying to address: How can we have SMEs grow beyond the one or two people that these small entrepreneurs end up hiring?

There is a massive skewness in terms of the number of people the sector employs vis-à-vis the potential that it holds. When we look at it from a rural or a small entrepreneur's perspective, there are three things that pan out: First, how do you infuse aspirations and inculcate a mindset among entrepreneurs to drive change and sustainable development?; second, how do we convert necessity-driven entrepreneurship to opportunity-driven entrepreneurship? Several entrepreneurs, we have come across, say – "This is the way

it has been and this is the way it will be. As long as I can survive, I am okay"; and third, how do we take to these people, stories of hundreds of entrepreneurs who are out there, and have braved the odds and succeeded?

No entrepreneur wakes up in the morning and makes a checklist, thinking: 'Today, I must work on my team, or focus on aspects related to technology, social media, or law'. For him/her, a day's goal is about expanding one's customer base, and making more money. How do we couch this aspect in the language of growth? Having engaged with the question of language at GAME or 1Bridge, we see that there is a stark gap between the vision and the current reality because we seem to be speaking to the entrepreneurs from 'our' perspective rather than speaking from their perspective to see what could potentially unlock their growth. Overall, it is important to understand what growth means from the lens of the SMBs. To take an example, about 2 years ago, a total of 25 entrepreneurs were funded and taught a digital marketing course, out of which half of them dropped out midway because they were unable to foresee how the said course would benefit their businesses. They either felt that it was a waste of their time, or that they were unable to see a connection between the learning outcomes of the course and their profession.

The results of GAME's Xcelerator Bengaluru programme in Bangalore, and Xcelerator Ludhiana - Sadda Karobaar, Punjab Di Shaan programme in Punjab, indicated that a large percentage of learning is influenced by peer networks. When there are twenty participants in a class, and they listen to a motivational speaker on sales, or have an insightful session on customer retention, cash, etc., these participants, at the end of the day, gain a bout of confidence that he/she/they can achieve the same goals. How do we then create local peer networks and ecosystems that are not designed using the top-down approach? How do we support local peer groups, and drive these conversations forward? The only way it is going to work and show impactful results is when these entrepreneurs engage and hear it from someone they know and trust. This approach has a higher chance of success, and can be achieved through a 100x more powerful campaign that we can facilitate in

rolling it out in an organic and sustainable manner. The challenge before us is to take these ideas to the grassroots without influencing them, and facilitate in designing a model in such a way that ignites the mindsets, realizes the potential of growth, and works towards forming strong networks of entrepreneurs at panchayat or tehsil level, and ultimately, ecosystems that provide us a platform to explore and carry out various different kinds of experimentations to find a way forward.

For instance, we could think of leveraging the strengths of platforms like Facebook and WhatsApp, whereby role models are created at a local level. Let us take 254,000 Gram panchayats, or around 7,000 tehsils that exist in the country. Can we celebrate entrepreneurs like the ones that we saw at the local level, and facilitate them to inspire many others? This is a very much doable initiative, given the scale and depth, which platforms like Facebook and WhatsApp carry. Further, what tools can we develop online to enable entrepreneurs to use them in a lucid manner? The platforms such as WhatsApp and Facebook are mutually interchangeable terms for the internet for most people in rural India. Given the interfaces of messenger, WhatsApp bots, and the SME model, how can they make the lives of entrepreneurs easier? It should get to a place where the entrepreneurs feel hassle-free and own it up with ease and confidence. We must stick to the language of growth, and talk about how pursuing such an endeavor would reduce costs and increase productivity. At GAME, we are focusing our entire work on promoting the ease of doing business. In Punjab, there are 1,100 instances where an entrepreneur could get jailed; not that they have been jailed, but it remains to be an impending threat, when an inspector randomly shows up to their factory and threatens them with jail time. What can we do together to make it easier for an entrepreneur to grow from a compliance standpoint, and use technology to get empowered at an ecosystem level?

Strategic Recommendations

Digital Citizen, Rural Consumer and Ease of Governance

Micro, Small and Medium Enterprises (MSMEs) play a major role in providing livelihoods and contributing to the production of services and goods in India. The revised definition of MSME by the Central Government in response to the Covid-19 pandemic is as follows:

"(i) a micro enterprise, where the investment in Plant and Machinery or Equipment does not exceed one crore rupees and turnover does not exceed five crore rupees;

(ii) a small enterprise, where the investment in Plant and Machinery or Equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees;

(iii) a medium enterprise, where the investment in Plant and Machinery or Equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees"

India has approximately 6.3 crore MSMEs as per the statistics presented by the Ministry of MSME[1]. The MSME sector contributes about 30% of the GDP through national and international trade. As per the National Sample Survey (73rd round) conducted during the period 2015-2016, the MSME sector has created 11.10 crore jobs

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1 "Indian MSME Industry Analysis", accessed on May 23, 2022, https://www.ibef.org/industry/msme-presentation

as well[2]. However, the Covid-19 pandemic has been devastating to this sector. A survey by the All India Manufacturers' Organization (AIMO) among 5,000 MSMEs in March 2020, had mentioned that 71% of MSMEs were unable to pay salaries to their employees. As per a survey of 1,525 enterprises undertaken by the International Labour Organization (ILO) in October 2020, 47% of the respondents mentioned that their businesses were temporarily shut down. The key impacts of the pandemic were reduced availability of workers, Government's suspension of operations, inability to pay wages and salaries, and the reduced demand for workforce. 47% of the respondents faced difficulties with payments of wages and social security. 43.1% of the respondents faced difficulty with repayment of loans, while 38% of the respondents struggled with paying house rent. Many of these MSMEs were already reeling under the pressure of demonetization and Goods and Services Tax (GST)[3].

As per a survey[4] of 250 small business owners conducted by Dun & Bradstreet in the last quarter of 2020, 54% of the respondents managed to reduce operational costs through digitization of daily activities. 51% of the respondents found that the adoption of new technologies, and digitization overall has enhanced their competitive positioning in the market. According to a study conducted in June 2020 by Endurance International Group, 30% of MSMEs surveyed started a business website, or enabled e-commerce functionality since the lockdown started. More than 50% of the respondents embraced video conferencing tools and WhatsApp to keep business running during these turbulent times. However, this still leaves a significant majority behind. According to this survey, the lack of technical skills and perceived costs of web development are the major challenges for MSMEs.

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2 "Report Titled "Key Indicators of Unincorporated Non-Agricultural Enterprises (Excluding Construction) in India" Released by NSSO", accessed on May 23, 2022, https://pib.gov.in/newsite/printrelease.aspx?relid=166982
3 "Situation analysis on the COVID-19 pandemic's impact on enterprises and workers in the formal and informal economy in India", accessed on May 23, 2022, https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_798079.pdf
4 "Impact of COVID-19 on Small Businesses in India and the Way Ahead", accessed on May 23, 2022, https://www.dnb.co.in/file/reports/Whitepaper_Impact-of-COVID-19-on-Small-Businesses.pdf

The number of user base of social media platforms in India as of February 2021, is as follows: WhatsApp - 530 million; YouTube users - 448 million; Facebook users - 410 million; Instagram users - 210 million; and Twitter users - 175 million[5]. The question that needs to be asked is: How do we convert these spaces into venues for furthering digital empowerment?

Madhu Sirohi, Head of Policy Programs and Outreach, Facebook (Meta) India, explained how Facebook, through mentorship and policy programs, supports SMBs. For small businesses, Facebook provides an easy and cost-effective way of advertising, with a high reach to the target audience. Facebook's business flagship programme focuses on getting women online, helping them reach their economic potential online, while equipping them with tools for active monitoring, connecting, mentoring, and skilling. During the Covid-19 pandemic, Facebook extended a support of 5 million USD to the Indian entrepreneurs, which came in the form of both cash and advertising credit. **Osama Manzar** observed that getting into technology for MSMEs is investing into the unknown. Thus, a significant amount of handholding is required, and as such would need larger funding at both regional and national level.

Madan Padaki asked several pertinent questions: How do we bring technology to the rural youth entrepreneurs, including the village-based Kirana owners? How can we support micro-enterprises to grow beyond the 1-2 employees that they hire usually? How do we convert necessity-driven digitization to opportunity-driven digitization? How do we bring inspiring stories to them so as to overcome barriers? How do we celebrate entrepreneurs and create relatable role models at the local level? He observed that a small entrepreneur thinks in terms of number of customers, and not strategies. To appeal to them, facilitators have to talk in terms of growth, and not in terms of technology, or social media. Further, it has been observed that most of the learning happens through

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5 "Government reveals stats on social media users, WhatsApp leads while YouTube beats Facebook, Instagram", accessed on May 23, 2022, https://www.indiatoday.in/technology/news/story/government-reveals-stats-on-social-media-users-whatsapp-leads-while-youtube-beats-facebook-instagram-1773021-2021-02-25

peers. The following question then is: How do we create local peer groups and ecosystems that support entrepreneurs? How do we ignite mindsets, and facilitate strong local ecosystems that provide space for various experimentations?

Neelam Chhiber observed that there is an urgent need to leverage technology among small businesses, and digital is the only go forward for all. Collectives provide strength, and therefore, it is important to build collectives to train and empower women entrepreneurs. **Naghma Mulla** spoke about the different efforts required to catalyze the development of SMBs and social enterprises. She pointed out that only 20.37% of the MSMEs are owned by women compared to the male ownership of 79.63%. The average incomes of women-owned enterprises are low as well. The lack of access to digital devices, lack of technical skills, overwhelming social norms embedded in patriarchal structures, and the contexts from where they come from, stand in the way of achieving their true potential. It is, therefore, important to ensure that peer groups are formed, and relatable role models can share experiences to inspire these women. There is an urgent need to reach out to them, appreciate and affirm their value, and build their confidence.

Osama Manzar posed the question: What is to be done? He talked about how DEF created websites for 6,000 small NGOs, however, 80% of them did not renew the content as they thought the photographs they took were not good for the website. Thus, it is very important to contextualize technology. Moreover, small NGOs tend to believe that securing online funding is impossible. Thus, there is an urgent need to also make the successful 20% of the women entrepreneurs, become an example for the remaining 80% women.

Anil Bhardwaj observed that the level of digital exclusion in SMBs is very high. The segments that are working with cutting edge IT may be 2% (~200,000) on the top of the pyramid. However, the bottom of the pyramid is excluded either by choice, or circumstances. If we talk about comparatively organized enterprises with their own workspaces, and are registered at least with the

local authorities, they have been pushed into the system forced by regulatory authorities such as GST. If they make transactions, they are forced to use technology on smartphones/fin-tech with ease, but that still leaves behind 30 to 40 million organizations that do not use technology. It is difficult for small organizations to grow in India beyond a point, under the strict regulatory regime. Once organizations cross a certain level, they are forced to comply with GST. He also noted that women entrepreneurs are further constrained by patriarchy.

For many people in rural India, the Internet is synonymous with WhatsApp and Facebook. Promoting WhatsApp chatbots would be an important step in this direction. Another significant move would be to support organizations with compliance. **Neelam Chhiber** proposed that building social media profiles for each and every artisan may not be possible. She also opined that free/subsidized advertisement would be helpful. Further, we also need to work with reasonably well-off entrepreneurs so that their value chains become more inclusive of smaller entrepreneurs, which in turn facilitates traceability. **Naghma Mulla** suggested that having the stories of successful entrepreneurs highlighted in social media platforms, would make them heroes in their environment, and further inspire many others. This approach would serve as positive reinforcement and encourage participation.

