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Collective action for market chain innovation in the Andes

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ABSTRACT

The Papa Andina network employs collective action in two novel approaches for fostering market chain innovation. The participatory market chain approach (PMCA) and stakeholder platforms engage small potato producers together with market agents and agricultural service providers in group activities to identify common interests, share market knowledge and develop new business opportunities. These forms of collective action have generated commercial, technological and institutional innovations, and created new market niches for Andean native potatoes grown by poor farmers in remote highland areas. These innovations have benefited small farmers as well as other market chain actors. This paper describes Papa Andina's experiences with collective action for market chain innovation. It then discusses the implications of these experiences for the understanding of collective action and the policy implications for research and development organizations.

Introduction

The Andean region of South America is characterized by extreme social and economic inequalities. It is estimated that more than 60% of Ecuador's rural population and nearly 80% of Bolivia's and Peru's are poor (CEPAL, 2004). Poverty is especially prevalent in highland areas, where the potato is the main staple food and an important source of cash income. In areas over 3500 m above sea level, subject to frequent frost and drought, potatoes are among the few crops that can be grown. Over centuries, Andean farmers have developed more than 4000 native varieties of potato. In Peru and Bolivia, most native potatoes are cultivated by semi-commercial farmers for home consumption, barter and sale in local markets. At lower altitudes, more commercially oriented farmers grow modern varieties employing pesticides, herbicides, and chemical fertilizers. In Ecuador, where growing conditions are generally milder, native varieties have almost entirely been replaced by new varieties introduced by national breeding and seed programs.

Agricultural development is taking place in the context of rapid urbanization and increasing market integration. Farmers are confronted with many new market challenges as well as opportunities. Urbanization and increasing participation of women in the labour force are leading to a dietary transition towards convenience foods, animal protein, fresh dairy products, and higher consumption of fresh fruits and vegetables. Packaged food sales and supermarket retail outlets are now found in most developing countries. Demand is also increasing for higher quality foods that meet ever-increasing standards of safety. Supermarkets are becoming major players in vertically integrated food marketing systems. Consequently, the production practices and livelihoods of small Andean farmers are increasingly influenced by the demands of urban consumers, market intermediaries and food industries (Reardon and Berdegué, 2002; Wilkinson and Rocha, 2006).

In contemporary agricultural markets, small farmers are often at a disadvantage in relation to larger commercial farmers who can supply larger volumes of quality-assured products, possess superior bargaining power, and have better access to information, services, technology and capital. Small farmers' limited access to physical and financial resources restricts their ability to expand and invest in technologies that increase efficiency and add value to primary production. Small farmers also frequently have limited technical skills and poor access to information and training for improving their production practices. The limited market surplus of individual small farmers inflates marketing costs, increasing transaction costs and the per-unit costs of assembly, handling and transportation. Small farmers also lack basic knowledge of the marketing system, current information on prices and market conditions, and bargaining power (Kruijssen et al., 2009; Berdegué, 2001).

Various approaches have been proposed to improve the prospects of small farmers in agricultural markets, including collective action via farmer organizations and cooperatives (Shepherd, 2007).

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In the present paper, we discuss two novel uses of collective action that involve not only small farmers but also market agents and agricultural service providers. The participatory market chain approach (PMCA) and stakeholder platforms foster market chain innovation in ways that benefit small farmers as well as other market chain actors. The main intended outcomes of these types of collective action are commercial, technological and institutional innovations. This differs from most cases of collective action described in the literature, which report on farmer organization for achieving economies of scale, enhancing small farmers' bargaining power or improving the management of common pool resources. The new forms of collective action reported on here, involving diverse market chain actors, researchers and other agricultural service providers, have been developed by the regional research and development (R&D) network, Papa Andina, which operates in Bolivia, Ecuador and Peru.

Perspectives on collective action and innovation

This paper is concerned with the use of collective action to foster pro-poor innovation in market chains. Much has been written on farmer organizations for managing common pool resources, and for marketing and service provision. There is also a rapidly growing literature on innovation processes. However, the role of collective action in innovation processes has received little attention to date. In this section we review relevant literature on collective action and on innovation, and identify key factors that will later be combined in a framework for analyzing collective action in market chain innovation processes.

