

Improving the competitiveness of the potato and carrot value chain in Kenya: An agro- cluster approach

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Abstract

The competitiveness of any agribusiness is based on its role within its environment, its relationship and linkages with other actors within which it operates. In this study, we use cluster approach to get an insight into what roles and linkages exist in the potato and carrot value chain, what the competitive edge is and what this means for the organisations in setting their marketing strategies using Product, Pricing, Promotion, Place, Processes, People and Physical parameters. The cluster approach forces actors and other stakeholders to think, analyse and relate strategically so as to maintain a competitive edge in their businesses.

Key words: Competitive, environment, linkages, value chain

Résumé

La compétitivité de toute l'agro-industrie est basée sur son rôle au sein de son environnement, ses relations et ses liens avec d'autres acteurs au sein desquelles elle s'opère. Dans cette étude, nous utilisons l'approche de cluster pour obtenir un aperçu sur les rôles et les liens qui existent dans la chaîne de valeur de pomme de terre et de la carotte, quel est le limite concurrentiel, et qu'est-ce que cela signifie pour les organisations dans l'établissement de leurs stratégies de marketing en utilisant le produit, le prix, la promotion, la place, le processus, les personnes et les paramètres physiques. L'approche sectorielle oblige les acteurs et autres parties prenantes à réfléchir, à analyser et à rapporter de façon stratégique afin de maintenir un avantage concurrentiel dans leurs entreprises.

Mots clés: compétition, l'environnement, les liens, la chaîne de valeur

Background

Agriculture is facing a multiplicity of challenges, such as climate/weather change, globalization, product standardization and high-value production. Focus is changing from production to enhancing competitiveness of agricultural enterprises. Moreover, value addition and commercialization of smallholder farms is becoming important. Addressing these challenges calls for connecting agricultural education and research to the needs of the farmers and food industry. Therefore, an integrated approach, collaborating the efforts of farmers, universities, research institutions, financial institutions as well as the industry should be adopted

for this vision of agriculture to be achieved. Currently focus is shifting to the cluster approach. An agro-based cluster (AC) is a concentration of producers, agribusinesses and institutions that are engaged in the same agricultural or agro-industrial subsector, and interconnect and build value networks when addressing common challenges and pursuing common opportunities (Gálvez-Nogales, 2010). Theus and Zeng argue that Cluster-based policy aims at removing the imperfections of innovation systems by enabling them to function more efficiently and avoid coordination failures. Furthermore, they contend that a cluster-based approach is a realistic way to identify the policy and institutional impediments to competitiveness and innovation.

Literature review

The close interplay between firms, their suppliers, and the business environment is why competitiveness theorists and practitioners focus on “clusters” as the locus of action, as opposed to individual firms or broad sectors. From competitiveness theory, individual firms cannot become competitive and stay competitive in global markets on their own. The vitality of an enterprise’s clusters along with its level of sophistication and productivity and the environment in which it operates strongly influence its competitiveness. A firm’s suppliers and supporting institutions must continually improve their capabilities in order to provide the firm with necessary inputs and services. This means that firms in the cluster must constantly innovate and create new products, new processes, and new ways of managing their operations to stay competitive.

Supporting institutions include:

- (i) Educational and (vocational) training institutions that build the workforce for an industry;
- (ii) Research institutions that generate the scientific knowledge required for technological change;
- (iii) Banking and financial institutions that ease access to credit;
- (iv) Government institutions whose policies and practices have an impact on the industry;
- (v) Providers of infrastructure for the industry;

The cluster pyramid developed by Stanford Research Institute (SRI) International (see Fig. 1) is a helpful tool to analyze the development of a cluster.

- (i) The top tier of the pyramid represents the “core cluster firms” that export goods or services to other states, regions, or countries and are the facilitators in the chain.
- (ii) The second tier of the pyramid represents “supplier firms” or those firms that provide inputs to the core cluster firms and are an essential part of the value chain.
- (iii) The bottom tier of the pyramid represents the “foundation factors” that provide the building blocks of the cluster.

