

## Digital Adoption of Sales Support Tools for Farmers: A Technology Organization Environment Framework Analysis

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**Abstract :** Digital agriculture is an approach that exploits information and communication technologies. These encompass data acquisition tools like mobile applications, satellites, sensors, connected devices, and smartphones. Additionally, it involves transfer and storage technologies such as 3G/4G coverage, low-bandwidth terrestrial or satellite networks, and cloud-based systems. Furthermore, embedded or remote processing technologies, including drones and robots for process automation, along with high-speed communication networks accessible through supercomputers, are integral components of this approach. While farm-level adoption studies regarding digital agricultural technologies have emerged in recent years, they remain relatively limited in comparison to other agricultural practices. To bridge this gap, this study delves into understanding farmers' intention to adopt digital tools, employing the technology, organization, environment framework. A qualitative research design encompassed semi-structured interviews, totaling fifteen in number, conducted with key stakeholders both prior to and following the 2020-2021 COVID-19 lockdowns in France. Subsequently, the interview transcripts underwent thorough thematic content analysis, and the data and verbatim were triangulated for validation. A coding process aimed to systematically organize the data, ensuring an orderly and structured classification. Our research extends its contribution by delineating sub-dimensions within each primary dimension. A total of nine sub-dimensions were identified, categorized as follows: perceived usefulness for communication, perceived usefulness for productivity, and perceived ease of use constitute the first dimension; technological resources, financial resources, and human capabilities constitute the second dimension, while market pressure, institutional pressure, and the COVID-19 situation constitute the third dimension. Furthermore, this analysis enriches the TOE framework by incorporating entrepreneurial orientation as a moderating variable. Managerial orientation emerges as a pivotal factor influencing adoption intention, with producers acknowledging the significance of utilizing digital sales support tools to combat "greenwashing" and elevate their overall brand image. Specifically, it illustrates that producers recognize the potential of digital tools in time-saving and streamlining sales processes, leading to heightened productivity. Moreover, it highlights that the intent to adopt digital sales support tools is influenced by a market mimicry effect. Additionally, it demonstrates a negative association between the intent to adopt these tools and the pressure exerted by institutional partners. Finally, this research establishes a positive link between the intent to adopt digital sales support tools and economic fluctuations, notably during the COVID-19 pandemic. The adoption of sales support tools in agriculture is a multifaceted challenge encompassing three dimensions and nine sub-dimensions. The research delves into the adoption of digital farming technologies at the farm level through the TOE framework. This analysis provides significant insights beneficial for policymakers, stakeholders, and farmers. These insights are instrumental in making informed decisions to facilitate a successful digital transition in agriculture, effectively addressing sector-specific challenges.

**Keywords :** adoption, digital agriculture, e-commerce, TOE framework

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