Perspectives on collective action

Collective action refers to voluntary action taken by a group to pursue common interests or achieve common objectives. In collective action, members may act on their own, but more commonly they act through a group or an organization; they may act independently or with the encouragement or support of external agents from governmental bodies, non-governmental organizations (NGOs) or development projects (Meinzen-Dick and Di Gregorio, 2004).

There is an extensive body of literature on the role of collective action in managing common pool resources such as forests, fisheries, grazing lands, and irrigation water. Agrawal (2001) presents an exhaustive literature review that identifies 33 "critical enabling conditions" that contribute to the sustainability of common property institutions. These fall into four main categories:

1. Resource system characteristics (e.g., small size, well-defined boundaries, predictability, low levels of mobility, and feasibility of storing benefits from the resource).
2. Group characteristics (e.g., small size, shared norms, past successful experience with collective action (social capital), homogeneity of identities and interests, capable leadership, interdependence among group members, and low levels of poverty).
3. Institutional arrangements (e.g., rules are simple and easy to understand, locally devised access and management rules, ease in enforcement of rules, and graduated sanctions for breaking rules).
4. External environment (e.g., external support for organization, low levels of articulation with external markets, governmental bodies that do not undermine local authority, and supportive external sanctioning institutions).

Ostrom (1999) identifies other factors that are important for institutional development, such as the feasibility of improving the resource and a low discount rate. Many authors emphasize the importance of social capital for the emergence and development of local organizations for collective action.

Based on a study of "associative peasant business firms" in Chile, Berdegué (2001) identified several factors that facilitate the emergence and development of collective action for marketing and value addition. These factors include: high transaction costs; policy incentives; presence of community groups and organizations, providing an important initial forum where alternatives can be discussed; support from external agents, such as NGOs or private extension firms; linkage to actors outside the rural community, providing access to external sources of information, expertise and financial resources; embeddedness in the rural community, facilitating more effective and less costly internal rules, decision-making processes and procedures for monitoring and evaluation; establishment of rules that are consistent with market signals; and potential to differentiate members' products through value addition.

Kruijssen et al. (2009) discuss the importance of social learning for collective action in the context of smallholder market participation. Social learning is defined as the process through which groups of people learn, by jointly defining problems, searching for and implementing solutions, and assessing the value of solutions for specific problems (Koelen and Das, 2002). Social learning brings about a shift from "multiple cognition" to "collective cognition". Individuals involved in social learning processes begin with quite different perceptions of their current situation and the potential for change; as they interact, they develop common, shared perspectives, insights and values. Dialogue and social learning foster collective cognition and social capital formation, both of which are necessary for effective joint action. Social learning and social capital formation are also key features of innovation processes.

Perspectives on innovation

Whereas research focuses on generating new knowledge, and technology development aims to create a supply of new production methods, innovation is concerned with the practical use of new knowledge. As Barnett (2004, p. 1) states, innovation involves "the use of new ideas, new technologies or new ways of doing things in a place or by people where they have not been used before".

The relationship between research and economic activity is not simple and linear but complex and interactive (Hall et al., 2001; Engel and Salomon, 2003; World Bank, 2007). Interactive social learning processes involving researchers and economic actors are crucial for ensuring that applied research generates useful new knowledge that is put into practical use. Since research organizations have traditionally worked in isolation from the end users of their technologies, institutional innovations that strengthen patterns of interaction between researchers and economic actors are crucially important for strengthening innovation systems.

An innovation system can be defined as "a network of organizations, enterprises, and individuals focused on bringing new products, new processes, and new forms of organization into social and economic use, together with the institutions and policies that affect their behaviour and performance" (World Bank, 2007, p. xiv). Four key sets of factors influence the performance of innovation systems: the external environment, the diversity of actors involved, the values and attitudes of the key actors, and the institutional arrangements and patterns of interaction.

Different factors can trigger innovation, including changes in policies, markets and technology. Attitudes and institutions determine how individuals and organizations respond to such triggers. Behaviours that make organizations and policies responsive to