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Assessing the status of farmers’ digital transformation in tea production and consumption: Case study of Son Duong district, Tuyen Quang province

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Abstract

Agriculture is perceived as a cornerstone of economic growth in Vietnam, accounting for 12 % of the national GDP and employing more than half of the national workforce, with rice, coffee, pepper and tea being the key products. The production and consumption of agricultural products play an important role in sustaining livelihoods throughout the country. However, the traditional production practices that strongly depend on the availability and expansion of factors, such as arable land and labour, have reached their limits. The small-scale production model, highly fragmented agricultural value chains (VCs) and increasing consequences of climate change and the Covid pandemic have posed further challenges to Vietnam’s agricultural sector. In this context, digital technology has emerged as a promising instrument to improve efficiency in resource utilisation, the linkages and information flow in agricultural VCs as well as to reduce labour and the damage generated by natural disasters and epidemics. However, to date, there is still little knowledge on the actual state of digital transformation in agriculture in Vietnam.

This study assesses the status of digital transformation at the household level in tea production and consumption. Being known as one of the tea hubs in Vietnam, Son Duong district, Tuyen Quang province, was selected as a study site. 474 household heads were surveyed, following a stratified random sampling approach. Furthermore, 12 in-depth household interviews were conducted to complement qualitative insights. The findings were validated in group discussions and expert interviews.

Initial results illustrated the low level of digital transformation of tea farmers, mostly focusing on several basic applications, such as weather forecasting, pest warning and QR code for payment. Various reasons were given by farmers for their digital application in their tea production and consumption activities. Of which the most frequent motivations were to increase income from the tea business (27.6 % of the respondents), through improving tea product quality (23.4 %) and quantity (23 %). Furthermore, the limitations of farmers’ awareness on digital transformation, capital and skilled labour were emphasised as the reasons restricting the application of digital transformation by households.

Keywords: Digital agriculture, digital transformation, production and consumption system, tea, Vietnam