However, perhaps the most important dimension of the model is the circle that surrounds the pyramid. In other words, the synergies and dynamism that result when all three layers of the pyramid are engaged and working toward a common goal (USAID, 2003). It should be

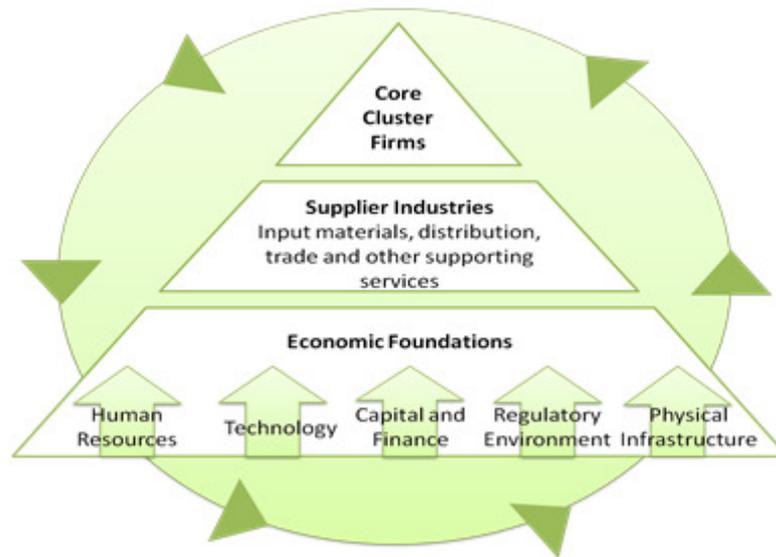


Figure 1. Cluster pyramid, source: SRI International.

noted that the co-location of actors in geographic proximity does not automatically lead to interaction, learning and innovation (Zeng, 2008).

Study description

The study was undertaken in Mau Narok Division in Nakuru County, Kenya. This is a potato and carrot growing zone. Focus group discussion and key informant interviews were used to collect data from the different actors in the cluster. In line but adjusted from UNIDO, the study used an eight step process to advance organizational development within the cluster:

- (i) Selection of the cluster areas
- (ii) Setting the objective for the clusters and identifying the research question
- (iii) Identifying cluster development over a time period
- (iv) Mapping the clusters
- (v) Describing the linkages between the actors in the cluster based on perception interviews by interviewing all actors in the chain based on a likert scale
- (vi) Providing a SWOT analysis per actor based on the perception interviews
- (vii) Analysing the linkages within the cluster
- (viii) Analysing the gaps and opportunities in the cluster

The findings

Within the cluster area, there were only two lead firms, one dealing with the processing of potatoes based about 100kms away from the production area. This firm has contractual relationships with potato producers. The other lead firm was a carrot processing factory. Two distinct markets were found in the cluster. The domestic market based in Nairobi for both commodities and the foreign market especially for the carrot commodity. The Nairobi

market was found to be highly oligopolistic with less than 5 major actors who played an influential role regarding commodity flow into the market. Moreover, there was a lot of competition from other clusters in the Nairobi market.

Other potato actors were also observed with two KARI (Kenya Agricultural Research Institute) stations and one ADC (Agricultural Development Corporation) station involved in potato varietal development. In addition two institutions of higher learning, Egerton University and Baraka Agricultural College were located within the cluster. These institutions play a key role in farmer training. About three farmer based community enterprises were also found within the cluster. These organizations play a key role in organizing both potato and carrot producers. A farmer based cooperative was also instrumental in resource mobilization for farm producers. The cluster had a visible presence of brokers in the two commodities, but more actively involved in the potato. The carrot commodity had more actors undertaking in the harvesting and cleaning and transportation functions in response to the needs of the market; especially the export markets in Uganda and South Sudan.

Main challenges observed included transport difficulties, issues of different weight requirements by different markets, policy contradictions, formal and informal taxation along various transportation routes.

Research application

The transformation process induced through better relationships and linkages in the potato and carrot clusters brings about: more products, added value to production system and value chain, quality improvement of products, less milk losses, adopting new transport and pre-processing techniques, economic empowerment of rural households and reduced poverty.

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