



## Investigation of the governance structure of the Nairobi dairy value chain and its influence on food safety



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### ABSTRACT

The dairy value chain of Nairobi is comprised, in its majority, of small-scale independent enterprises that operate within a complex interlinked system. In this complexity, the coordination and power structures of the system may have major influences on the management of dairy food safety. Therefore, the aim of this study was to investigate the governance structure and challenges faced by stakeholders throughout the Nairobi dairy value chain and assess their potential implications on food safety. Qualitative data were collected through focus group discussions and key informant interviews based on a dairy value chain mapping framework previously developed. Thematic analysis enabled identification of governance themes, key challenges and analysis of their implications on food safety. Themes were organized depending on their association with farmers (informal settlement or peri-urban), dairy cooperatives, dairy traders, processing companies, retailers or government officers. The identified governance themes included: i) weak linkage between government and farmers, ii) inadequate compliance with government regulations by traders and retailers, iii) emphasis on business licenses and permits for revenue rather than for food safety, iv) multiple licensing resulting in high business cost and lack of compliance, v) fragmented regulation, vi) unfair competition and vii) sanctions that do not always result in compliance. The key challenges identified included, among others: i) inadequate farmer support, ii) harassment of traders and retailers and iii) high business costs for traders, retailers, dairy cooperatives and large processors. The implication of governance and challenges of food safety were, among others: i) inadequate extension services, ii) insufficient cold chain, iii) delivery of adulterated and low milk quality to bulking centers, iv) inadequate food safety training and v) lack of policies for management of waste milk. The range of issues highlighted are based on stakeholders' perceptions and reflects the complexity of the relationships between them. Many of the governance themes demonstrate the linkages that are both beneficial or confrontational between the formal and informal sectors, and between industry and regulatory authorities, with possible direct food safety consequences. Findings obtained provide indications to decision-makers of potential governance areas that could help improve efficiency and food safety along the dairy value chain.

### 1. Introduction

By 2050, demand for milk consumption will triple in Africa and particularly in East Africa driven by population growth, increasing urbanization and improved purchasing power due to economic growth (Herrero et al., 2014). Kenya is one of the countries in Africa with high milk consumption estimated to be between 50 and 100 L of milk per

person annually (Bosire et al., 2017). The significance and prominence of the Kenya dairy sector is exemplified by its nutritional importance (Dominguez-Salas et al., 2016), its 3.5% contribution to the total gross domestic product (Muriuki et al., 2003), its economic value estimated at 230 million US dollars (Kaitibie et al., 2010) and creation of numerous job opportunities. The Food and Agriculture Organization of the United Nations (FAO) estimates that for every 1000 L of milk handled

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