Becoming Digital: How Agricultural Organizations Redefine Their Identity in the Digital Era

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Introduction

Digitalization has become a defining force in the agricultural sector, transforming how organizations structure, manage, and deliver services (Klerkx et al., 2019). Prior studies indicate that digitalization reshapes both operational systems and employee roles, introducing new tasks that drive organizational change while complementing existing structures (Ingram & Maye, 2020; Fielke et al., 2020). One notable outcome of this transformation is the emergence of *digital organizational identity*, an underexplored concept describing how organizations redefine their purpose, values, and functions in response to digital change (Batko & Baliga-Nicholson, 2019). Organizational identity, defined as an organization's central, enduring, and distinctive character (Albert & Whetten, 1985), influences how members interpret and adapt to change (Gioia et al., 2013). Within agriculture, digitalization has been particularly consequential for extension organizations that act as intermediaries connecting research, innovation, and rural communities (Nyarko & Kozári, 2021). As their roles shift toward facilitation and network-building, extension professionals must integrate new technologies and digital skills to remain effective (Ayre et al., 2019; Shepherd et al., 2020). Despite growing interest in digital agriculture, limited research has examined how digitalization reshapes the identity, values, and internal roles of agricultural organizations—especially in developing-country contexts where digital transformation remains nascent. This study addresses that gap by exploring how agricultural organizations experience identity transformation during digitalization.

Conceptual Framework

This study was informed by prior research on organizational identity change during digitalization (Gioia et al., 2013; Rijswijk, 2022; Rijswijk et al., 2019). Previous work indicates that digitalization transforms both the tangible (e.g., services, customer relationships, interorganizational collaborations, work processes) and intangible (e.g., goals, values) dimensions of organizational identity. This conceptual framework guided the development of interview questions designed to examine changes in agricultural organizations undergoing digitalization. However, data analysis followed an inductive approach, with concepts and categories derived directly from participants' responses.

Purpose and Research Objectives

The purpose of this study was to explore how digitalization transforms the organizational identity of agricultural organizations. Specifically, this research sought to: (1) examine the tangible and intangible dimensions of organizational identity influenced by digitalization, (2) identify the primary organizational roles and values that change during digital transformation, and (3) describe how these changes manifest in the internal structure, culture, and practices of an agricultural organization in a developing-country context.

Methods

This research employed a qualitative, single-case study design. The case selected for this study was the Agricultural Organization of Fars Province, chosen for its ongoing digital transformation initiatives in the agricultural sector. To gain a comprehensive understanding of organizational identity changes, 21 semi-structured interviews were conducted with managers, deputy managers, and senior experts across seven key departments. Purposive and snowball sampling methods were used to identify participants with relevant knowledge and experience regarding the organization's digitalization process. Each interview lasted approximately 90 minutes and was transcribed and analyzed using NVivo 12 software.

Analysis of participants' characteristics indicated that 76% of the interviewees were male, and the average age was approximately 46 years. Most respondents held a master's degree (76%), while the remainder held a doctoral degree (24%). Work experience ranged from 10 to 28 years.

Results

Data analysis using NVivo 12 produced 76 concepts and 18 main categories. The most notable organizational identity changes included process automation (21 interviewees, 29 references), creating an agile work environment (18 interviewees, 30 references), blurring organizational boundaries (18 interviewees, 27 references), data-driven decision-making (18 interviewees, 29 references), redundancy of skills (14 interviewees, 30 references), and increased responsiveness (14 interviewees, 31 references). These categories reflect both structural and functional changes in organizational roles and interactions and align with previous studies on organizational digitalization (Eastwood et al., 2019; Rijswijk et al., 2019; Sousa & Rocha, 2019).

Conclusions & Implications

Findings from this study indicate that digital transformation in agricultural organizations extends beyond technological change; it redefines organizational roles, values, and internal structures. This transformation has made educational and extension activities more efficient, targeted, and timely, enabling experts to use real-time data to design and evaluate educational programs. An agile work environment and the development of digital skills have fostered synergy between units and facilitated collaboration with scientific institutions and the private sector, promoting innovation networks and collective learning in the agricultural sector.

In developing countries, such changes can enhance organizational resilience amid resource and infrastructure constraints and help mitigate environmental challenges. Specifically, data-driven decision-making and process automation can improve resource efficiency and reduce time and cost inefficiencies. In contrast, in developed countries, a new digital identity provides a foundation for complex data analysis, continuous evaluation of educational programs, and improvements to the agricultural extension system. Overall, these findings highlight the importance of promoting digital-centric approaches within organizations, as they enable integrated data systems, agile structures, international collaborations, and ongoing evaluation to strengthen agricultural education and extension.

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