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Implication of Market Intermediation on Efficiency of the Camel Milk Market in Kenya

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Abstract

Notwithstanding investments and interventions by the government and NGOs over the last ten years, the performance of the camel milk value chain in Kenya has remained poor, characterised by poor milk quality, losses and low-marketed volumes as well as producer prices. The market also features a large number of small (individual) traders and a considerable number of large (cooperative) market intermediaries operating along different market channels. Economic theories of increasing returns to scale suggest that presence of increasing returns gives an opportunity for large firms to take advantage of higher productivity to crowd out small firms. The structure of this market is therefore inconsistent with these theories where system-wide efficiency is expected to be large in a market with a few large firms buying directly from producers. Using data from 135 camel milk producers and 193 camel milk traders, this paper investigates whether the variation in scale and size distribution of intermediaries in camel milk market in Kenya can be explained by unexploited scope in efficiency improvement. The importance of market intermediaries in linking farmers to the market is evident as majority of the producers sell their milk at the production point. Analysis of volumes, costs and margins identifies transport, handling and monitoring costs as sources of increasing returns. Increasing returns to distance, transaction size, marketing task and working capital cannot be rejected. Large traders largely utilize public transport buses than motorcycles and cover significantly more distance compared to individual traders. Milk transport by bus is more cost efficient for large volumes over long distances as small loads are more penalized in motorcycle transport than buses. We observe a significant reduction in the density of trade in the dry season and motorcycle transport rival buses among large traders. Obtaining larger volumes in this season demands fetching the milk deeper in the rangelands where transport is only feasible by motorcycles. We therefore conclude that this observed behaviour among large traders is rational given the circumstances. Under similar circumstances, small traders can only capture efficiency gains by aggregating to prevent small volumes from being penalized. This implies that policies should be geared towards institutional innovations that promote cooperation among agents thus capturing efficiency gains.

Keywords: Costs, efficiency, handling, intermediation, margin, market, returns, transaction, transport