Anil Bhardwaj stressed that it is critical to provide small organizations technical assistance for capacity development. He suggested that Facebook (Meta) can reach out to local communities and SHGs so that they can gain experience and confidence. Other stakeholders can also be included in the process so that the local communities will be enriched by new perspectives and approaches. Wrapping up the conversation, **Madhu Sirohi** observed that it is important to manage expectations. For example, social media may not be useful to expand the customer base of a small Kirana shop owner, while it can help a pickle maker go viral. However, there are ways social media can be useful such as inspiring, showcasing case studies, and removing barriers for women entrepreneurs/small enterprises to be digital. She also acknowledged that while these are all user-friendly technologies, they can have detrimental

impacts too.

We must, therefore, employ language in such a way that appeals to small and micro-entrepreneurs, and that clearly demonstrates the connection between digitization, and their business goals. We should celebrate success stories of people they can identify with, to inspire confidence in them. It is also important to contextualize technology so that they are not intimidated by it. There is an urgent need to enable ecosystems of support at the grassroots level that inspires, connects, and provides a space for experimentation. We should focus on forming local collectives, and facilitate peer learning. Mentoring systems can also be built in such spaces, where role models are created at the local level. This can be achieved by tying up the existing women collectives and SHGs. This concept can also be taken digitally by providing digital spaces for groups of artisans to showcase their work, as seen in the initiative of the Creative Dignity platform.

Getting fund grants to support Indian MSMEs is an essential step, considering the size of Facebook (Meta) user base, and the potential for expansion, with a focus on rural India and micro-enterprises. Further, pairing youth with artisans is one way to support the elderly among the artisanal community, to become digitally savvy. Grassroots fellowships can also be constituted to achieve the same. We must also work towards enabling MSME entrepreneurs to build traceability and value addition into their programme. Using the power of features such as WhatsApp chatbots, we can support organizations with compliance; for instance, training in GST compliance. Facebook can also make available other online tools that will make compliance easier. Free or subsidized advertising opportunities should be provided for small entrepreneurs and their collectives. To reiterate, featuring women entrepreneurs and collectives periodically, and celebrating their achievements would inspire many others to pursue careers in entrepreneurship. It can even be three minutes clips so that it will not be overwhelming to the newly digitally literate. The most important of it all, it is very important to be realistic and manage expectations, as the benefits and challenges would vary according to the types of businesses and their scopes.

The number of user base of social media platforms in India as of February 2021, is as follows: WhatsApp - 530 million; YouTube users - 448 million; Facebook users - 410 million; Instagram users - 210 million; and Twitter users - 175 million[30]. The question that needs to be asked is: How do we convert these spaces into venues for furthering digital empowerment?

STRATEGIC RECOMMENDATIONS |

PART III

Accelerating Digital Inclusion
for the Unconnected

The journey to digital maturity and unlocking digital value is not an easy one. There are many challenges that the rural entrepreneurial systems face along the way. Through the series of waves of the Covid-19 pandemic, the importance of digitization is now more prevalent than ever. The concept of digital transformation being thought of as a competitive edge is now a need for economic and business resilience. This thematic session brought forth discussions about how social entrepreneurs are adapting approaches, tools, and technologies to mitigate economic

promote digital inclusion, especially for those who continue to remain unconnected. The two acclaimed experts explored the impact of the pandemic in the areas of economic and digital empowerment, and how CSOs and the leading Thinkers from the Government, Tech Industry, Academia, etc., are responding to these challenges in practical ways.

The discussions revolved around devising potential strategies to promote the inclusion of women and youth in the digital space, and facilitate a digital-based economy that provides job opportunities for building a robust post-pandemic economy. Abhishek Singh detailed extensively about all the schemes and initiatives introduced by the Central Government and its Digital India machinery to promote digital inclusion among those who lack access to digital tools and resources. He explained in detail about the policy particulars, and the required digital apparatus that is being meticulously built by the Government to ensure an effective implementation on ground. Amit Bhatia pointed out two determining factors - digital depth and digital value - pertinent to reaching the goal of digital inclusion and digital transformation. He called attention to the need for analyzing the impact of digital initiatives by measuring the digital value generated from it, in terms of the overall growth and development of people and their communities, especially in rural India.

Chapter 10

The Making of Digital India

Abhishek Singh

The pace of digital initiatives undertaken and the transforming digital landscape in India, saw a rapid increase in the last few years, more so with the advent of the Covid-19 pandemic crisis. More reliance has been put on the use of digital technology for equitable access to healthcare, agriculture, and education. There have been consistent efforts to strengthen digital infrastructure, especially in rural India to empower the farmers digitally and facilitate them to access livelihood opportunities, and use e-consultation services for securing commodities in daily life, including education, healthcare, agriculture, etc. However, the challenge remains to include those in the digital ecosystem, who are still digitally excluded due to lack of connectivity, or lack of access to a device, or in many instances, lack of ability to operate a device despite having connectivity and access to it.

The first challenge of lack of connectivity is being tackled by several interventions, most notably the National e-Governance Plan (NeGP), which in its initial formulation, was designed to provide assisted access, but eventually led to the genesis of around 100,000 Common Service Centers (CSCs) across the country. Digital India enhanced its scale and scope. Presently, the number of CSCs has increased to over 460,000, having been set up at Gram Panchayat-level across villages in India. Through the CSCs, people can avail services even if they do not have connectivity, or access to a device,

or if they lack the ability to operate devices. This provision of assisted access is a model that aims to empower people to utilize e-services even in the rural areas. The BharatNet project also seeks to connect every Gram Panchayat with fiber-based connectivity. The Government of India (GoI) has announced its extension to more than 600,000 villages across the country from their earlier target of reaching 250,000 panchayats. Out of these panchayats, around 177,000 are connected with Optical fiber and have installed equipment. Moreover, the Department of Telecommunication has decided to implement the BharatNet through a public-private partnership model to ensure its effective implementation.

At the panchayat-level, fiber-based connectivity is meant to connect the primary institutions including the primary/middle/high schools, sub-centers or the Primary Health Centers (PHCs), the Anganwadi Centers and the Panchayat Centers. For domestic use, fiber-connectivity can also be made available at homes through a program called Ghar Tak Fiber (Fiber to the Home (FTTH)). However, the challenge in its implementation is to develop a business model that facilitates people to use these services. To accelerate connectivity in the villages, the Government came up with an innovative scheme called Prime Minister's WiFi Access Network Interface (PM-WANI), which enables those equipped with WiFi connectivity at a particular location, to provide connectivity to other residents in their localities. For instance, a bank, CSC, or a grocery store with connectivity can provide Wi-Fi connectivity to people in their vicinity, and charge it under the PM-WANI scheme. This scheme among other initiatives is an entrepreneurial model implemented by the Government to use, sell, buy, and leverage connectivity. The focus of this model is to fulfill the needs of the service providers, and enable them with a business model to set up internet connections at homes at an affordable price that is utilizable as a service similar to how Cable TVs were rolled out and operationalized by the private sector in which, the service providers would set up the connection and collect a monthly fee from its users. The need of the hour is to leverage the entrepreneurial spirit of the community by finding entrepreneurs at the village/panchayat levels who can run the CSCs and operationalize the fiber-based

connectivity in practice.

India has seen significant progress in terms of building a fast-paced, evolving, digital economy, which aims to create value and add meaning in its true sense, to people's lives especially those who are still struggling to avail the benefits of the digital ecosystem. In the health sector, for instance, the Ministry of Health and Family Affairs has initiated the eSanjeevani project as an integrated telemedicine solution. Prior to the Covid-19 pandemic, there existed a limited bandwidth that allowed systematic capacity of doing around 5,000 doctor-to-doctor consultations per day. With the advent of pandemic, there was a sudden demand for telemedicine, whereby doctors had to move online and provide teleconsultation to patients. A shift from doctor-to-doctor consultations to patient-doctor consultations ensued, wherein patients, who are looking for teleconsultation for their concerned illness, can log in to esanjeevaniopd.in and connect to a pool of doctors. More than 22 million people have been served through this service and 110,000 persons are taking benefits on a daily basis. The digital infrastructure and the whole digital system thus is constantly evolving to meet the demands of the same.

Another initiative, the Digital Health Mission or the Ayushman Bharat Health Mission launched by the Hon'ble Prime Minister, aims to create an entire digital backbone for healthcare, similar to Unified Payments Interface (UPI) for healthcare. As part of the digital healthcare mission, basic building blocks are being built, which include the doctor's registry, hospital registry, healthcare service provider registry, lab registry, pharmacy registry, etc. This would enable the people to be able to log in to these platforms and choose a doctor or health service provider of their choice, connect to them, pay the service charges through a UPI interface, and join consultation through the video conferencing medium. The doctor's prescription would be provided in an electronic health record format, and documented in Healthlock in the DigiLocker interface, a platform that uses technology to review and check the credentials of health service providers, and the medical bills and costs incurred, with the aim to ensure that the doctors are ensuring privacy of patients, and are not overcharging them for medical

services. This would also entail that if the doctor prescribes any medicines, the patients can place their order for the medicines from an e-pharmacy, which would also be integrated into the system. The basic building blocks of this system, equipped with sandboxes, have already been created by the GoI's National Health Authority (NHA). For private entrepreneurs and private service providers, Application Programming Interface (API) has been set up to integrate application software and services. Additionally, people will be provided with health IDs to ensure that all records from different hospitals are linked so that a patient can give access to one's health records to the health service provider, and get medical advice accordingly. The aim of digitizing health records is to make it efficient, convenient, and easily accessible for people, similar to how financial transactions in the form of UPI-based payments have become part of everyday life.

In the education sector, the already existing National Education Depository is being used to record and integrate 10th and 12th class students' certificates into the DigiLocker interface. Through this interface, any person who is authorized can verify the credentials of students. This mechanism has been used extensively and successfully in University admissions. To take an instance, during the Covid-19 pandemic, when shortlisted students were unable to physically pursue the University admission process in Delhi University (DU), API-based verification was adopted, thereby departing from the earlier system of submitting their mark sheets in a state-notarized paper format. This new system entails a digital verification of the mark sheets of 12th class students, who are seeking admission to undergraduate programmes at DU. As a result, around 100,000 students completed their admission process at DU without any paper trail. Similarly, for constable recruitment in Karnataka Police where 6-8 months were earlier spent for verifying mark sheets of the applicants, DigiLocker verification was adopted, thus saving several months of time in the recruitment cycle.

The academic certificates are now scaled up to include higher education certificates as well, including University documents, University transcripts, engineering certificates, medical certificates,

etc. All the records are entered in the DigiLocker interface as part of the National Academic Depository (NAD). A total of 1,418 universities to date have already been enrolled into this system. Additionally, the Academic Bank of Credits (ABC) would also be implemented at the national level as part of the latest National Education Policy (NEP) 2020, which is a digital storehouse that stores information on the credit points secured by students. This would further allow transfer of credits from one institution to another institution thus making it flexible for students to choose between credit programs and institutions at any time of their academic year.

