
Guest editorial: Role of technology in E-commerce: bright and the dark side

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The potential of e-commerce is undeniable. E-commerce has helped shape various businesses and boosted the economy of countries as well. The applications of e-commerce are diversified and encapsulate almost every sector and business. The advent of technology has further strengthened the roots of e-commerce companies and their business models. South Asian countries are one of the fastest-growing economies in the application and adoption of e-commerce. The growth rate is driven by the architectural growth of technology and the diversity of e-commerce applications (Nisar and Prabhakar, 2017). Thus, information and communication technology (ICT) forms the backbone of e-commerce. New technologies and trends, especially those associated with the wave of the Fourth Industrial Revolution, are rapidly developing and shaping a strong digital ecosystem supporting e-commerce (Akter and Wamba, 2016). E-commerce is more than just merchants selling products online. With rapidly evolving technologies, customer expectations have risen higher. E-commerce firms around the world are embracing new technologies – such as big data analytics, the Internet of Things (IoT), artificial intelligence (AI), augmented reality (AR), virtual reality (VR) (Jayawardena *et al.*, 2023) and blockchain technology (Zheng *et al.*, 2022) – to meet evolving customer needs, befitting greater customization, maximum convenience and security (Liu and Li, 2020; Martínez-Navarro *et al.*, 2019; Wu and Lin, 2018; Behl *et al.*, 2019).

The recent coronavirus disease 2019 (COVID-19) pandemic has forced offline businesses to switch to online businesses, and thus, the role of these technologies becomes more evident. While these technologies were once considered a luxury for some businesses, they have become a necessity for organizations to survive in this competitive environment. The radical growth of technology in e-commerce could be a double-edged sword (Hallikainen and Laukkanen, 2018). On one side, it can break the geographic barriers for consumers and convert them to digital natives who can experience the product/service digitally. This injects new dynamics into the global market. With better and improved technologies adopted by e-commerce firms, customer acquisition costs have gone down drastically. This supplements the splurge of new entrants in e-businesses with similar ideas at almost similar prices, a more or less similar variety that makes the competition tougher for older players to survive. Thus, on the flip side, the advent of technology interventions causes intense competition which forces e-commerce firms to at times indulge in bad practices. Some of them include creating artificial demand for products, fake reviews of products, display of incorrect product specifications, (Nguyen *et al.*, 2020) etc. Studies have also reflected that there lies a serious issue in understanding the sudden change in technology by a large part of potential customers who are not as tech-savvy as others are (Yim *et al.*, 2017). This makes them digitally crippled and demotivates them to use these e-commerce firms to avail of their services (Nguyen *et al.*, 2020; Tang *et al.*, 2019).

In a digital economy, firms should continuously adjust in response to technology and market changes to keep the edge of competition sharp. In this regard, Asia will need to maximize e-commerce-related opportunities and minimize or eliminate the associated risks to turn the potential into a real engine of growth. While some countries in Asia have a wider and deeper understanding of technologies, a large number of countries have a large population that is still technologically challenged (Behl *et al.*, 2022). Similarly, while mature e-businesses



have matured in terms of adopting advanced technologies, a lot of start-up firms in the digital e-commerce space are still using contemporary technologies to run their business.

This special issue presents an interesting debate for South Asian e-commerce firms to address some of the key research questions:

RQ1. How can advanced technologies act as a boon for the e-commerce industry and the end-users?

RQ2. What is the flipside or the dark side of the use of these advanced technologies for the e-commerce industry and end-users?

RQ3. How can e-commerce platforms be made more inclusive?

To answer these critical questions, the special issue has accepted five research papers. These papers discuss themes related to blockchain technology, mobile service adoption, sustainable organizational performance, performance improvement of e-commerce firms and developing social capital (SC) of agribusiness firms. A detailed overview of the five papers is as follows:

The first paper, "*Using blockchain for global governance: past, present and future*" by Chandan Tiwari and Abhinav Pal, explores the state of the blockchain governance research. The study is both qualitative and quantitative. The study's findings propose a conceptual framework for the use of blockchain in governance and global governance and provide a global look at how the public and private sectors alike are implementing new technologies. The numerous governmental and commercial initiatives that have made use of blockchain are also highlighted in the study. With the growing interest in governance issues in blockchain technology, this paper provides a thematic understanding of areas where blockchain technology and governance can work together.

The second paper, "*Dimensions of mobile service adoption – a systematic literature review*" by Vishal Kulshrestha, Kokil Jain and Tarun Dhingra, identifies the main factors influencing mobile service adoption and defines a universally applicable holistic concept capable of explaining all types of mobile service adoption that will be useful to all stakeholders. The study found that usefulness and experience are identified as the primary motivators for adoption and that negative barriers to adoption must be controlled to improve adoption. Demographics play a role in adoption and the technology acceptance model (TAM) emerged as the most suitable model to study the variables affecting mobile service adoption. The review provides a holistic mobile service adoption process that can define adoption for all kinds of mobile services and is universally applicable as well.

