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Constructing sustainable 'qualities' for local food systems in developing countries: The case of the Songhai Centre in Benin

Allison Loconto and Marcello Vicovaro¹

Abstract – Post-harvest concerns, particularly in terms of quality (in its multiple forms), are both highly important and often down-played in the analysis of local food systems. The ability of actors in local food systems to provide consistent quantities of food products that meet these quality standards has not been consistently analysed in developing country contexts, nor has it been theorized sufficiently in terms of the institutions that are necessary for ensuring these qualities. This paper seeks to fill this gap by examining the construction of a sustainable local food system through a single case study of the Songhai Centre in Benin Republic. We show that a multi-actor innovation platform facilitates the creation of a local food system that produces products that meet actors' perceptions of quality and ensure sustainability.

Keywords – quality, sustainability, local food system.

INTRODUCTION

How to develop sustainable local food systems in developing countries is a question that is increasingly being asked by policy-makers, academics and practitioners alike. A number of approaches have been developed to understand how these systems can be analysed as well as how they might be implemented (e.g., Goodman et al., 2012). What is clear is that post-harvest concerns, particularly in terms of quality (in its multiple forms), are both highly important and often down-played in the analysis of local food systems. Qualities, specifically safety and sustainability as semi-credence qualities (Allaire, 2010), are often the key values that an emerging group of urban consumers are seeking (e.g., Roitner-Schobesberger et al., 2008). The ability of actors in local food systems to provide consistent quantities of food products that meet these quality standards has not been systematically analysed in developing country contexts, nor has it been theorized sufficiently in terms of the institutions that are necessary for ensuring these qualities. This paper seeks to fill this gap by asking *how does an institutional arrangement ensure the qualities of safety and sustainability in a local food system?*

METHODS

Data was collected during three field missions to Benin between 2013 and 2015. We used purposive

sampling to conduct semi-structured and structured key informant interviews (28) with producers, consumers and intermediaries. We conducted an analysis of the roles of diverse actor types in institutional innovations (Loconto et al. *forthcoming*). We conducted qualitative and semantic analysis using Iramuteq software to identify the definitions of quality that the diverse actors use to define what qualities they look for in organic products. We also collected data on their visions of the sustainability of the local food system using the LAB ESS methodology. We use the results of these two analyses to reflect upon the role of post-harvest aspects in contributing 'value' to local food systems in developing countries.

RESULTS AND DISCUSSION

Description of the network. Established as a youth training centre in 1985, the Songhai Centre incorporates three key sectors of the economy into a single organizational form. It is organised in such a way as to create synergy and complementarity between sustainable production methods based on an integrated production system that includes vegetable, pulse, cereals and fruit crop production, livestock raising, aquaculture and biogas production. It includes an industrial cluster model, where artisanal and modern food processing takes place (e.g., fruit juice, snacks, popcorn, baked goods, bread, fresh cuts and cured meats, soap, plastics recycling, plastic buckets). The centre also organises the production and sale of sustainable inputs (seeds, manure, compost and effective micro-organisms (EM)), provides agro-tourism and internet services, and is involved in developing appropriate technologies for sustainable production.

The Beninese network is currently made up of the main demonstration site in Porto Novo and five satellite centres in regional urban centres that source, when necessary, from surrounding rural farms. No link functions without a relationship to one or more of the other links and the satellites are governed through a centralised, hierarchical, chain of command that permits horizontal linkages between network members. There is a central procurement and marketing service that organizes the procurement of raw materials for processing and the sales of processed products from the Porto Novo hub. However, each satellite is also responsible for local sales of their fresh produce and artisanal processed goods. 54% of the value of finished products was internal to the network and 46% constituted product sales with a value of

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4,185,694,831 FCFA (US\$ 7,040,540), of which the off-farm sales of finished products accounted for 1,533,743,462 FCFA (US\$ 2,579,830) in 2014.

Actor functions and institutional innovation. We refer to the Songhai model as an institutional innovation, because the actors in the network have had an active role in defining what Organic means in the country through their use of consumer-facing labels and how the ministry of agriculture administers it projects for youth training in agriculture (changing the rules) and with their efforts they have created an organizational model that is being replicated in other countries (the actors who use and enforce the rules). In fact, the greatest revenue in 2014 came from the corporate fees they received from the Nigeria operations.

This mobilisation has occurred through the establishment of a multi-actor innovation platform (Kilelu et al., 2013) that focuses the attention of the actors in the network on sustainable agriculture technologies. For this platform, the integrated production method that focuses on the use of EM is the core technology that has mobilised the researchers, students, producers, processors and buyers. We found that innovation intermediaries are highly influential in this system (carrying out 70 % of the functions) as the interactions between producers and consumers take place in the regional satellite centres.

Qualities and perception of the local food system. The Songhai model of production is maintained by consumer demand for the qualities of its products. These qualities are communicated by word of mouth, with posters and direct communications by the employees in the sales points, through direct experience with the agricultural techniques either by attending the centre's training program or through a visit of the demonstration site, by consuming the food in the on-farm restaurants or by reading the on packet labels. The consumer facing labels of Songhai products make claims about the product 'qualities' including: organic, healthy, medicinal properties of certain crops, and nutritional properties.

The core qualities that all actors are looking for in Songhai products are: 'egg yolk integrity', packaging, taste, freshness, and size. Producers valued: 'egg yolk integrity', freshness, shelf-life, organic and texture; Intermediaries sought: packaging, flavour, freshness, tested and consistency; and Consumers wanted products with the following qualities: nutritive properties, no chemicals, colour, freshness, and healthy. The concept of safety is seen only in terms of freshness, product tests and the absence of chemicals because of the organic production. All types of actors believe that the local food system is rather sustainable (Figure 1), with producers being the most optimistic about the economic sustainability of the system. Consumers were the most optimistic about the environmental cultural sustainability.

These results are actually reflected in the qualities that the different types of actors are looking for. We see the consumers looking for qualities related to healthy eating habits and to the

safety from chemical residues provided by organic production methods. Intermediaries are more tempered in their perception of the sustainability of the system and are mostly focused on those standardized qualities that make for good products that can be sold. Producers represented a balanced conceptualization of quality and sustainability.

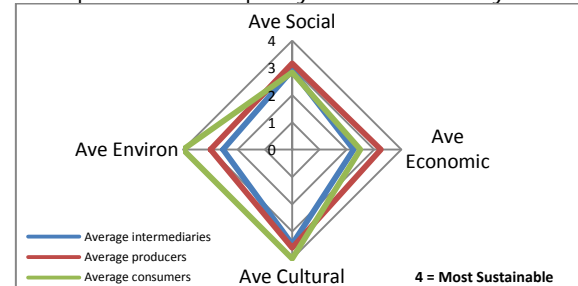


Figure 1 Perception of sustainability

One interesting conclusion is that the majority of the qualities noted by all types of actors are those related to the post-harvest processes that turn produce into products. This influence in the data can be linked to the high level of influence of intermediaries in the organizational and institutional set-up of this system (in the form of the Songhai Centre and its various satellite sites). Yet, it is because of the work of these intermediaries that both producers and consumers perceive the system to be more sustainable than the intermediaries themselves. Future research should further explore the specific post-harvest processes that can increase quality and sustainability in local food systems.

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