GOI's National eGovernance Division (NeGD) formed a division called the India Enterprise Architecture (IndEA) to ensure the seamless implementation of Government initiatives across ministries, states and other bodies. In order to facilitate the Whole-of-Government (WAG) approach and the national public digital platform, IndEA has been upgraded to India Digital Ecosystem Architecture (InDEA). Under InDEA, public digital platforms in sectors, including Health, Education, Agriculture, Logistics, Tourism, MSME, etc., have been taken up. The emphasis is to integrate the existing Government applications through common architecture and APIs, and deliver a full range of services to stakeholders, primarily common citizens in a personalized and efficient manner. In the sphere of finance, the UPI interface has ensured that financial transactions are carried out seamlessly whether it is a transfer between individuals, or from one bank to another, without any service charge. The UPI system has been a game changing initiative for the financial sector, and has led to the growth of hundreds of thousands of operators in the private sector, who are offering their services on platforms, including Bharat Interface for Money (BHIM), Paytm, PhonePe, Google Pay, Postpe, etc.

Furthermore, the approach taken by the overarching Digital India Programme has been to reduce the compliance burden that is needed to offer various services, be it for the Government or the private sector. This program became a means to provide essential services based on the desire-centric market interests of customers.

The API interface, for instance, has allowed the (Know Your Customer) KYC verification by Government entities and private parties using the DigiLocker credentials. This has been approved by the Reserve Bank of India (RBI) and Securities and Exchange Board of India (SEBI) as well, and has now led to the genesis of institutions like the Industrial Credit and Investment Corporation of India Bank (ICICI) e-securities and other insurance service providers. These service providers are now using DigiLocker's KYC verification system for the authentication of customers digitally, thus saving the earlier KYC costs and helping them get more customers on board. Many of the unicorns or start-up companies are now using the Digilocker services too. The purpose of all these initiatives by the Government is to build an overall secure digital ecosystem that provides necessary and secure information to a service provider and allows them to use it to generate value. The Unified Mobile App for New-Age Governance (UMANG) has been made operational with an aim to realize mobile governance in the country, thereby, providing government and bill payment related services through a single mobile app. At present, 1,528 Government services from 285 departments and 20,558 bill payment services are operational. The plan is also to offer next-generation mobile services through Artificial Intelligence (AI)-enabled text and voice-bot.

Chapter 11

The Creation of a Digital Value System

Amit Bhatia

Digital reach is only one half of its journey in transforming the digital divide into digital inclusion. The fact that a person in rural India has access to a device, or even internet connectivity, is a problem half-solved. The other half of the problem, which has not been focused on as much, is if and how the parameters of digital depth and digital value are measured. Without accounting for the whole value system, it is not possible to deliver the anticipated synergies. Unless it reflects on a person's overall quality of life, there is no value in it. In the process of putting the value system in place, one would have to take into consideration the means available to not only catalyze the last mile connectivity, but to also make sure it has a foreseeable impact on people's lives. It is not just the roads that need to be built; the consequent outcomes of new initiatives for the overall development of Trade and Commerce, and its impact on people's lives and careers, will be important indicators to assess where we are in terms of digital inclusion. This would benefit the digital ecosystem, and in turn be one step closer to attaining a just society. This whole system approach will help achieve the objectives of digital inclusion.

To take an example, when the schools were shut down during the second wave, a friend in Delhi sent his domestic help, and her family members to Jharkhand, where they hailed from. He had given her a computer, and a basic training to use it, to ensure

that her daughter, Akanksha, stays committed and continues her education. He also asked her to set up her own bank account so that he is able to send her money directly; since he had been transferring the salary to her husband's account. Accordingly, they went to Jharkhand, and had access to both computer and internet connectivity. However, they were not able to make any applications work, and the child thereby could not attend school. Despite several efforts by villagers to make it work, it did not work, which brings us to the question whether owning a device and having connectivity is enough? If not, what do we do about it?

The digital divide is multi-faceted as we see it, operating on different levels - in telecom, rural and urban - governed by regional, gender, and socio-economic factors. A solution-focused approach should ensure that the process aimed at digital inclusion is enabling and empowering people in education, health, energy, and financial sectors. We should start thinking of impact in these terms - enhanced digital education, enhanced digital infrastructure such as data storage, data centers, content hosting, etc., and a reliable provision of a continuous electric power supply. More importantly, it is important to increase investment in digital sectors such as education technology (ed-tech), health technology (health-tech), agricultural technology (agri-tech), clean technology (clean-tech), financial technology (fin-tech), feminist technology (fem-tech) etc., all of which create digital depth and digital value, essential for an inclusive digital economy and society.

The Government has introduced several schemes and initiatives to meet the objectives of digital inclusion. For example, the Open Credit Enablement Network (OCEN) and the Open Network for Digital Commerce (ONDC) have created trading opportunities for people. It is important to incorporate the same approach while creating a business model for digital inclusion, whereby the whole system approach is undertaken, and more investment is made in the tech-for-good sectors. It is only when there is enough traffic in this connectivity that will create a digital ecosystem, whereby value will be created, and people's lives will change for the better. The growth and development in the sectors of agriculture, energy, healthcare, logistics, value in subsidy transfer, procurement, labor

market improvement, reduction in fragmentation of job market, etc., are crucial in building an inclusive democratic society. The investment in these sectors is essential to promoting digital inclusion as well. It is only when a business model is created, which invests in building bridges between the digitally excluded and the technology sector that it will serve those who do not have deep pockets. That would be the only way to realize the full potential of the digital ecosystem.

At a time when the private equity industry, and venture capital investment have emerged as potential sources of capital for the corporate sector, it is important to create alliances and make partners with these businesses, to be able to reach the last mile of digital inclusion. We must move away from the current focus, which is mostly about creating an oasis of welfare, and rather focus on creating oceans of replicable and scalable impact. We must bring impact into focus because only then can we drive the overall sustainability and profitability of digital inclusion. Many entrepreneurs and investors have engaged in seeding the idea of how businesses can be a force for good, and can create impact, which serves the community and satisfies societal needs sustainably. They also see merit in the idea of digital transformation. It is important to bring these people on board, who would want to fund the last mile connectivity. This will empower the small entrepreneurs, who can make sure that the devices are working, and value is created. That is when this country would realize the vision of Digital India, which aims to transform India into a digitally empowered society and knowledge economy.

The study of the impact, and especially of how business enterprises are changing their DNA, has revealed that half to two-thirds of investments are all made in big sectors such as the financial sector. For example, fin-tech is going to drive USD 350 billion revenue off the USD 500 billion revenue by 2030, and they have articulated their need for digital access. In education, the sector is going to achieve the target of USD 300 billion, out of which USD 160 billion will come through ed-tech in almost a decade. The same is the case with other sectors such as clean-tech, agri-tech, etc. The research is ongoing, however, the preliminary findings

reveal that trillions of dollars will be driven towards these sectors. It is necessary at this point, to create alliances with the private sector, especially startups who are bringing in investment into India at a very significant level. The access can only be provided by the Government to acquire a new customer, especially in rural India who are under-served. It is important, therefore, that the Government facilitates the unconnected population to become partners, and new business models get built to reach the last mile connectivity, while resolving the problems that come into play.

India has made tremendous progress on digitization of India. The entrepreneurial spirit and the zeal of the entrepreneurs in India to serve the under-served, is critical to innovation. There are two challenges at this juncture, which require attention. One challenge is the yardstick itself, which the Government uses to measure the outcomes of digitization; it does not measure the value of digitization in terms of the scale of financial, social, and personal growth in people's lives. The number of optical fibers laid, the number of telephone connections issued, or mobile phones/computers sold, are not a measure of either outcome, or impact. To take an example, the schools equipped with devices and connectivity, will not be connected in its true sense because there is no assessment of the learning outcomes. The first challenge, therefore, is to address and rectify - What is it that we are measuring? How can digital value be measured? In fact, the reason we do not measure impact is that it is hard to measure. A lot of this data appears at first glance to be qualitative, and cannot be processed. The second challenge lies in the fact that the focus of the current approach remains on how digital highways can be used for implementing large scale government schemes, instead of bringing in the private sector, which would empower the under-served, and find ways of seeking low-cost and affordable solutions. It would be a premature celebration if the puzzle is not solved in its entirety. It would be like putting in the micro-grids, but there is no power supply in the homes. The finish line, therefore, can be attained by the creation of the digital value system in its true sense.

Strategic Recommendations

Accelerating Digital Inclusion
for the Unconnected

There are two major challenges that stand in the way of achieving digital inclusion in India. The first challenge is the digital divide caused by lack of connectivity, lack of access to a device, lack of ability to operate a device, and a combination of many such factors, which contributes to the state of being unconnected, and deprives people of growth and development, especially those residing in rural India. The primary challenge is securing connectivity for people who want to pursue a career in business, and have digital access to entitlement, health, and education. As per a study undertaken by the Internet and Mobile Association of India (IAMAI), with the consulting company Kantar, 43% of the total population across urban and rural India were found to be active Internet users (spending an average of 1.8 hours daily) in 2020. However, this leaves behind a substantial population, who have no access to connectivity. The results also indicated that there is a considerable rural and urban divide, and gender divide in access as well. As per the report, while 67% of the urban population have access to the internet, only 31% of the rural population have access. Similarly, as per the Mobile Gender Gap report 2021, the disparity between genders in mobile internet usage in India is up to 33%. The second challenge is ensuring meaningful connectivity to those who are already connected, and bring opportunities to their lives. How many of those connected are able to generate digital value and digital depth, which in other words is the extent of

impact on people's lives in terms of their growth and development? The objectives of digital inclusion can, therefore, be met only when parameters such as digital value and digital depth become indicators of success.

It is especially pertinent to address these challenges as there has been an increased reliance on digital technologies in the Covid-19 pandemic era be it for healthcare, agriculture, or education. For instance, as per a study by Azim Premji Foundation, more than 60% of the children in public schools could not access online classes, which were held in 2020 during the pandemic. The study also revealed that in the initial stages, the digital divide also hampered the equitable access to vaccination.

Over the years, there have been many attempts by the Central Government to digitally include those unconnected; the most prominent among them being Digital India, a flagship programme of the Government of India. This programme provides assisted access through over 460,000 Common Services Centers (CSCs) spread across 250,000 gram panchayats in India. Bharat Net project is another project that connects panchayats with fiber-based connectivity. It strives to connect public institutions within the panchayats such as the health center, panchayat center, Common Resource Centers (CRCs), and schools to each other. It also has a provision to provide connection in upto five houses in each village using Ghar Tak fiber. PM WANI is another initiative aimed at inclusion that allows those having connectivity at a particular location, to provide Wi-Fi connectivity to others in their vicinity. It is important to make people aware of these schemes to increase access to connectivity. In this regard, local CSOs can play an important role in creating awareness, and expediting the implementation of Government initiatives.

However, the question of last mile connectivity is yet to be addressed. **Abhishek Singh** observed that it can be achieved only by leveraging the entrepreneurial spirit of the youth, who are operating CRCs, cyber cafes, etc. He, however, acknowledged that there are two limitations to this approach - firstly, the availability of proper round the clock 24x7 connectivity; and secondly, the

affordable and appropriate service-charges for consumers, as set up by the entrepreneurs. However, every utility service provider faces these implementation issues at village level. The question that needs to be asked is: How do we scale it up, so as to be able to provide services to the vast number of 'unconnected' in a short period of time and in an affordable manner?

Amit Bhatia highlighted the importance of shifting focus to digital depth and digital value, which would be a measure of tangible and significant improvements in education, health, finance, and energy. He opined that in order to achieve it, enhanced digital education, investments in digital infrastructure in terms of data storage, data centers, and continuous supply of electricity are required. It also necessitates increased investment in health-tech, agri-tech, fin-tech, clean-tech, ed-tech, and fem-tech, as these sectors would facilitate infrastructural support, and provide opportunities to pursue a career in entrepreneurship. This is the only way a digital value system in its true sense can be attained, and people's lives can change for better thus creating a sustainable digital ecosystem.