The third study, "*Improving firm performance using market orientation and capabilities: a case study approach*" by Sandeep Narula, Sudhir Rana, Shakul Srivastava and Manjeet Kharub, explores the relationship between market orientation (MO), marketing capabilities, competitive advantage and firm performance with a focus on productivity and growth. This study answers how MO and capabilities can enhance the performance of a firm. The study attempts to answer a critical question, "How proactive MO helps the business organization to improve performance and attain category leadership in the desired therapeutic segment?" The study uses a public sector firm that was carefully chosen and data were gathered through interviews with managers from different levels of the case company. The results of this study explain that the MO concept is highly effective in building marketing capabilities and sustaining performance. The study explains that MO, when combined with marketing capabilities, gives the organization a competitive advantage, which ultimately enhances the firm's performance.

The fourth study, "*Sustainable organizational performance management: deciphering the role of emotional capital in e-commerce industry*" by Parul Gupta, Kanupriya Misra Bakhru and Amit Shankar, aims to understand the role of employee emotional capital in e-commerce organizations for implementing a sustainability-oriented approach. It explores two research

questions: First, what role does emotional capital play in creating a sustainability-oriented functioning in an e-commerce organization? Second, how can the emotional capital of employees and leaders be molded and aligned to the desired behavioral approach toward sustainability. The findings indicate that organizational emotional capital can help in designing and pursuing sustainability-oriented practices in a more “engaged” manner. This can further stimulate a new approach to determining the dimensions, goals and measurement criteria for organizational performance management in the e-commerce industry. This study presents strong futuristic managerial implications and focuses on how e-commerce organizations can achieve long-term sustainability performance by harnessing the resource of emotional capital, which is inherently present with them at individual and collective levels.

The fifth paper, “*Social capital in e-commerce era: toward a deeper knowledge of its conceptualization and empirical measurement in agribusiness*” by *Le Dang Lang*, proposes a scale development process for integral measurement of social capital (IMSC). Technology adoption to pursue an e-commerce model for agribusinessmen is not easy, and COVID-19 has made them lose customers and led them to crises. In that context, the role of SC has increasingly been paid significant attention, especially for micro and family businesses. Agribusinessmen can use SC to adopt technology, renew and reinforce their businesses in the global agricultural supply chain disruption context. This research adopts a widely accepted and rigorous scale development process, a mixed-methods research design and essential statistical techniques to develop an IMSC. The result develops an IMSC consisting of nine facets: linking-corporate, bonding-bridging, trust in political institutions, trust in public services, generalized social trust, norms and social sanctions, subjective safety, civic sense and community cohesiveness. Thus, the study offers measurable and tangible outcomes in exploring and measuring IMSC.

The special issue offers a balanced approach to presenting critical insights by using different yet useful approaches. Three studies present thematic and historical review-based articles to understand how, over time, technology and e-commerce organizations grew in different directions. Other studies used a case-based approach to investigate and propose theoretical perspectives for the organizational performance of e-commerce firms. Lastly, studies used scale development and validation, which would be useful in the future to measure constructs like IMSC.

The special issue proposes a balanced approach between the bright side and the dark side of technology by offering learning for different technologies and their applications. The studies in the SI advocate that the advancements and research in blockchain governance highlight that there can be a better way through the blockchain-based infrastructure, which can lead to improved collaborations and cooperation in public-private partnerships. The existing and traditional governance systems are becoming obsolete, and the same will have to be redesigned. On a similar note, for mobile service adoption, the facilitating condition acts as a critical construct that makes a difference when it comes to understanding the nature of adoption. Security risk is also found to be another such construct that, when controlled, would lead to the adoption of mobile services. Thus, with growing mobile services and their applications, it is important to understand which constructs and to what degree they impact the process of adoption. While certain constructs and strategies are applicable at the individual level, others are applicable at the firm level. Through a case-based approach, the studies also projected that an organization’s commitment-induced MO tied up with marketing capabilities becomes the prominent source of competitive advantage. As technology becomes strength for most firms with the growing digitization and digitalization, they must understand that any technology can only bring in a competitive advantage in the short run and will then become normalized with new technology coming in. This calls for an agile approach to understanding the dynamic-capabilities view for

technology-based products and services. Thus, to transform from a dark side to a bright side, it is critical to connect the dots between sustainable organizational performance and emotional capital. Organizations (especially e-commerce firms) can achieve long-term sustainability performance by harnessing the resource of emotional capital. The organizations should thrive to understand the changing dynamics in the existing volatile, uncertain, complex and ambiguous (VUCA) world between business and society, wherein the role of business goes beyond ensuring economic viability.

Abhishek Behl

*Department of Information Management, Management Development Institute Gurgaon,
Gurgaon, India, and*

Justin Zuopeng Zhang

Department of Management, University of North Florida, Jacksonville, Florida, USA

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