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## Enhancing livestock marketing by small-holder livestock farmers through software-as-a-service (SaaS) framework in tanzania

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### Abstract

Tanzania's livestock sub-sector lacks systematic market information systems, in which livestock keepers and traders can easily find customers for their animals. Likewise, the buyers of livestock or products cannot easily find sellers without intermediaries. Information flow between sellers and buyers remains obscure. This information gap is normally exploited by the intermediaries at the expense of livestock keepers and buyers. To overcome this challenge, a digital tool in the form of a mobile phone application was conceived where livestock keepers could post product details (prices, quantities being sold, sellers locations). The buyers on the other end could query the system and identify sellers' prices, quantities and locations. This article presents findings on the possibility of adopting digital tools for addressing the stated challenges. A cross sectional survey was conducted in Morogoro District in Tanzania to: assess the type of mobile phone being owned by the livestock keepers, traders and buyers, understand their experience in using digital tools to do business, and evaluate their willingness to pay for the digital services if available. A total of 213 respondents, including livestock keepers, traders and buyers, were interviewed in June-July, 2023. Majority of respondents (68 %) owned smartphones, 26 % owned featured phones, and the remaining 6 % owned other types of phones (e.g., tablets). The majority of users (83 %) had no experience in using any digital tools in selling or buying livestock. As for respondents' willingness to pay for the market information system services, the majority (53 %) were willing to pay while 47 % were not. The significant usage of smartphones by livestock keepers, traders and consumers suggests that there is a possibility of adopting digital tools in marketing of livestock and associated products. The provider may start with a free tier since the small number of those willing to pay suggests their low purchasing power. We conclude that introducing digital platforms for market information systems is important in enhancing transparency, efficiency and profit margins for livestock keepers. These findings may help software developers especially in the livestock sub-sector to explore the feasibility of building digital platforms for providing market information in Tanzania and similar environments.

**Keywords:** livestock business, expenses, intermediaries, SaaS, systematic market information