There are many efforts being put towards such value generation. For example, eSanjeevani, the telemedicine solution rolled out by the Ministry of Health and Family Welfare, supported by Digital India programme, has been a great success. Similarly, the DigiLocker system benefits students and employers alike, by enabling easy access and reducing the cost of Know Your Customer (KYC). **Osama Manzar** observed that conceptually, this would be the equivalent of the Government acting as a giant Application Programming Interface (API) enabler.

However, the importance of investing in the basic digital infrastructure to create value cannot be understated. As **Osama Manzar** pointed out, not all of the schools/health centers are connected. Micro, Small and Medium Enterprises (MSMEs) are still struggling to use digital medium meaningfully, while also struggling with paying Goods and Services Tax (GST). Moreover, patriarchal institutions and societal norms work against women's entrepreneurial pursuits, as seen in many places. Amit Bhatia

raised the critique that the Government still measures the output in terms of the amount of fiber laid, rather than its impact i.e., the value generated. He opined that it is digital value that is the finish line; digital access is just the start. There should be realistic tools in place to evaluate the impact or value. Further, to ensure that the digital pathways bring in value, the private sector should be roped in as a key player.

Osama Manzar summarized the session with the following questions:

How do we create a digital ecosystem that generates digital value and digital depth? What would be its building blocks, and what would it translate to, in terms of infrastructure, access, skills, and education, and its conversion to create an efficient life? How do we ensure connectivity, access to devices, and expand digital capacities across genders and geographies? How do we ensure that those connected are able to generate value in terms of people's access to health, finance, education, governance, and energy?

In this context, the following strategies can be devised: 1) we can adopt public institutions such as schools, health centers, etc. to ensure connectivity, and build the capacity of staff and the users to integrate digital with their capacity to function. For example, teachers can be trained to use digital learning tools, and the staff working in health centers can be trained to apply digital solutions for better health outcomes of the local communities; 2) training and support can be extended to grassroots entrepreneurs, who work in CRCs, cyber cafes, etc. to provide connectivity to the rest of the locality; 3) educated local youth can be recruited and given training to do the same; 4) the service provider, who would enable the service using the fiber, should be equipped with a business model including the ability to set up internet connections at home for an affordable price. This can be implemented in integration with the PM WANI scheme; similar to DEF's Wireless for Communities (W4C) scheme; 5) women should be recruited particularly to ensure that they also benefit from the scheme. We can set up grassroots centers in coordination with the existing CRCs or public institutions so that women, and youth generally, are trained to use digital, for

their growth and development; and 6) in areas where CRCs are not functional such as in tribal and fishing hamlets, and other remote areas, new centers can be set up. These centers should be equipped with television sets and digital equipment that enable the students to access online education. In these centers, women, and youth generally, can also be trained to use digital for livelihood purposes as well as to participate in Governance mechanisms.

Further, there is an urgent need to ensure device access and enhance digital capacities among women and girls from marginalized communities, including fisher and artisanal communities. In association with the CRCs, digital fellows can be selected, trained, and equipped with individual devices and digital skills. For instance, having access to smartphones will make marketing easier for fisher women. Finally, the most important task at hand is to ensure the digital safety of the newly connected, which would, in turn, help build a secure and sustainable digital ecosystem. The new digital literate must be given training to protect themselves from online fraud and cyber threats. The same precautions must be taken while introducing them to fin-tech and ed-tech especially, as these sectors have the potential to expose people to predatory and fraudulent practices.

PART IV

Emerging Dimensions of Rural Women Entrepreneurship

While there are several initiatives undertaken by the Government and Civil Society Organizations (CSOs), designed to help rural women get functional digital and financial literacy, there is no adequate information or guidance available to them. This has resulted in the lesser participation of rural women in the entrepreneurial field. Besides, there are problems with the policy definitions, as the women nano-entrepreneurs are clubbed under the category of micro-entrepreneurs or small entrepreneurs. Most rural women face exclusion from accessing digital devices

and digital skills. They do unpaid domestic work and thus have hardly any time left for personal and professional development. These women lack access to the Government schemes and policies owing to the gender, regional and socio-economic divides, and face exclusion from institutional financial systems as well[1].

In this context, this thematic session dealt with some critical questions:

- How do we address the underrepresentation of women in entrepreneurship with their low participation rate?

- How do we facilitate the growth and raise the levels of productivity in the industries where women are working in large numbers?

- Once nano-enterprises are established, what kind of interventions can help them scale up?

- In what ways can digital means and resources help to address these challenges?

- How do we tackle the patriarchal society that creates hurdles for women from seeking their career goals?

Geetika Dayal talked about the significance of building a mentorship program, whereby established women entrepreneurs from local communities, and from the cities can interact, train and instill confidence among rural women to pursue a career in entrepreneurship. She also highlights the significant contributions of organizations such as The Indus Entrepreneurs (TiE) and Self-Employed Women's Association (SEWA) towards empowerment of rural women entrepreneurs in India.

Sanchita Mitra pointed out that the definitions laid out by the Ministry of MSME do not differentiate between micro and nano-entrepreneurs, and that they both come under the definition of micro-enterprises. She highlights the need to define nano-entrepreneurs separately and develop key policies specifically

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1 "International Journal of Current Research, Vol. 11, Issue, 05, pp.4128-4132, May, 2019, accessed on May 27, 2022, https://www.journalcra.com/sites/default/files/is-sue-pdf/34756.pdf

to cater to their needs. She also sheds light on SEWA's model, which is designed in a way that incorporates the perspectives and sensibilities of rural women, and builds safe and secure networks to facilitate opportunities that are relatable, reliable and accessible to these women. Both the participants acknowledged the potential of digital technologies in altering the social and economical relations rooted in the feudal gender norms of Indian society.

> *Most rural women face exclusion from accessing digital devices and digital skills. They do unpaid domestic work and thus have hardly any time left for personal and professional development..*

Chapter 12

Avenues of Growth and Sustainability of Rural Women Entrepreneurs

Geetika Dayal

Several surveys and studies depict the reality of contemporary times where the share of participation of women entrepreneurs in the ecosystem of Small and Midsize Businesses (SMBs) has risen, especially in the last few years. It is revealed how in the case of women entrepreneurs, there are high returns on investment; accountability is higher, and so are the scales of growth and productivity. The digital-based rural entrepreneurship models are showing promising results in this direction. To create further impetus for the empowerment of women entrepreneurs, especially in rural India, there is a need to tackle several bottlenecks and challenges that impede the process. The number of women in the entrepreneurial field are very high, whereas they are not equipped with adequate financial resources required for sustenance and growth. While women entrepreneurs carry the entrepreneurial spirit and execute their works efficiently and effectively, there has been a high rate of failure because of the lack of access to necessary resources, awareness, training, and education in general. When multiple layers of complexities emerge in the rural ecosystem due to social and cultural factors, as in the case of rural women entrepreneurs, the challenges increase manifold. It is in this context that it becomes important to introduce digital business practices of SMBs and micro-enterprises among rural women entrepreneurs.

One of the main issues encountering rural women entrepreneurs

has been the lack of proper education and training to start either their businesses, or to scale it up to contribute effectively towards the creation of job opportunities. Here, the role of organizations such as The Indus Entrepreneurs (TiE) becomes crucial. TiE is a global organization dedicated to supporting the already established entrepreneurs as well as providing assistance to the aspiring and emerging entrepreneurs. By facilitating the start-ups with the required networking, knowledge, incubation process and financial aid, they become the cornerstone for sustainable development thus covering the whole value chain. The emerging sectors in India, which require support to accelerate and enhance entrepreneurship include education, healthcare, retail, food and food services, sports, and travel. These are thriving sectors, wherein professional businesses can be built and expanded to support entrepreneurs in rural areas, especially women entrepreneurs. To achieve the same, the first and foremost need is to identify people, collectives and organizations, who are engaged in these works at the grassroots level. This would entail connecting the emerging entrepreneurs at the grassroots level to technology, capital, tech industry, and established senior entrepreneurs in the field. Here, the work of organizations such as the Self-Employed Women's Association (SEWA) has been remarkable. While there is still a lot of work to be done in this direction, several women entrepreneurs are emerging in different sectors, and running successful and sustainable businesses.

Women entrepreneurs, especially in rural India do not identify as entrepreneurs, or take any credit for their contributions to the entrepreneurial field. As most women entrepreneurs fall in the lower bracket in how micro-entrepreneurs are defined, negligible attention is drawn to their specific requirements. To minimize this gap in access to resources and build confidence about rural women, there is a need to promote mentorship among local communities, which have hitherto been unconnected. Technology has become a big enabler in this process as it has now been adopted by people in their everyday lives. TiE, in this regard, is formulating a National Mentorship Platform (NMP) with global collaboration and Government support that would harness the intellectual pool

of senior entrepreneurs, who are leading successful businesses in contemporary times. It is important to note here that at times, it is not the senior members who are the most effective mentors to the emerging entrepreneurs. Those successful entrepreneurs who emerge from and operate in local contexts, and know the community from their personal experiences can often be more effective in mentoring the aspiring entrepreneurs. Building an experiential model that provides examples of successful entrepreneurs, who tackled real-life problems would be an important step in this direction. The end goal should be to empower rural women to pursue their businesses, which would in turn transform these women into job creators in their local settings. Thus, diverse kinds of mentorship programs are required to cater to the interests and needs of different entrepreneurs, as it would be different for aspiring entrepreneurs than for those who have already ventured in the field and would want to scale up further.

The target for NMP of TiE is to connect to 100,000 people across the country, identify regions where this program can be implemented, and connect them on a regular basis with mentors for both individual and group mentoring sessions. The important facet here is for the mentors to correctly identify the specific problems and issues that rural women entrepreneurs face so as to give them the most appropriate advice, guidance, and training. It needs to be a continuous process of engagement, wherein the right kind of mentor is identified, a regular feedback mechanism is devised by the mentor, and the rural women entrepreneurs are trained to adapt to the emerging challenges that come in their way, and are encouraged to pursue a career in entrepreneurship.

On the whole, the rural women who aspire to become entrepreneurs learn their skills from their experiences of working in the local markets. These women can successfully become entrepreneurs if they are equipped with proper access to education, training, information, financial resources, etc. It is equally crucial to create a safe environment that is conducive for rural women to utilize their community resources and become successful entrepreneurs. To reiterate, one of the examples of successful community-based approaches is the SEWA model, where women entrepreneurs

create businesses with the support of their families and the larger community. Most importantly, the objective of creating successful entrepreneurs among rural women can be achieved only if there is a collaborative approach, wherein different organizations and collectives with different areas of expertise collectively create a non-patriarchal enabling environment, and work towards building a gender-sensitive bottom-up model of digital ecosystem.

> *The second challenge is ensuring meaningful connectivity to those who are already connected, and bring opportunities to their lives. How many of those connected are able to generate digital value and digital depth, which in other words is the extent of impact on people's lives in terms of their growth and development?*

Chapter 13

Building a Safe and Enabling Digital Ecosystem

Sanchita Mitra

How is a micro-enterprise defined? It is an enterprise, which invests up to 10 million (1 crore) rupees. Isn't this definition too broad? Who are the women we are dealing with? The reality is that the rural women can only invest up to a maximum of Rs. 30,000. The institutions such as the Non-Banking Financial Company (NBFC) and Self-Help Group (SHG) allow a credit between Rs. 20,000 to Rs.100,000 in practice, at affordable interest rates. Informal sources on the other hand, offer more credit without paperwork, but at a higher cost. For different types of credit, including asset finance, purchase finance, etc., working capital is not easily available to a woman-owned micro-enterprise, or a woman micro-entrepreneur. Will the same categorization and definition of micro-enterprise apply to everyone? An expansive definition such as this has resulted in over 63 million enterprises being recorded in India in 2019, up from 13.3 million in 2008; a burgeoning space for entrepreneurship. Apart from the formulation of conducive policies, greater attention was given to finance. However, as the rural women in question do not self-identify as micro-entrepreneurs, they have largely remained invisible and unaccounted for.

