Exploring the Critical Success Factors (CSFs) and Barriers to the Adoption of Blockchain in Financial Services

Ariba Fatima and Dr. Somen Dey
School of Management Studies
Motilal Nehru National Institute of Technology Allahabad, India
aribafatima07437@gmail.com, somen@mnnit.ac.in

Abstract

This study will aid in successfully adopting Blockchain Technology (BCT) and its applications in financial systems. The research aims to explain the Critical Success Factors (CSFs) and impediments or barriers that may arise with BCT adoption in financial services. To develop the theoretical framework, the identified CSFs and barriers were grouped and analyzed along different dimensions (i.e., Technological, Organizational, Operational, Environment & Economic). Smart Contracts, Peer-to-Peer Networks (P2P), Trust, and Security, are identified as CSFs in the technical realm. At the same time, Scalability, Fake Identity Threat, and Interoperability are impediments to BCT adoption. Under the organizational dimension, Trust Mechanism and Informational Access are highlighted as CSFs, whereas Lack of Management Support and Commitment are hurdles to BCT deployment. Decentralization and Energy-Intensiveness are identified as CSF and impediments to BCT adoption along the operational dimension. Under the economic dimension, financial trust, Fintech disruptions, and Cost-Cutting Measures are identified as CSFs. At the same time, High Transaction Prices have been determined as barriers to BCT adoption. Finally, Disintermediation and the Absence of Regulations and Laws are identified as CSFs and hurdles to adopting BCT, respectively, along the environmental dimension. The developed theoretical model presented in the paper provides a practical roadmap for successful BCT adoption in financial services in Indian settings.

Keywords
Blockchain, Critical Success Factors, Barriers, Financial Services, Financial Sectors

Bibliography
Ariba Fatima is a Ph.D. student at the Department of School of Management Studies at Motilal Nehru National Institute of Technology Allahabad in Prayagraj, Uttar Pradesh. She graduated from Allahabad State University, Prayagraj, and post-graduation from the University of Allahabad, Prayagraj, specializing in Financial Management. Her current research interests include the application of Information and Communication Technologies (ICTs)and Blockchain Technology (BCT) in finance.

Dr. Somen Dey is currently Assistant Professor in the School of Management Studies, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, Uttar Pradesh, India. He obtained his B. Tech (Hons)degree in Production and Industrial Engineering from the National Institute of Technology, Jamshedpur, India, and Master of Engineering (ME) degree in Production Engineering with a specialization in Production Management from the Department of Production Engineering, Jadavpur University, Kolkata, India. He earned his doctorate (Ph.D.) in Operations Management and Manufacturing Strategy from the Department of Industrial and Management Engineering, Indian Institute of Technology Kanpur, India. His primary research interests include operations management, supply chain management, organization, and manufacturing strategy, strategic information systems (IS), production planning and control, operations research, and optimization techniques. He also has secondary research interests in data mining, machine learning algorithms, and knowledge discovery (KDD) applications in manufacturing and production planning and control. He received the Best Track Paper Award in Operations Management at the 7th Annual Conference on Industrial Engineering and Operations Management, IEOM, April (11th–13th)2017, Rabat, Morocco.