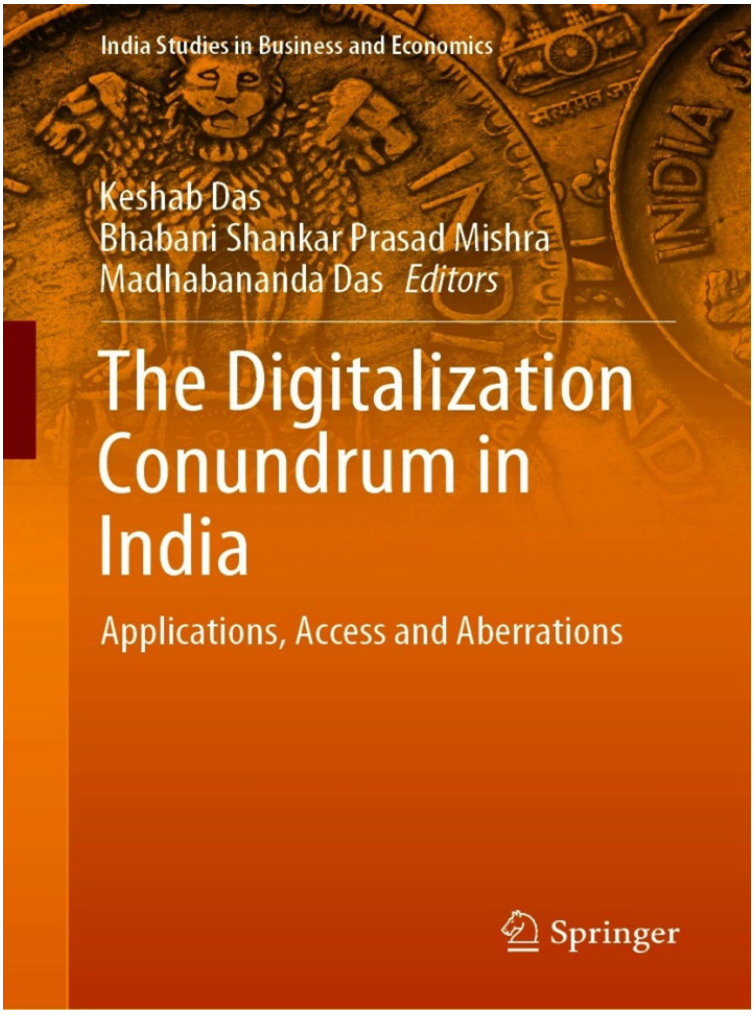
Journal of Scientometric Research, 2024; 13(2):651-654.
https://www.jscires.org

Book Review

In Search of Hidden Stories Behind Digitalization in India



The Digitalization Conundrum in India: Applications, Access and Aberrations, edited by Keshab Das, Prasad Mishra and Madhabananda Das. Springer, Singapore, 2021, xviii + 308 pages, hardback, ISBN: 9789811569067.

According to Daniel Bell, the renowned American Sociologist, 'Service occupations grow at the expense of those producing material goods, and white-collar workers come to outnumber blue-collar workers employed in factories'. As the knowledge-driven economy was the major motivating force, the name 'Knowledge Society', coined by Peter Drucker, gained importance over time. The knowledge became a key economic resource in course of time with the progress of science from different angles. The term 'Knowledge society' essentially describes the societies, which are economically and culturally iconized by the intensive dependence on their potential to create scientific and technological knowledge. Information and knowledge, in this way, are becoming a special type of good or strategic resource in its own right and the phenomenon of 'Digitisation' has become the key activity of the knowledge society. The central role of 'Digitisation' is to transform the huge corpus of recorded information into machine-readable formats. There are several pros and cons behind digitization, to mention a few; digitization adopts new technologies and every stakeholder in the market is focused on successful digital adoption to put their start-up at the forefront of their position. The digitization eventually

DOI: 10.5530/jscires.13.2.51

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leaves behind the parochial or conservative competitors. Digital transformation makes people more productive. Digital transformation allows organizations to meet respective customers' needs better through appropriate use of technology. As far as the negatives of our digital transformation pros & cons go, this one is unavoidable. Technological progress is, for the foreseeable future, unending. The digital transformation thus is an ongoing process. In India, it is observed in both the service sector (both public and private) and commercial sector that the burden of constant digital changes falls onto the shoulders of the employees. While 87% of employees claim they're ready to learn new skills, every person has a different tolerance for stress factors. That is why a personalized approach is required when training employees to use digital tools. In terms of the pros & cons of digital transformation, the positives to successful technology adoption are obvious, though implementation can be a challenge.