If and when rural women entrepreneurs are acknowledged and counted as entrepreneurs, it would give us an idea about the number of women in the entrepreneurial field, the nature of their needs, and the challenges faced by them mostly, who are at the

bottom of the pyramid. This would be quite different from the existing model that has been universally defined, and does not account for the experiences and needs of the rural women. It is very crucial to bring attention to this problem and find a deliverable solution. The rural women are major drivers of local economic activity, employing themselves and in many cases, multiple others in the community thus creating an economy of nurturance. Given the local nature of their entrepreneurship, they are also often drivers of zero-waste production practices to a much larger extent than larger enterprises, who racket up public costs via transportation and consumption of resources.

There is a huge opportunity and pertinent need for digital intervention and outreach, to promote and advance the participation of women in digital-based entrepreneurship in rural India. These women have hardly any access to the programs and training sessions conducted to equip emerging entrepreneurs with adequate knowledge and resources. During the pandemic, we saw the proliferation of these efforts to promote digital inclusion and reduce the regional imbalance, but it failed in places where we saw that there were no sufficient gadgets and mobiles with women to start with. Coming to the idea of mentorship, there are several adolescent girls, who played a huge role in acting as a bridge between technology, and their mothers and grandmothers. This process ensured that all their families got access to technology and knowledge. However, in my experience, the reach of technology, or technological assets, or even a simple mobile phone has been bare minimum, especially in remote parts of the country. To reduce this gap, we piloted an initiative called a Digital Library through Facebook, wherein women can join the platform on tablets, and access the schemes themselves. It showed great results in terms of scale of outreach, as the said community-oriented platform is directly accessible to women.

In SEWA Bharat, a holistic approach is undertaken, whereby creating a safe network is as important as providing access to technology. Through SEWA Shakti Kendras, which are small setups in the heart of the community, and that ensures access to Government schemes, food, health, education, banking, etc.,

rural women are equipped with digital along with social security. This in turn empowers women to pursue entrepreneurial work as a professional career. It would also be important to take into consideration the need for support for child care; otherwise, most women are unable to find time to pursue entrepreneurship. To take an example, I have seen a woman farmer in Almora, who had to lock up her child for an hour, as she had to step out of her house to fetch drinking water.

The SEWA's model is aimed at building leadership skills and solidarity networks to accelerate and enhance economic empowerment of women, especially in rural India. We should, therefore, work towards facilitating business resilience and growth through providing access to health insurance, childcare, and social security schemes in addition to the access to financial, digital and technical skills, and access to capital and markets.

However, in my experience, the reach of technology, or technological assets, or even a simple mobile phone has been bare minimum, especially in remote parts of the country.

Strategic Recommendations

Emerging Dimensions of Rural Women Entrepreneurship

In India, there are approximately 10 million enterprises registered with the Goods and Services Tax (GST), while the total number of enterprises ranges from 40 to 60 million. It cannot be accounted for with precision because most of these enterprises are unorganized and unregistered. Except for a few million enterprises registered with the GST, most of these enterprises are categorized under what is termed as the Micro, Small and Medium Enterprises (MSMEs). However, as the categorization under the definition of MSMEs is very broad, it does not cover the actual reality of most of the enterprises. According to the classificatory criteria of the MSME sector, an enterprise is categorized as micro if the investment in the plant, machinery and equipment is less than 10 million (1 crore), and the turnover is less than 50 million (5 crores). It is a small enterprise if the investment in plant, machinery and equipment does not exceed 100 million (10 crores), and the turnover does not exceed 500 million (50 crores). The classification criteria for medium enterprise is that it should have less than 500 million (50 crores) investment in plant, machinery and equipment, and the turnover should not exceed 2000 million (200 crores).

From the said classification, it is clear that the criteria for micro-enterprises is very broad. It groups together the established enterprises that are registered and have access to finance and technology in all their operations like designing, accounting,

Enterprise Resource Planning (ERPs), etc., with those enterprises, which are excluded from access to finance and technology. The latter enterprises are mostly unregistered and unorganized, and fall under the category of nano-enterprises. There is a need to classify these enterprises separately if the policies are to be designed for their specific requirements and challenges. It is important to classify them separately because in India, around 95% of enterprises in the MSME sector are micro-enterprises and around 93% of them are unregistered. Furthermore, about 84% of the workforce is employed in this sector. Nano-enterprises have to be classified separately if women entrepreneurs are to be supported through policy and other interventions because the majority of women-owned enterprises fall under the category of micro-enterprises. A 2019 report by International Finance Corporation (IFC) shows that 98% of the women-owned enterprises are micro-enterprises, and the sixth economic survey has revealed that 78% of them are home-based.

Some industries have more women entrepreneurs than others. A report based on the analysis of the sixth economic survey[1] has shown that although only 20% of all the enterprises are women-owned, industries like tobacco, paper and paper products, chemicals, apparel, textiles, plastics, beverages, education, miscellaneous manufacturing, and wood products have more than average share of women entrepreneurs. However, their share is much lower than average in certain key industries such as food (14.9%), retail (10.5%), and health (9%). The data reveals that the gender gap becomes starker in terms of the performance of these enterprises. In the textiles, food and education sector, the assets and productivity of women-owned enterprises are less than half of male-owned enterprises. The gross value added per firm for women entrepreneurs is only 46% of the gross value that male-owned firms carry; labor productivity is at 62% and the assets owned is merely 40%. The corresponding ratio for rural India is even lower at 35%, 44% and 43% respectively.

1 "All India Report of Sixth Economic Census", accessed on May 23, 2022, https://msme.gov.in/sites/default/files/All%20India%20Report%20of%20Sixth%20Economic%20Census.pdf

There are many systemic reasons for this lower productivity, especially in the rural parts of India. Most of the women in rural areas have only quasi access to digital devices due to what can be termed as a gendered digital divide. The exclusion from digital devices like mobile phones hinders their access to information and deprives them from accessing digital skills. It also thus limits their opportunities to expand their businesses through online platforms. It is the women of the household, who perform unpaid domestic labor, which most times involves child care and cattle care. These activities take away the time of women entrepreneurs and have huge opportunity costs for them thus making them time-poor. Although the law mandates the provision of child care to factory workers and workers in the organized sector, there is no such provision for women entrepreneurs. Anganwadi Centers (AWCs), the only institutions available for child care in rural India, were also shut during the pandemic thus affecting rural women entrepreneurs disproportionately.

According to a recent study[2] done among 2,083 non-agricultural enterprises to assess the impact of the pandemic, three out of four respondents reported over 80% drop in revenues. The findings from the same study showed that while women reported a decrease in the time spent on their own entrepreneurial activities, most women felt that the time they spent on care giving, running the household, and assisting their spouse did not change. Few women reported that they felt that the time spent on household work (43%) and unpaid work (38%) had increased during the pandemic. Similarly, most of the rural households possess cattle, and the responsibility of tending to the cattle falls on the women. Thus, time poverty becomes a major bottleneck for rural women to scale up and achieve their entrepreneurial pursuits.

Another issue that rural women entrepreneurs face is access to entitlements and finance. The Government of India has come up

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2 "2020 lockdown shut 11% women MSMEs, only 1% got back on feet with govt help, finds study", accessed on May 23, 2022, https://theprint.in/opinion/2020-lockdown-shut-11-women-msmes-only-1-got-back-on-feet-with-govt-help-finds-study/666319/

with several policies, programmes, and schemes to support rural women entrepreneurs. The Bharatiya Mahila Bank (BMB) is run by women to lend exclusively to women entrepreneurs. The Pradhan Mantri Mudra Yojana (PMMY) scheme lends up to 10,00,000 rupees to women. Another scheme by the name, Pradhan Mantri Rojgar Protsahan Yojana (PMRPY) is a general scheme, which mandates that 30% of the beneficiaries shall be women. The Mahila Udyam Nidhi (MUN) scheme launched by the Small Industrial Bank of India (SIDBI) also gives loans to women entrepreneurs with an operational history of two years. These schemes provide new opportunities to women entrepreneurs, but require documentation to prove one's operational history, tax returns, proof of registration, etc. As most women-owned enterprises are informal and unregistered, they are excluded from availing these schemes. Thus, according to the International Finance Corporation (IFC) report of 2019, the total finance requirement of women-owned MSMEs in 2012 was around 8.68 trillion rupees, and the total supply of finance to these enterprises was limited to a sum of 2.31 trillion rupees. The other reasons for women's inability to access institutional finance are the absence of collateral as they rarely own property and banks. The funders also often find lending to unmarried women risky as there are chances of them changing their residence after marriage. Overall, there is limited awareness of financial services and products, lack of customized financial products for low-income women entrepreneurs, and lack of women workforce because of which, women perceive banks to be unfriendly and intimidating spaces.

There are, however, several ways in which these bottlenecks can be addressed. There is a need to create entrepreneurial mentorship programmes for the specific requirements and challenges of rural women entrepreneurs. An example of it is DEF and Facebook's (Meta) collaborative programme on digital mentorship and literacy named Going Online As Leaders (GOAL) that focuses on indigenous populations and disabled youth. If supporting individual women entrepreneurs with access to individual digital devices is impracticable for the time being, then the focus should be shifted towards creating community spaces for digital access.

These community spaces can also then function as classrooms, where women can be trained about financial and digital literacy. One smartphone in the hands of a woman will revolutionize the digital economy. Furthermore, there is a need to develop a curriculum on financial literacy for rural women entrepreneurs to disseminate information on different schemes available to them. The curriculum can also include aspects on financial literacy like account keeping, income tax filing, process of applying for different loans, etc. Furthermore, digital training and sessions on gender sensitization needs to be provided to relational officers in banks as a means to ensure that these spaces become more accessible to women. A collateral-free loan up to 500,000 rupees should be provided to the emerging women entrepreneurs. Finally, a model of entrepreneurship needs to be adopted, whereby childcare services are provided so as to increase women's productive hours in a work day.

> *Few women reported that they felt that the time spent on household work (43%) and unpaid work (38%) had increased during the pandemic. Similarly, most of the rural households possess cattle, and the responsibility of tending to the cattle falls on the women.*

STRATEGIC RECOMMENDATIONS |

PART V

Digital Financial Inclusion in Rural Economy

The Brazil, Russia, India, China, and South Africa (BRICS) report from 2021 emphasizes on how financial inclusion driven by technology is an important part in working towards achieve the UN's Sustainable Development Goals (SDGs) by 2030[1]. This should, however, not be coming at the cost of deepening the digital divide, and leading to further social and economic exclusion.

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1 "BRICS Digital Financial Inclusion Report, 2021", accessed on May 21, 2022, https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/BRICSDIGITAL7330275ABF-0C4198B581897DF2C131CA.PDF

A 2019 study by United States Agency for International Development (USAID) noted that the ast decade for financial inclusion has been one of the most successful ones worldwide, with over 330 million people having been includedinto the financial sector[1]. This has been made possible by Government policies such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme, whereby bank accounts have been created for many citizens who previously did not have them, and the Direct Benefit Transfer (DBT) scheme where these new accounts have been made the default channel for transfer of welfare money. USAID claims that the linking of accounts to mobile numbers and the Aadhar has further enabled inclusion[2]. Policies such as demonetization have also hit the informal economy, while on the other side lending a push towards digitization. Fintechs have been allowed to provide banking services with a new Payments Bank license. RBI and the Government's focus on building infrastructure like the UPI is another context to look at these numbers.

