Digital Transformation Elements and Dynamic Capability Development among farmers in Yewa, Ogun State, Nigeria

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Introduction
The rapid integration of digital technologies into agriculture has brought transformative changes, especially in developing countries where agriculture remains a significant contributor to livelihoods. In Nigeria, smallholder and medium-scale farmers face various challenges in adapting to changing environmental and market conditions. As such, developing dynamic capabilities—defined as the ability to adapt, innovate, and respond to change—is essential for enhancing resilience and productivity. This study investigates the relationship between digital transformation elements and the development of dynamic capabilities among farmers in Yewa, Ogun State, Nigeria. The research aims to determine how access to digital tools, digital training, and years of experience with digital technologies influence farmers' ability to adapt and innovate in the agricultural sector.

Materials and Methods
This study employed a quantitative survey research design. Stratified random sampling was used to select a total of 500 smallholder and medium-scale farmers from five Local Government Areas (LGAs) in Yewa division: Yewa North, Yewa South, Imeko-Afon, Ipokia, and Ado-Odo/Ota. Data were collected using a structured questionnaire based on a 4-point Likert scale. The instrument measured key variables including access to digital tools, number of training hours received, years of experience using digital technologies, and indicators of dynamic capability development. Descriptive statistics and multiple linear regression analysis were used to analyze the data and identify predictors of dynamic capabilities among the respondents.

Results and Discussion
The results of the regression analysis indicated that access to digital tools, training hours, and years of experience with digital tools significantly predicted dynamic capability development among farmers. These variables collectively explained 66.3% of the variance in the ability of farmers to adapt to change, innovate farming practices, and effectively apply digital knowledge. The findings suggest that digital literacy and long-term engagement with technology play a critical role in fostering the adaptive and innovative potential of farmers. Farmers who had more frequent access to digital tools and participated in training programs were better equipped to use technological innovations to improve agricultural productivity and respond to changing conditions in the market or environment.

Conclusions
The study concludes that digital transformation is a key enabler of dynamic capability development among farmers in Ogun State. Enhancing digital access and capacity-building initiatives can significantly boost farmers' resilience and competitiveness. To achieve this, it is recommended that policymakers and stakeholders improve access to affordable digital tools, expand digital training programs, promote long-term adoption of digital innovations, strengthen agricultural extension networks, and encourage active participation from the private sector in the development of agritech solutions. Future research may explore the long-term impact of digital capability on productivity and the role of gender and education in digital adoption.

Keywords: digital transformation, dynamic capability development, access to digital tools, training hours, years of experience, smallholder farmers.