



A Multivariate Analysis of Agricultural Electronic Trading Adoption

Sanjay Chaudhary^{1*} & P K Suri²

¹Delhi Technological University, and Vivekananda Institute of Professional Studies, Pitampura, Delhi 110 034, India

²Delhi School of Management, Delhi Technological University, Delhi 110 032, India

Received 21 January 2022; revised 16 August 2022; accepted 16 August 2022

The study addresses the knowledge gap related to the scarce literature on digitalization in India's agricultural marketing. A field survey of five hundred National Agriculture Market users is undertaken to understand the theoretical constructs of wholesale electronic trading adoption in a realistic backdrop of a large digital project. The Partial Least Squares-Structural Equation Modelling (PLS-SEM) methodology is used for the statistical analysis. It demonstrates the positive effect of variables: 'Trust', 'Cost', 'Social Influence', 'Perception-Ease of Use', 'Perception-Usefulness', and 'Facilitating Conditions' on the adoption. The study brings out a simple agricultural wholesale e-trading adoption framework. It extends the existing theoretical knowledge base concerning technology adoption in new contexts (wholesale electronic trading, agriculture, India). It expands the scope of the theory by adding new constructs, 'Trust' and 'Cost'. The study's recommendations are expected to help practitioners in decision-making. It shall help practitioners of developing countries prioritize using scarce resources to deliver the intended benefits to the farming community in terms of administrative ease, user convenience, expanded market reach, faster cycle time,

Keywords: Digitalization, ICT, National agriculture market, PLS-SEM

Introduction

The digitalization trend is evident in the agriculture sector. The interaction of fast-changing latest Information and Communication Technology (ICT) and the oldest profession (agriculture, traditional ecosystem) opens multiple issues. Digitalizing the business-to-business (B2B) procurement stage is essential to improving the agricultural supply chain.

Digitalization in the Procurement

In the procurement stage, agricultural commodity sales are progressively changing from the verbal public sale (auction) mode to the digital e-trading mode in India. Wholesale e-trading platforms are more open and transparent than physical markets. E-trading has accelerated and expanded the procurement process. It is also expected to strengthen the seller's bargaining power by giving them online reach to intra-market, inter-market, and inter-state buyers. As a result, farmers are set to receive a higher price when selling produce to the markets with shortage/high demand through the online e-trading platform rather than through a limited number of regional agents at the farm gate.^{1,2}

The research focus is derived from the empirical finding that the B2B e-commerce platforms such as electronic trading (e-trading) shall focus first on building a critical number of users (farmers, traders) and quality. As the number of users/transactions on the e-commerce platform grows to the critical number, the platform becomes viable and more valuable to other stakeholders. The other stakeholders include application developers, exporters, transporters, logistics and value-add service providers.³

Post literature review, the research gaps are identified as follows: Research on the agricultural B2B e-commerce (e-trading) adoption is scarce, the case studies on agricultural e-trading are few, and there is little research in India on agricultural e-trading benefits for farmers. By responding to the following queries, the research gaps can be filled: What are the driving factors behind adopting e-trading in the Indian agricultural sector? Using the learning from the case of the National Agriculture Market (eNAM)⁴, how can the adoption of e-trading be promoted? These research questions led to the research objective of this study.

Research Objectives

Consequently, the study has the following objectives:

*Author for Correspondence
E-mail: one.sanjay@gmail.com