The general lack of digital access that persists, and the issue of digital illiteracy also brings with it a lack of trust in machines, devices, and transactions that overlook the ease of use factor. This is more complex than just forcing down digital options of people, as there are deeper and more embedded social and cultural reasons for people's preference of cash for transactions. Moreover, the curriculum in schools does not teach about finance in an elaborate manner. This too is not revised and mostly comes from a time where most finances and transactions were non-digital in nature. This means that from a young age, people do not have a formal understanding of digital finances and other options of formal sources of credit.

The digital tools for finance are often designed for people, who would have some prior knowledge on technology and applications; it often does not include the rural masses who are new to technology.

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1 "India Digital Financial Inclusion: Journey Map Report - USAID", accessed on May 21, 2022, https://www.usaid.gov/sites/default/files/documents/15396/mSTAR_IndiaDFI_Report_DRAFT_FINAL.Pdf
2 USAID, ibid

It also often does not consider the diversities of languages that exist in the country. There is a real lack of access to credit in ways that would both be reachable and also appeal to the rural masses. Either the transaction fees are too high, or it simply does not reach enough people. Even today, exploitation from informal sources such as money lenders is a very real problem. RBI's documents reveal how 42.9% of Indian population still borrow from money lenders or loan sharks, who charge high interests, often leading them into debt traps[3]. In this context, the five revered experts engaged with two critical questions:

How do we overcome the barriers of financial and digital literacy, and its adoption?

How can we increase credit penetration to the rural economy?

Shrikant Sinha detailed the initiatives undertaken by Telangana Academy for Skill and Knowledge (TASK), an advocacy organization set up by the Government of Telangana that aims to educate people about finance operations. He stressed on the need to design training modules in vernacular languages for wider outreach to people and local communities. **Dr. Hemant Adarkar** discussed the cultural aspects of digital transformation and digital inclusion. He talked about how the project of digital financial inclusion would not be effective unless we factor in the role of culture that shapes the relationship of people with digital technology and its apparatus. **Dr. Ravi Chandra** highlighted the activities of the United Nations Development Programme (UNDP) in the post-pandemic scenario. He called for a collaborative action on enhancing credit penetration among most marginalized communities, which he believes is an important step towards ensuring digital financial inclusion of people in rural India. **Priyanka Jain** summarized the achievements of WhatsApp by listing three pillars - education, skills, and digital access as essential to the task of digital and financial inclusion. She proposed an action plan, including building training and capacity-building modules, facilitating digital-based solutions to help new

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3 "Persistence of Informal Credit in Rural India: Evidence from 'All-India Debt and Investment Survey' and Beyond", accessed on May 21, 2022, https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/05WS080513_F.pdf

business innovations grow and thrive, and promoting digital and financial literacy programmes, which would all add up to achieving the goal of digital and financial inclusion. **Dr. Ganesh Natarajan** described a Catch-22 situation, wherein the plausibility of revival of rural economy is dependent on consumer demand, which in turn is dependent on the capacity of the people to spend. Referring to rural India as Bharat, he talked about the need to facilitate and strengthen the job market to tackle the grave problem of digital divide prevailing in today's India.

> *The general lack of digital access that persists, and the issue of digital illiteracy also brings with it a lack of trust in machines, devices, and transactions that overlook the ease of use factor.*

Chapter 14

Enhancing Digital Tools, Skilling and Synergy

Shrikant Sinha

At a time when India as a large economy is facing several economic challenges, it is important for various stakeholders to work collectively to find solutions. It is only a collective effort that can create an impact on a large scale. This intervention needs to take into account - access to policy, large-scale implementation, and technological innovations to gather insights on the issues that are identified. Rural economy is an economic frontier that has still not been integrated with the formal economy. It provides enormous potential for further economic growth, but the main bottleneck in this process is the lack of financial inclusion of the rural economy, which is abysmally low. Although 84% of India's population aged 18 and above have a bank account in rural India according to National Sample Survey Office's (NSSO) data, around 50% of these remain inactive due to the unavailability of suitable financial products. Similarly, according to Standard and Poor's (S&P), only 24% of adults in India are financially literate. One can only assume the level of financial literacy in rural India. Even for scaling of businesses, the need for financial inclusion remains crucial today.

Telangana Academy for Skill and Knowledge (TASK) is an organization established by the Government of Telangana for enhancing skilling synergy among stakeholders of industry, academia and the Government. It identifies the gaps that exist in synergy and provides short-term skill programs for the youth to

overcome the same. It creates an entrepreneurial mindset amongst people. From its experience, the CEO of TASK states that those seeking employment for the first time are not financially literate. They are unaware of various financial tools like insurance schemes, investment opportunities, etc. One of the main reasons for lack of literacy is the cultural mindset of people that gets reflected in the upbringing of children. Children in Indian households are kept away from learning financial operations. They are discouraged from making purchases without the consent of their parents. Similarly, basic financial instruments are not part of the school curriculum. Even when people get jobs and become financially independent, they remain financially illiterate. In the case of entrepreneurs, the pervasiveness of financial illiteracy remains till now. India is second only to the US in terms of the start-up ecosystem. Yet, the issue that confronts this ecosystem is the need for financial literacy. The entrepreneurs want people to invest in their ideas without addressing the issues at the core: 1) if they have ever made a sale; 2) if they can handle finances; and 3) if they know how the financial planning functions. The most likely answer to these questions has been largely in the negative.

Here, TASK plays an important role in educating people about finance. It runs a program named I4TS (Innovation for Telangana) with a byline, "Social Innovation for Simplifying Lives." This program focuses on social and rural innovation. Another program by the name, Mandi is structured to educate people about consumer behavior, first rejection, process of testing markets, making a consumer, etc. All of this is taught in a practical manner, whereby the exercise is to purchase something of no value and then sell it; the sale is not for profit but to understand the above-mentioned aspects of finance. Similarly, the Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA) program that was started in 2017-18, aims to impart financial literacy. Here, certificates are issued to candidates only after they have undertaken financial transactions. It cannot be sufficiently stressed that a large part of the economy at present is driven digitally, and thus apart from financial literacy, digital literacy becomes ever more important.

So, there is a definite need for financial literacy at all levels

across the country that would require the right kind of inputs. Many people are now enamored by the buzz around crypto and its supposed promise, and assume it to be financial literacy, which is far from reality. In order to increase financial literacy, the transaction charges while using digital banking needs to be further lowered so that people feel confident to undertake transactions online. Moreover, a confidence-building approach has to be adopted to remove people's hesitancy and assure them that the digital system is safe and secure. Most importantly, digital literacy needs to be imparted to the people in a way that it becomes a matter of common sense to them. The literacy model needs to be simple through the use of vernaculars, and should be focussed upon with clearly laid down objectives and outcomes.

> *Social Innovation for Simplifying Lives."*
> *This program focuses on social and rural innovation. Another program by the name, Mandi is structured to educate people about consumer behavior, first rejection, process of testing markets, making a consumer, etc"*

Chapter 15

The Cultural Aspects of Digital Transformation

Dr. Hemant Adarkar

The digital and financial inclusion of the hitherto excluded population on a mass scale needs to not just take into account the technological and infrastructural aspects, but also factor in the role of cultural impediments that hinders the process of inclusion. In India, out of the total population of more than 1.2 billion, only 70 million people have access to the formal credit mechanisms. The remaining population relies on informal means of acquiring credit, and the issue at hand is to include them in the mainstream formal financial system. The access to financial institutions should not just be limited to an elite minority, but needs to be upgraded on a mass level so that we have a financially included population.

One of the main concerns that we encounter while arguing for digital financial inclusion is privacy. It is ironic since the 70 million people, who are elites and have access to formal sources of credit already, want to remain anonymous while the rest of the struggling population wants to be on Government records. The issue of privacy remains an important aspect of digitization. Unless the financial professionals and technologies do not address the cultural nuances underpinning the digitization efforts, digital inclusion would remain a difficult task. Nevertheless, the focus of financial inclusion needs to be on the rural masses. There remains a wide gap in physical infrastructure that is needed for financial inclusion. Although there are huge populations with a bank account, the

physical infrastructure that is required to make it operational remains absent. In the rural countryside, the numbers of ATMs are abysmally low. The issue of internet and uninterrupted power supply in the rural areas is still persistent. During demonetization, there were only around 209,000 ATMs in the country out of which, more than 75% were located in urban areas and that too in financially well off regions.

In this scenario, mobile phones provide the opportunity for sublimation from having no infrastructure or very minimal infrastructure to a strong infrastructure. However, the planning for financial inclusion through digital means has to be done in detail. It cannot be only premised on the number of smartphone users as other important conditions also have to be taken into account; like how many people know how to undertake digital transactions; how many people actually do digital transactions; how many people have connected their bank accounts to their mobile phones, etc.

To reiterate, the whole aspect is cultural because this country has a numerical minority, who have access to formal credit and the remaining are in the informal sector with the impending challenge of integrating them in the mainstream. It is, therefore, important to understand that unless the cultural nuances are not accounted for, the project of digital inclusion will be an impossible task. The promise of digital financial inclusion cannot be reduced to the number of people who watch videos online on their mobile phones, which now have exceeded more than 700 million. This number needs to be translated into people using their mobile phones for seeking their financial needs. The promise of digital financial inclusion, however, cannot be discounted. As many economists argue, 'India should focus on having bank accounts'; there are models that examine the possibility of giving credit to small artisans and small businesses in rural areas through mobile phones. Through the use of the float concept, people without a credit rating can be included in the financial ecosystem.

Overall, the task at hand is to extend formal credit opportunities to the next billion population. The issues of data privacy that would

ensure that the mobile phone ecosystem reaches the rural areas in a safe manner have to be resolved to achieve the same. India is a country where people are accustomed to touch and feel money and thus digital money is a cultural challenge for the tech industry. The culture of having a sense of security by keeping money in a bag needs to be altered. This can only happen when there is trust and confidence among people that they can transact digitally without worrying about the possibility of fraud.

> *The promise of digital financial inclusion cannot be reduced to the number of people who watch videos online on their mobile phones, which now have exceeded more than 700 million. This number needs to be translated into people using their mobile phones for seeking their financial needs.*

THE CULTURAL ASPECTS OF DIGITAL TRANSFORMATION |

Chapter 16

Digital and Financial Literacy in Rural India

Dr. Ravi Chandra

My experience over the last decade and a half, tells me that fusing the three concepts - rural economy, entrepreneurship, and digital is a difficult proposition. However, there is a pressing need for it today. I was previously an entrepreneur myself, managing micro-finance, handloom handicraft, and other businesses. While integrating with the digital platforms, I found the process to be rather painful - downloading excel sheets, uploading the photos with the appropriate resolution, waiting for verification, etc. It took me a couple of months to learn how to upload photos, verify, and sell products along with tax compliance, etc. It is after more than a decade today that I see the same issue being faced by artisan entrepreneurs, both at an individual and a collective level.