This edited volume consists of fifteen chapters in total. The foremost chapter entitled "The Digitalization Conundrum in India: Context and Concerns" authored by Keshab Das, Bhabani Shankar Prasad Mishra & Madhabananda Das presents a set of studies dealing with the issues and concerns of digitalization in India. This chapter concludes that technological applications may unveil new possibilities but their actual access by users is dependent on the institutional framework. Various socio-economic anomalies frequently create hindrance to get benefits of technological changes. The second chapter to eighth chapter, i.e., seven chapters in total are compiled under the broad heading "Technical/Engineering Applications and Infrastructure". The second chapter entitled "Digital Transformations and Structural Exclusion Risks: Towards Policy Coherence for Enabling Inclusive Trajectories" by Smitha Francis discussed digital markets. The several features of such digital markets may cause adversities for the developing country economies, which is a new challenge to the Indian economy. Despite several new opportunities of digital technologies, it can create unevenness to the access of technology. The third chapter entitled "Quantum Computing and Its Application in Healthcare and Agriculture" authored by Kiranjit Pattnaik, Subhashree Mishra and Bhabani Shankar Prasad Mishra explains the basics of quantum computing and its application both in the health and agriculture sectors. The fourth chapter entitled "Decision-Making Using Big Data in Predicting Degenerative Diseases" authored by V. Bhanumathi & C. P. Sangeetha concentrates on defining decision-making architecture for the degenerative disease, Alzheimer's disease named Alzheimer's Health Management and Analysis (AHMA), with the help of sensors, big data and IoT. The degenerative disease is one which will kill a man over a long run and the symptoms will be unknown in advance. The technology has made the disease analysis of patients easier. As the patients with disease cannot be interviewed for a longer duration, the big data derived from the system will be very much beneficial for decision-making. The fifth chapter entitled "Impact of IoT in Healthcare: Improvements and Challenges" authored by H. Swapna Rekha, Janmenjoy Nayak, G. T. Chandra Sekhar & Danilo Pelusi describe the history and development of emerging technologies of IoT in the healthcare system. This paper presented studies that showed factors affecting the health concerns may be found out through the latest findings of IoT. The components of IoT may thus serve as the basis of information for scientists, technocrats, researchers and common people.

The sixth chapter entitled "Paving the Way for Smart Agriculture in India" authored by Debasish Kumar Mallick, Ratula Ray & Satya Ranjan Dash is focused on the implementation of newer technologies in agriculture for creation of smarter ways to use available energy resources sensibly. Three case studies are presented here, which address different problems faced in agricultural practices. The first case study concerns facial recognition technology that detects the presence of the worker assigned to the job and as per requirement, the machine starts. The second case study depicts the design for a smart greenhouse equipped with monitoring systems and temperature, moisture and light sensors. These components create a self-regulating environment to provide an optimal condition for the plants to grow and efficiently save energy at the same time. The third case study addresses the issue of detecting coffee plants infested with bugs which produce a characteristic noise and causes stem rot in coffee plants. The authors opined that undertaking such challenging projects would pave a path for spearheading technological advancements for India in the global platform. The seventh chapter entitled "Agricultural IoT as a Disruptive Technology: Comparing Cases from the USA and India" authored by M. Umme Salma & Srinivas Narasegouda presents a comparative case study of agricultural IoT in India and the USA. This chapter gives the details related to the impact of agricultural IoT on the socio-economic life of the farmers, its impact on the growth of the agriculture sector and, in turn, the growth of the country. The eighth chapter entitled "A Survey of Digitized Handwritten Signature Verification System" authored by Anjali Rohilla & Rajesh Kumar Bawa discussed the recent work done on online and offline modes which are the two ways of digitizing the handwritten signatures. A comparative study of these works based on various features and techniques used has been executed.

The ninth to fifteenth chapters are compiled under the broad heading "Access/ Use, Aberrations and Obstacles". The ninth chapter entitled "Protection of Consumer Rights in E-Commerce in India by Richa Gupta presents a brief overview of the architecture for the protection of consumer rights in e-commerce

