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Institutional Adjustment and Transaction Costs: Product and Inputs Markets in the Tanzanian Coffee System

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Summary. — Commodity market liberalization can improve incentives for production of export crops by reducing the total costs of transforming products through space, form and time, or by reducing the costs of arranging and completing transactions. While liberalization often leads to reduced costs in output exchange, it can remove opportunities for linked input–output transactions that sometimes lowered the costs of providing finance in state-controlled markets. Assessments of liberalization that focus on output exchange alone obscure the impact of rising transaction costs in finance. This study of liberalization in the Tanzanian coffee market documents declining costs in output marketing, rising transaction costs for financing farm activities, and differential, but generally positive, net impacts on growers. © 2002 Elsevier Science Ltd. All rights reserved.

Key words — Africa, Tanzania, agricultural markets, institutions, liberalization, transaction costs

1. INTRODUCTION

By the late 1980s, most observers agreed that agricultural development in Africa was suffering due to policy interventions that had failed to "get the prices right." While this diagnosis was based on neoclassical analysis, the prescriptions were institutional. Starting in the early 1990s, countries adopted economic policy reforms aimed at correcting price distortions by changing the institutional framework in which transactions were completed (Meerman, 1997). Liberalization programs to replace state-controlled trading systems with competitive commodity markets were expected to result in lower marketing margins, higher producer prices, and increased productivity.

Marketing margins may be high because poor physical infrastructure or mismanagement result in high costs to transforming products through space, form and time, or because poor institutional infrastructure implies high costs to gathering information and negotiating, monitoring or enforcing contracts. These latter costs are often referred to as transaction costs (Bardhan, 1989; Sadoulet & de Janvry, 1995; Williamson, 1985) while the former can be termed transformation costs (Wallis & North, 1986). [1] Liberalization can bring a decline in the transformation costs of marketing if a competitive environment stimulates improved management or increased investment. For transaction costs to fall, organizations must establish contracts that reduce the costs of making exchanges in the new institutional setting. The costs of storage, transportation and processing are more

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readily quantified than the transaction costs, but Minten and Kyle (2000) demonstrate that search and negotiating costs can dominate the transformation expenses in agricultural markets. Recent work by Fafchamps and Minten (2001) suggests the importance of networks and institutions in reducing these costs.

Market liberalization and the emergence of competitive trade could simultaneously reduce transformation costs and increase transaction costs if, for example, competition led to lower assembly and transportation expenses, but higher costs of negotiating and enforcing contracts. Moreover, because there are often many transactions in a commodity system, institutional changes that reduce the margins in one exchange may lead to higher transaction costs in related contracts and have an ambiguous impact on the system as a whole. Replacing a controlled system of interlinked credit, inputs and output exchange with distinct, competitive transactions could result in greater efficiency in output marketing, but higher transaction costs to financing the production. The need for policy reforms to generate lower transactions and transformation costs throughout the marketing chain is now recognized (Jayne & Jones, 1997; Poulton, Dorward, & Kydd, 1998; World Bank, 2000a), but empirical assessments of liberalization tend to focus on its impact on output marketing margins, output prices, or the structure of output markets (Badiene & Shively, 1998; Barrett, 1997; Jayne & Jones, 1997; Meerman, 1997; World Bank, 1994, 2000a). Less attention is given to costs in the inputs and financial markets, if they are assessed at all (Kherallah, Delgado, Gabre-Madhin, Minot, & Johnson, 2000; World Bank, 2000b). This paper provides a more complete view of the impact of liberalization on incentives by considering the costs of each exchange that farmers make when they engage in commercial production.

Focusing on transaction costs, this paper examines developments in the Tanzanian coffee system since the market was liberalized in 1994. According to the New Institutional Economics, changes in an institutional framework should stimulate changes in contracts to minimize costs (Bardhan, 1989; Hubbard, 1997; North, 1990). After liberalization in Tanzania, organizations did develop new contracts to lower transaction costs in the new institutional environment. Moreover, the initial change in institutions stimulated further endogenous institutional innovations as private and public sector participants sought rules and guidelines to structure the market. The analysis reveals that the costs of marketing output fell substantially with liberalization, but the transaction costs associated with financing production rose. These shifting transaction costs resulted in differential impacts across producers. While the great majority of coffee growers appear to have benefited on balance, a minority of growers may have lost more from increasing costs of finance than they gained from reduced costs in product marketing.

2. COFFEE MARKETING IN TANZANIA

This study is based on a survey of 159 farmers, eight private coffee traders and eight exporters in Arusha Region of Tanzania in 1998. Arusha and neighboring Kilimanjaro Region account for more than half of Tanzania's Arabica coffee, which constitutes about a third of the country's foreign exchange earnings. Smallholder farmers produce over 90% of Tanzania's coffee. Before marketing their crop, farmers pulp away the fleshy exterior of the coffee "cherry" and dry it into "parchment" coffee. The parchment must then be milled in a curing factory to reveal the "clean" coffee beans, which are graded based on international standards and auctioned for export.

In this system, farmers face multiple transactions, which may or may not be linked into bundled exchanges. First, they may require finance to purchase inputs for production. In this market the farmer will pay some discount rate plus the transaction costs associated with the exchange (e.g., screening, monitoring, and enforcement). Second, farmers will make some transactions to purchase inputs, paying the import price of inputs plus the costs of internal marketing, including transportation and various transaction costs. Labor might be hired or household labor allocated to production. Finally, the producers sell parchment coffee, receiving the export price, minus the transformation and transaction costs in the market. Marketing the output may involve multiple exchanges as coffee is assembled at the village, transported to a factory, processed, and transported to auction or export. Since Tanzania is a price taker in the coffee market, policy reform cannot influence the export price. Instead, to improve the returns to production, liberalization must reduce the net transformation and transaction costs throughout the domestic coffee system.