There are three types of challenges in this sector: It is difficult to gather digital financial resources as a seller than as a consumer since there are multiple compliances to adhere to. Although Goods and Services Tax (GST) is one of the frequent requirements of big platforms, turnover below Rs. 200,000 does not require GST submission. However, if the buyer is registered on an e-commerce portal, which has a different address than the state where the artisans reside, it attracts taxes such as Integrated Goods and Services Tax (IGST), State Goods and Services Tax (SGST), etc., thereby making it harder for the entrepreneur. The small artisan entrepreneurs, who aspire to sell smaller quantities, are unable to

handle GST, or the time value of money is too high.

The question that needs to be asked is: how do we build collectives? It is important to build digital literacy among the rural organizations, rural producers, etc. The United Nations Development Programme (UNDP) has been working on the digital form in relation to the most marginalized sections of the population across the country. Recently, the digital empowerment program by the UNDP was implemented as a response to the Covid-19 pandemic, wherein 5,000 artisans were onboarded from various states. They faced similar issues; the majority of e-commerce portals were contacted to sell artisan products, however, the bigger portals refused to give permission due to lack of GST registration. Gaatha and Facebook (Meta) were the only two helpful platforms, but they fell under the category of social commerce, and not e-commerce. The digital rails are available, but there is a need for adequate capacity-building.

Applications such as Facebook (Meta), Zoom, WhatsApp, etc., were used extensively to stay in touch. However, the UNDP differed on its effectiveness, in comparison to the physical workshops organized before the Covid-19 pandemic. The physical training resulted in a much more effective output than an online training, due to the receptive capacity of the rural community. Digital platforms such as Facebook (Meta), WhatsApp, or Zoom can be used if there is no other choice - by transmitting information and undertaking community-based initiatives, and to learn from the visual images to get onboard with the digital form, which also needs investment.

The philanthropic capital often referred to, suggests that the digital form has made production cheaper by reducing unit costs; but in order to reach the last mile, the unit costs cannot be the same in a different region. The unit costs vary depending on the region, and the idea of lowering unit costs to reach the masses is insufficient since the bottom 20% will demand 5% to 10% more resources than the top 40%-60% of the population. Therefore, digital form cannot be utilized to reach the poor at a lower cost. The investment needs to be very high from the regulator's end within the ecosystem.

In the last decade, bank account penetration has reached more than 80% of the population. India, now, has 4G and therefore, smartphone penetration too has increased, yet these two figures do not confirm digital transactions in the same breadth. It is important to consider the usage of the account beyond opening the account. As mentioned earlier, 45% of the bank accounts are currently inactive thus indicating the shift from savings to access to credit. The discourse currently exercised involves savings, and it is like what Self Help Groups (SHGs) do; although it is not the solution. The ability to access credit is crucial too.

Thus, the first step is to open the bank account followed by putting savings into the bank account, towards accessing credit since credit unlocks the growth potential. The artisans, or other small businesses, cannot invest 100% capital, leading to borrowing of 80% from the bank and 20% equity. Another question posed is: Why are we forcing the poor to invest their own money, or take a loan with a higher interest rate for small businesses? The 80% credit is becoming critical; and how to base digital inclusion around it since the majority is from regulators, banks, or innovations in small finance banking. Thus, the question being – how to increase credit penetration among the artisans, who are part of the rural economy. While the schemes exist, access and facilitating the last mile of credit is a challenge, which even the UNDP struggles with.

The infrastructure is in place, but the need is to customize it to suit different stakeholders. Although the Government of India has a huge Self Help Group (SHG) platform for 80 million families, both the Government and the UNDP are grappling with how to rotate the money as a sustainable enterprise. For example, if a woman receives a subsidized credit of Rs. 50,000 or 100,000, how can she use this as seed capital to generate an annual transaction of Rs. 1,500,000, and earn a profit of Rs. 200,000, or so for a consistent income of Rs. 20,000?

This is the current model being worked on, and the key is capacity building. There are various models of capacity building that have been tried, tested, and scaled by the Civil Society Organizations and non-profit sectors. Therefore, the same needs

to be increased because the scale is huge; the small resources will be inadequate for all. The required resources are unavailable for capacity building for the scale India requires, and therefore, is dependent on Government funding, which has the potential of providing the bulk of the capital. Moreover, the catalytic capital tries to create low-cost models on the scale that should be tested. Currently, there are various capacity building models in both digital and physical forms. The partnership between the Civil Society Organizations (CSOs) and local governance, with the units of rural livelihood, textile, and Micro, Small and Medium Enterprises (MSME) becomes key, as the schemes are interesting, and the challenge is to convert them into reality. It is thus important to support the initiatives of the Government and the communities to facilitate the capacity building at a large scale.

Chapter 17

Whatsapp's Role in Aiding Emerging Business Innovations

Priyanka Jain

WhatsApp is currently India's most popular messaging app, and has statistically proven to have a positive influence on people's lives. WhatsApp has 400 million+ users and huge sets of data that are exchanged on the platform, however, it does not have access to the data as it is an encrypted platform. To reiterate a few things, WhatsApp is a private messaging app, and an encrypted platform. It does not store, see, or access any data of a user. For the same reason, users consider WhatsApp a digital ally that allows them to connect with communities, businesses, and people worldwide. Before diving into where WhatsApp is today and what its vision is, I would like to contextualize this conversation in relation to the four aspects: rural economy, digital technology, financial literacy and women entrepreneurship. Digital and financial literacy are critical components of growth and development of all these aspects; Telangana has paved its way. The main challenge is to understand how the digital at times is not enough, and the physical set up is more effective than the digital. While the physical medium caters to people of all ages, the digital medium can be made as relatable as possible, and the scale can be leveraged to drive inclusion.

It is important to note that not all are smartphone users since WhatsApp is also available on feature phones. The fact that people have replaced email with WhatsApp is a strong enabler, as it comes in the form of a native application, which requires an email address

to download the application from PlayStore or AppStore.

In the rural economy, those who cannot create an email account, do not have access to digital platforms. WhatsApp is the only exception that has the potential to drive inclusion, however, is contingent on the need for a mobile number. India has over a billion people on telecom platforms to ensure that everyone owns smartphones. In WhatsApp, mobile number authentication and two-factor-authentication are undertaken to ensure safety for its users. The only personal information the user provides is a mobile number; the name is not recorded by the application. This is one of the reasons the platform is able to maintain the narrative on lack of data segregation and hence, the platform will not record the percentage of rural population in India.

When I worked at a credit bureau, I observed how microfinance was handled, and how consumers get access to credit. It has become a difficult reality for most in the country, and for the same reason, approximately, only 7% of the Indian population have access to formal credit. WhatsApp has the ability to create a tide, whereby customers do not reach out for the products, banks, or financial services. Rather, the services reach the customers. It is a change of tide because the moment you remove friction of access, understanding, ease, language, and affordability, the consumer gets interested in the product. For example, if I were to tell a consumer about an opportunity to buy life-cover from his/her/their preferred insurance company; completing the whole process on WhatsApp, the consumers are more likely to purchase the insurance rather than initiating the process at the branch. Similarly, digital payments – WhatsApp now has the approval to go up to 40 million users for digital payments via Unified Payments Interface (UPI). Furthermore, the platform has attempted to democratize digital payments by showing the 'rupee' icon on the composer text itself.

Jan-Dhan created an infrastructure that is assisting UPI, as everyone has a bank account with the option of using bank-to-bank transfer services. The icon on the chat page allows for translation on an application, which people understand in a preferred language

on a private and secure channel of communication. Similarly, WhatsApp has also made its camera a QR code scanner thus eliminating the need to download another QR scanner separately. For instance, one can use the WhatsApp QR code scanner to pay a local vendor. These small features, therefore, will lead to larger inclusion and penetration. Lastly, WhatsApp is trying to digitize small and medium businesses in order to facilitate capital among rural communities. Coming to the question of women entrepreneurship, while partnering with Mann Deshi, and SEWA in Maharashtra and Gujarat, I noticed that women have established small business ecosystems on WhatsApp, and earn their livelihood through the application.

Today, technology is not an option, but rather is one of the most important channels that connects the world in an equal and uniform manner. To take the best example, WhatsApp drives inclusion from the first mile to the last mile, while providing the access to the application to everyone in the same breadth. Countries and economies require this power of connection to grow and sustain themselves. India has been a catalyst for technology and change, as it has seen one of the earliest eruptions in the Information Technology (IT) sector. This change has been brought with the support of several countries thus making the country a developmental and software hub. Technology is not new to us; we are just looking at innovative ways to use it. During the last decade, prior to 2020, WhatsApp was permitted to utilize the Jan Dhan-Aadhaar-Mobile (JAM) trinity. It has a very strong foundation, as it was built for over a decade. For instance, Jan Dhan has around 84% of the Indian population with a bank account; while a lot of them are still dormant, there are other promising ways to utilize the bank accounts.

Similarly, India struggled with identification issues for long and now, there is Aadhar – a uniform identity platform encapsulating over 90% of the population. It generates traction for people to apply for financial services because the identification issue has been resolved. Lastly, with close to more than one billion people already using mobile phones, this becomes an effective way of ensuring that people are digitally aligned, and are able to access

critical, essential services like the financial services. WhatsApp can be used for a variety of purposes such as driving businesses, teleconsultation, book vaccines, etc., which makes the platform versatile.The National Strategy of Financial Inclusion (NSFI), released by RBI in 2019 and valid till 2024, speaks of four critical aspects: awareness - what financial literacy is about; access – it is what we refer to as digital touch-points; affordability – since the moment it becomes digital, it is a sachet-size thus reducing the costs; and lastly, it is for all segments of India, not just rural. These are the guiding steps to ensure financial inclusion on WhatsApp. We believe that WhatsApp has the ability to address all the four challenges.

The vision of WhatsApp is that complex issues can be addressed by finding simple solutions. For example, to speak of a multilingual feature, it encompasses the needs of a diverse population of India. Moreover, the voice message feature breaks the barrier of literacy, and is also recognised as a crucial medium for digital inclusion. Amazon is one such example, achieving great results with the Alexa-enabled voice. Similarly, audio/video content is easily comprehended by all users. Financial literacy can be a reality if driven through such mediums. The necessity of financial literacy can be shared through a video; for instance, the need for an insurance policy, or the need of a pension plan for a dignified post-retirement life, etc. WhatsApp can enable these methods depending on the needs of the target population. Recently, pension and insurance were introduced on WhatsApp in collaboration with SBI and HDFC Pension Fund.

The moment you remove the most critical and expensive channels such as the local branches, or the local people who manage these branches, or the consumer-grievance redressal mechanism via Interactive Voice Response (IVR), it will directly lead to a cut in costs. WhatsApp then becomes an end-to-end solution to drive product literacy, whereby the entire consumer life-cycle is moved onto WhatsApp. For example, in the case of insurance, the forms can be filled in local vernaculars using radio buttons. Moreover, policy documents can be sent through WhatsApp with an option to also file a claim via a chatbot enabled service. We believe that

this is how a messaging-driven and convenience-driven interface like WhatsApp can make it affordable, accessible, and most importantly, drive financial literacy.

Financial inclusion will not stand by itself; it has to be supported by the ability to earn, get economic and financial independence, and have access to financial services. In the context of WhatsApp, it is not only about the digital inclusion of financial services, but also about skill and education as its important pillars. For instance, if around 80%-85% of the workforce working in the rural informal sector are provided with educational opportunities, it would become easier for them to access livelihood. Once the means of livelihood is figured out, essential services become accessible thus providing space to think of savings, pensions, apply for credit, etc.