in India, which includes the Consumer Protection Act 1986 and 2019. This chapter looks thoroughly at various consumer cases filed in the e-commerce category at district, state and national consumer forums in India to answer certain pertinent questions in this field which may benefit much from the attention of policymakers and researchers alike. The tenth chapter entitled "Mediating Financial Inclusion through Digital Technology: A Critique" by Tara Nair describes the financial revolution in India. The first wave of this revolution occurred in the 2000s when the foundation of all-encompassing payment architecture was laid and the Aadhaar project was launched. The second wave of financial inclusion that started around 2015 used the Aadhaar and payments infrastructures to open bank accounts (under a scheme called Jan Dhan Yojana or JDY) on a mass scale and made all government benefit payments digital and direct-to-account. This article pointed out that many concerns about the privacy and security vulnerabilities of the Aadhaar architecture still remain unaddressed. The eleventh chapter entitled "Future of Work in Information Technology and the Analytics Industry: Understanding the Demand" by Nausheen Nizami studies the nature of work in the IT-Analytics industry. The study scrutinizes the current skill demand in the industry to understand the possible skill gaps in the labour market. The twelfth chapter entitled "Technology for Information Democracy: Case of GIS Enabled Entitlement Tracking System" by Sushmita Patel, Tenzin Chorran, Kunja Shrestha & Shivanyaa Rawat scrutinizes the Union and State Governments' of India various social security schemes and programmes intended for the well-being of the nearly eighty million households representing acute marginalized sections of the country. The authors found that most evaluations of the implementation of schemes blame their unsatisfactory performance on leakages in the system. The lack of information concerning these schemes is also a major factor behind the same. Governments across the world, including the Indian Government, started leveraging ICT to improve their public outreach.

The thirteenth chapter entitled Mobile Application in Agriculture Development in India: Policy, Practices and the Way Forward by Vikas Kumar scrutinizes the role of mobile application in agricultural development in India. This paper emphasizes the issues and challenges to implement a policy related to the mobile application. The paper is based on a quantitative research method and the study also analysed several facts from the peer-reviewed literature and books published by the academicians. The fourteenth chapter entitled "Open Research Data in the Global South: Issues and Anomalies in the Indian Context" by Anup Kumar Das discusses the salient features of FAIR (Findable, Accessible, Interoperable, Reusable) Data Principles. The chapter also highlights the issues and challenges in India's open research data ecosystem as a member of the developing nations in the Global South. The chapter also highlights the availability of open research data in India vis-à-vis the Global South, highlighting a few success stories. The fifteenth and the last chapter entitled "Crisis in Technical Education in India: Evolving Contours of the Computer and Information Sciences Discipline" by Hastimal Sagara & Keshab Das addresses the major churning taking place in the sphere of professional education in Computer and Information Science in India. The study takes into account a wide variety of Computer and Information Science courses those are/were offered in technical institutions in India over about the last couple of decades and analyses the implications of such performance of the CIS education in India.

This book examines the nature, extent and implications of rapid treads digitalization has made in India since the turn of the millennium. These have been examined not merely in the sphere of information and communication technology (ICT) but its multifaceted applications spreading across almost all aspects of production, services and institutions. With contributions from both ICT scholars and social scientists, this book presents diverse scenarios and unravels challenges faced in the process of technical applications, access by the users of these disruptive technologies (automation, e-commerce, big data analytics & algorithms, artificial intelligence, cloud computing, etc.,) which, unlike heavy machines (embodied technology), mostly defy physical space, pace of mobility and interoperability between technologies. Chapters in this volume address challenges and possibilities in establishing and operating intricate engineering infrastructure, technical and societal constraints encountered in broad-basing digitalization across layers of educational and social skills conducive to difficult geographies. Issues dealt with in this book include farming, healthcare, education, food processing, e-commerce, labour, rural community development, open-source data and information democracy. The chapters also reflect upon implications on local economy and society of the very global nature of these seamless technologies where interoperability remains the quintessential advantage of digitalization whether promoted or spearheaded through the state, private sector or global capital. The book criticizes policy inadequacies and suggests probable policy approaches to reduce the adverse impacts of fast digitalization. This book would be of interest to scholars, practitioners, technocrats, industry analysts, policymakers and civil society agencies.

As the title of the book consists of the term 'Conundrum', therefore from the perspective of the editors and authors of the chapters the approach of this book is quite justified. But it is worth mentioning that no light can be luminous if there is any absence of shadow. Hence, the shadow makes the light completely bright. Therefore, apart from so many deaths, it is absolutely true that the process

of digitization radically changes the overall Indian society from its very root. This worthy collection should throw a little lighter on this feature. Actually, each and every pro is shadowed by some cons and vice versa. Therefore, it is obvious that the digitization process may create some toxic by-products, creating several bottle-necks to society. But still, the enlightened parts of the paradigm shift of Indian society particularly over the last decade, cannot at all be overlooked. This edited volume, however, fails to portray the impact of digitization features on Indian culture and society from the prospective outlook.

Reviewed by
Dr. Bidyarthi Dutta
Department of Library & Information Science, Vidyasagar University, Midnapore, West Bengal, INDIA.
Email: bidyarthi.bhaswati@gmail.com
ORCID ID: 0000-0001-6049-5445

Received: 03-08-2023;
Revised: 22-09-2023;
Accepted: 02-10-2023.