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Pricing inclusive digital extension services: Gender, delivery design, and farmers' willingness to pay in Zambia

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Abstract

As digital agricultural advisory platforms transition from subsidised pilots to subscription-based models, user fees may exclude vulnerable groups, including women and resource-poor smallholders. This study examines gender differences in willingness to pay (WTP) for Atubandike, a phygital extension platform in Zambia that combines interactive voice response messages on climate-smart agriculture with in-person community support. Using data from 560 active users participating in a randomised controlled trial of five delivery models, we find that demand is highly price sensitive and declines sharply as fees increase. Women, particularly married women, exhibit significantly lower WTP than men, even after controlling for socioeconomic characteristics. Delivery design strongly influences women's demand: phygital models that combine digital advisory with village-based digital champions and community engagement generate higher WTP among women than digital-only models. However, the recurrent costs of socially inclusive delivery designs cannot be recovered through widely affordable user fees alone. The findings suggest that sustaining inclusive digital extension systems will require broader public and private financing mechanisms, with user fees playing a complementary rather than primary role.

Keywords: Digital extension, women

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