

Social Welfare Supply Chain Modelling Leveraging Smart Contracts

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Abstract

This research aims to integrate blockchain technology and smart contracts into a government organization's supply chain. The strategy includes developing an optimal facility location model and a blockchain framework. This could potentially transform public health supply chains, especially in rural areas. However, it's crucial to recognize that while blockchain and smart contracts offer numerous benefits, they also present challenges and vulnerabilities that must be addressed. Further research and development in this field are necessary. A thorough study was conducted, assessing the current landscape through a literature review that focused on various schemes and initiatives by both government and non-government bodies. The study's contribution is two-fold: it provides practical benefits to government schemes and expands the literature in new and significant ways. A methodology grounded in technology and operations research is proposed to tackle challenges arising from the government's benefit transfer schemes. This study could improve the efficiency of benefit delivery systems and represents a collaboration between an educational institute and the government.

Keywords

Menstruation, Blockchain, Smart Contracts, Supply Chain, Optimization

Biographies

Satyavolu Rama Vijaya Kumar is a seasoned Information Technology Professional with over 25 years of industry experience. He earned his Bachelor of Engineering in Electrical and Electronics Engineering from Andhra University College of Engineering, Visakhapatnam. He also holds a Master of Technology in Industrial Engineering and Management, a Master of Technology in Computer Science from Jawaharlal Technological University Hyderabad, and an M.B.A from Indira Gandhi National Open University. Throughout his career, he has worked with various organizations, including Hughes Software Systems, Wipro Technologies, OpenText Technologies, and TeamLease Digital, across domains such as Telecom, Embedded Systems, Unified Communications, and Enterprise Content Management. His areas of interest include Management Information Systems and Supply Chain Management

Prof. K. Venkata Subbaiah is the founding Vice-Chancellor of Jawaharlal Nehru Technological University, Gurajada, Vizianagaram, with around 37 years of academic experience. He earned his Bachelor's, Master's, and PhD degrees in Mechanical Engineering from Andhra University. He has held key positions, including Chairman of the Faculty of Engineering, Dean of Research & Development, and Honorary Director of the AU Development Centre at Andhra University. He also served as Head of the Department and Chairman of the Board of Studies in Mechanical Engineering at AU College of Engineering, Andhra University. Additionally, he has been a Member of the Bureau of Indian Standards Committee and a Governing Body Member as the A.P. State Government Nominee for five engineering colleges. His research interests include Fuzzy Systems, Supply Chain Management, Inventory Management, Quality Management, Composite Materials, and Optimization. He received the State Best Teacher

Award from the Government of Andhra Pradesh in 2014, the Dr. Sarvepalli Radhakrishnan Award for Best Academician in 2008, and the Best Researcher Award in 2014 from Andhra University. He is affiliated with various professional bodies, including the Institution of Engineers (India) and the AP Academy of Sciences.

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