To take an example, credit has three parameters: identity, intent, and capacity. A unique identity - Aadhaar is issued by the Unique Identification Authority of India; intent is established by building a pattern of positive repayment; and building capacity by having a steady income and repaying the debt. For instance, Pratham, an educational institute, which helps the underprivileged children in availing education, is using WhatsApp as the primary mode of imparting education. In the survey undertaken by Acer, WhatsApp came across as the accessible channel, which consumers or children in this case, prefer to learn from. Thus, access can solve a lot of real-world problems.Recently, WhatsApp collaborated with the National Skill Development Corporation (NSDC) to organize skilling programs for the grassroot organizations and individuals on WhatsApp groups. People, therefore, do not have to travel to the nearest center for skilling, as assistance can be provided in local settings.

The other aspect is employment; in the context of the current start-up boom, it is on a different scale with the Initial Public Offering (IPO), with Unicorns coming to the limelight. India has always been an entrepreneurial economy. To take an example, women working with Mann Deshi, who made school uniforms noticed that in March 2020, all the schools canceled the orders, and they were left with fabric without any order. These women

converted the fabric into masks; more women were trained to do the same. Over a period of time, a village produced one million masks, which they sold to people in cities, including Pune, etc., to generate livelihood. This entrepreneurial spirit of the masses at the grassroots level has always existed. It is thus important to be able to harness it, provide digital solutions to scale and sustain businesses, make skilling and up-skilling a reality, enhance financial and economic resources, and achieve the goal of financial inclusion.

Chapter 18

Impact of Pandemic on Markets & Economy: What is to be Done?

Dr. Ganesh Natarajan

In the first phase of the recovery of the Indian economy post-pandemic, we see that some of the large companies have revived their business operations, as demand has bounced back. However, a large number of Small and Midsize Businesses (SMBs) and micro-enterprises are still suffering from the impact that the pandemic has had on the market structure. Moreover, due to the economic battering caused by the pandemic, especially in rural India, not only are the people unable to spend money, they are not left with any financial resources thus impacting their lives in the domain of education and health, among other basic necessities.

In the realm of education for instance, while the Annual State of Education Report (ASER) 2021 - Rural[1] states that the number of people owning their smartphones is on a rise, the rate of digital exclusion is noticeably very high too. At *Educate Girls*[2], a non-profit organization that works on facilitating education to young girls, we see that there has been a sharp rise in school dropouts of girls. Moreover, the digital materials, which are available in urban India, are still not accessible to the rural populations. India has had over

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1 "Annual Status of Education Report (Rural) 2021", accessed on May 18, 2022, https://img.asercentre.org/docs/aser2021finalreport_16.116.54pm1.pdf
2 "Established in 2007, Educate Girls' is a non-profit that focuses on mobilizing communities for girls' education in India's rural and educationally backward areas.", accessed on May 18, 2022, https://www.educategirls.ngo/Who-We-Are.aspx

70 weeks of no school as against the global average of 40-45 weeks of no school. Besides, digital schooling has largely been ineffective in rural India[3].

The urgent solution to this problem lies in the development of the infrastructure needed to cater to the requirements of people in rural India. For instance, there is still a need for extending the National Optical Fiber Network (NOFN) to the rural parts of India, as it is not fully laid out up to the last mile. Another important aspect is to integrate and empower people financially to be able to become aware of the digital tools, be it for accessing opportunities in education, or the MSME sector.

To create an inclusive model of financial empowerment of people in rural India, there is a need to generate a consumer demand. The consumer demand will increase if and when people have the adequate financial resources to spend. To break out of this Catch-22 situation, it is important to set an indicator for consumer demand, based on the market needs of the poorest of the poor. For instance, the data shows that the fertility rate in India has fallen to below replacement, thus stabilizing the population growth[4]. However, that is not the case with the poorest states. These states would perhaps see an aggravated digital divide caused by an increased demand for digital intervention due to the growing population. The digital divide is also increasingly apparent as we see children getting excluded from availing education opportunities, and youth being unable to pursue a career in MSMEs due to the lack of knowledge, resources, and training.

To reduce the all-pervading digital divide in the country, a significant solution would be to institute a mechanism to generate and distribute jobs among rural masses. In the last few years, we have seen people in rural India increasingly move to cities in search of jobs. The only way to reverse this trend is to redistribute

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3 "India's School Education Is in Grave Crisis", accessed on May 18, 2022, https://thediplomat.com/2022/04/indias-school-education-is-in-grave-crisis/
4 "Fertility rate falls to below replacement level, signals population is stabilizing", accessed on May 18, 2022, https://indianexpress.com/article/india/fertility-rate-falls-to-below-replacement-level-signals-population-is-stabilising-7639986/

urban jobs to facilitate opportunities for people in rural India. This redistribution of jobs is possible only when there is adequate digital infrastructure available, and investments are made in technology and skilling, whereby people are able to define their own futures. To take an example, NASSCOM, under my leadership, has started an initiative called the Bharat Initiative, which is aimed at encouraging and empowering millions of women in rural India through entrepreneurship. The means to achieve the same are through digital skilling to be able to market their product, and help create a collaborative ecosystem platform.

While we work towards many such initiatives, the most important player in this humongous task is the Government, as it has all the resources and access tools to implement these initiatives in an efficient and effective manner. It is, therefore, the need of the hour for the Government to reach out to the private sector and make Public-Private Partnerships (PPPs). For instance, Educate Girls is in working partnership with the Rajasthan, UP and MP Governments. Pune City Connect (PCC), which is now called the Lighthouse Communities Foundation (LCF), has formed partnerships with Municipal Corporations in Maharashtra, as well as with the Delhi Government. It is also gearing towards getting into a partnership with the Odisha Government as part of the Jaga Mission, to evolve the whole digital system. Along with the visionary policies of the Central Government and State Governments aimed at empowering Bharat[5], and partnership with the private sector, a big impetus complemented with our collaborative efforts, is required for the making of the future market.

We have to work towards building an ecosystem equipped with entrepreneurs, markets, capital, etc., along with the required physical, digital, and social infrastructure at a pan-India level. Once the ecosystem is in place, the ideas would then flow and get converted into concepts and products, which would in turn seek a market thus building the local economies that ultimately would generate livelihoods and employment for people at a large scale, especially in rural India. The other pertinent task at hand is

5 The author is employing the word 'Bharat' to refer to rural India.

to promote digital literacy programmes and training through the Common Service Centers (CSCs) set up across the country. Most importantly, we need to collectively reflect on the question of how the Government can be an enabler of a much larger change rather than just talking about the Digital India programme in silos. How do we integrate the digital in every sector, including the MSMEs, education, agriculture, entrepreneurship, among others? With the imminent national spread of 5G technology; Governments focused on digital innovations; and a willing social sector - it is possible to dream of India's tryst with a global digital destiny in this decade.

Strategic Recommendations

Digital Financial Inclusion in Rural Economy

The All India Debt & Investment survey undertaken by the National Sample Survey Office (NSSO), Ministry of Statistics and Programme Implementation reveals that about 84.4% of rural population in India, who are 18 and older, had deposit accounts in banks. In urban India, about 85.2 % of the urban population of age 18 years and above had deposit accounts in banks. However, while almost 80% of the Indian population above 18 years have a bank account, nearly half of their accounts remain inactive due to the unavailability of suitable financial products. Therefore, the usage of such accounts is less than 50%. According to the report conducted by the Global Financial Literacy Excellence Center, only 24% of adults in India are financially literate. Thus, the level of financial literacy indicates a low level of financial inclusion. The Reserve Bank of India (RBI) defines financial inclusion as "the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost." More broadly, the financial services include access to loans, equity, and insurance at universal access and reasonable costs.

The two main challenges before us are: First, low levels of digital financial inclusion in India; there is hardly any access to credit for most people in the country. Around 7% of Indians have access to formal credit, and 24% are financially literate. The studies

also show that most Jan Dhan accounts in the country are lying dormant. The utilization or the activities that happen through the claimed number of PMJDY accounts need to be looked into, to evaluate the actual status of financial inclusion in the country. Second, the lack of finance culture; although there is a rise in digital transactions post-pandemic, there is almost no cultural embedding of finance across the country about electronic payments, and thus most people still place their trust on physical currency. Therefore, the questions that need to be addressed are: What do we do to overcome the barriers of financial and digital literacy? How do we increase credit penetration of the rural economy?

There are various means to attain digital or financial literacy. The first step can be the inclusion of finance in curriculum and digital undertakings, to increase awareness and inculcate cultural embedding that favors physical currency over electronic/digital currency. The integration of finance and culture has not taken place, and as a consequence, we see that the growth indicators such as literacy, education, scaling, etc., are talked about in isolation. The role of finance as an integral factor is neither recognized while measuring the domestic growth, nor is it advocated by parents, or the schooling education system. It is not recognized as a subject to teach or learn in the same way for instance, subjects such as Mathematics, Sciences, or Economics are taught. This is one of the biggest gaps, which has the potential to be addressed through digital means. One way to address this impending issue is through publicity and dissemination of knowledge in as many local languages, which would be accessible to different communities in the country, especially among those unconnected. All the cooperatives, Self-Help Groups (SHGs), and other clusters can be targeted for forming partnerships to penetrate financial literacy, especially in the context of the rural economy.

Our focus should further be on facilitating the last mile of credit beyond the existing schemes in place. An understanding of terms related to financial statements should be encouraged among rural economic institutions like SHGs, Cooperatives, Farmer Producer Organizations (FPOs), etc. Furthermore, float-based concepts of credit must be applied to include more people, which

would also ensure better products for people in rural India, with lower transaction fees. New models should be designed, which explore the possibilities of providing credit to smaller artisans and businesses through mobile phones, including those without a credit rating. Additionally, the safety and privacy of the small entrepreneurs should be guaranteed.

There are already existing ecosystems and solutions, which can drive inclusion, provided the last-mile access networks are utilized properly, and are beneficial to people in its true sense. These existing systems in place would need some tweaking to be accessible and appealing to people in rural India. Besides, we need to find solutions to overcome the barriers to access credit. Based on DEF's work and activities on the ground, which included training 30,000 women to become digital entrepreneurs, we have come to an understanding that with sufficient access to smartphones and connectivity, financial and digital literacy are not difficult to achieve. However, despite being literate, both financially and digitally, it is not guaranteed that one is able to redeem credit seamlessly. The barriers, which are often practical, non-digital, bureaucratic, and related to trust and decision-making challenges, need to be addressed. We have also observed that women are easier to approach as they are at the center of all domestic responsibilities. It is, therefore, more so necessary to find ways to support women entrepreneurs by introducing suitable and efficient policies, programmes, and schemes.

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Osama Manzar is a global leader on the mission of eradicating information poverty from India and the global south using digital tools through Digital Empowerment Foundation (DEF), an organization he founded in 2002. A British Chevening Scholar and an International Visitors Leadership Program Fellow of the US State Department, Osama is a social entrepreneur, author, columnist, angel investor, mentor, and sits on several Government and policy committees in India and abroad working in the areas of Internet access, and digital inclusion. Osama's recent book was released during the Covid-19 pandemic titled, The New Normal: How to Survive the New World Order. He has instituted 10 awards for recognising digital innovations for development in India, Bangladesh, and Sri Lanka. He is reachable at osamam@gmail.com

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This publication has been produced based on a series of roundtable discussions and brown bag sessions with the leading thinkers from tech industry, Government, Civil Society Organizations (CSOs), and academia in India, in the domain of digital access, resource empowerment of rural women entrepreneurs, and an inclusive model of digital-based rural economy.

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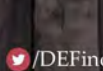
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