PN-ABW-646

Economics and Sociology
Occasional Paper No. 2027

WHO WILL MARKET FERTILIZER IN AFRICA'S PRIVATIZED INPUT MARKETS? EVIDENCE FROM THE GAMBIA

by

Mayada Baydas

and

Richard L. Meyer

January 1993

Rural Finance Program
Department of Agricultural Economics
and
Rural Sociology
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210-1099

Abstract

The standard policy prescription is that markets should be privatized in Sub-Saharan Africa. Little analysis has been done about the fertilizer privatization process. This study shows that existing food traders in The Gambia may achieve scope economies by marketing fertilizer, but problems of scale and access to finance exist.

WHO WILL MARKET FERTILIZER IN AFRICA'S PRIVATIZED INPUT MARKETS? EVIDENCE FROM THE GAMBIA*

by

Mayada Baydas and Richard L. Meyer

I. INTRODUCTION

The standard policy prescription that has emerged from economic analysis during the past decade has argued for the privatization of the input and output markets in Sub-Saharan African countries (SSA) (World Bank). Donors and governments in several countries have attempted to move several sectors of their economies towards a freer market system. It is generally argued that the parastatal agencies must be closed in order to create a more attractive environment for private entrepreneurs to enter the market (Arthur Young; Lieberson; MAC Group; Rexford and Katz). However, there is a lack of analysis about the actual transition process in which the old economic agents disappear and the new ones emerge. Little thought is given to the nature of the economic agents who will be able to satisfactorily operate in the newly privatized markets. This issue is the main focus of this paper which reports on an analysis of the fertilizer market in The Gambia.

The Economic Recovery Program (ERP) in The Gambia, which was initiated in 1985, has been viewed as one of the most successful structural adjustment programs in SSA

* We acknowledge with appreciation the assistance we received in conducting this research from the USAID Mission in Banjul, from the traders and entrepreneurs interviewed for this study and from our colleagues Douglas Graham, Benjamin Carr and Geetha Nagarajan who provided assistance and advice on this research. The usual disclaimers apply.

(Radelet). The policy reform objectives in The Gambia included encouraging greater private sector involvement in agricultural marketing with special emphasis on fertilizer. Fertilizer was one of the primary commodities whose importation and distribution had been controlled by the government supported Gambia Cooperative Union (GCU). Several studies have focused on the role of the GCU in a privatized fertilizer market, but none have carefully reviewed the operations of the private entrepreneurs who may eventually begin to operate in this input market (Nagarajan, Graham and Meyer).

Trade in The Gambia accounted for a large share (25%) of the total gross domestic product (GDP) in 1990/91 (Baydas and Meyer). The strategic location of The Gambia has contributed to its emergence as a dynamic entreport involved in a wide variety of trading activities to meet the growing domestic demand and to service the reexport trade to neighboring countries. Traders are heavily dependent upon the reexport trade which expanded greatly in the 1970s when Gambia maintained an open trade policy while neighboring countries increased tariffs to limit imports. This trend became even more evident under the ERP reform policies which resulted in reduced inflation, more stable foreign exchange rates and one of the most efficient telecommunication systems in the region.

It is not surprising, therefore, that there exists a fairly dynamic set of importers who handle the importation, distribution and financing of a large volume of commodities under what appears to be quite competitive conditions. The large trading activity involves large amounts of imports which pass through a complex wholesale and retail network. In addition to the role played by importers, wholesalers and retailers manage the flow of commodities through the three principal stages of marketing: importation, wholesaling and retailing. This situation implies that these traders could be potential candidates to engage in a privatized fertilizer trade.

Food commodities, which constitute about 36.1 percent of total imports, represent the largest import item in The Gambia (AID). These commodities are mainly rice, flour, sugar, tobacco, tea and cooking oil. Flour, in addition to being an important ingredient for households, is the primary production input for a large number of traditional and modern bakeries. As an input into production, it is as important to bakers as fertilizer is to farmers. The objective of the research reported in this paper was to examine the operations and linkages of traders involved in importing, wholesaling and retailing food commodities, and especially flour. This inquiry allows us to explore the feasibility of one set of private traders, who have well established operations for one set of products, entering into the fertilizer market. This paper will identify the similarities and differences between flour and fertilizer and summarize the influence of these factors on the degree to which fertilizer could become another commodity profitably handled by these private entrepreneurs.

The next section of the paper discusses the methodology used in the study. The third section describes the roles of the economic agents following the downstream market linkages of the various traders from importation to final consumer. The fourth section describes the financial contracts associated with each stage of the commodity market from importers to retailers. Section five addresses the important question of whether or not private food traders who handle flour, among several commodities, will likely emerge as private agents to sell fertilizer in privatized input markets. The last section presents the summary and conclusions.

II. METHODOLOGY

The study of the flow of commodities in a particular sector, such as flour or fertilizer, may be appropriately conducted by examining the various channels through which these products pass as they flow from origin to the final end users. This approach has been referred to as the subsector approach. The subsector analytical methodology entails the study of vertical (upstream-downstream) linkages in the distribution/production of commodities among the different economic agents (Boomgard et al.). It includes an analysis of the role of the various economic agents, the terms and conditions of their contracts and the linkages in their transactions. Furthermore, it helps to identify the constraints affecting the different economic units and the appropriate means for policy intervention into the market.

In analyzing the flow of a commodity within a trader network, the subsector approach reveals important insights into vertical linkages, network coordination and competition in the market place. By surveying key agents operating at different levels in the marketing chain, a considerable amount of information can be collected about the process of distribution or flow of commodities and the nature of the financial contracts associated with these flows. Collecting information from both sides of an economic transaction, i.e. buyer and seller, especially when interviewing private traders who are reluctant to discuss the details of their business operations, reduces information asymmetries and generates credible data.

In our examination of the food commodity subsector, a total of 12 traders or suppliers provided information for the first data set used in this study. They included seven importers, three wholesalers and two retailers, all of whom marketed flour as one of the several commodities handled in their business. The seven importers are among the largest importers of flour and other food commodities in the country; therefore, the information obtained describes the operations of most of the flour activity in the country at this time. The small scale wholesalers and retailers tend to have fairly homogeneous operations compared to the large importers.

The second data set used in this study was collected in a survey of small manufacturing enterprises in four subsectors. Roughly 40 enterprises were randomly interviewed in each of four subsectors including tailoring, tie-dye production, metal-working and bakeries. Data from the subgroup of 39 bakeries that constitute the customers of the flour wholesalers and retailers were used in the latter part of this paper to complete the analysis of the commodity flow to end users.

III. ECONOMIC AGENTS IN THE FOOD COMMODITY SUBSECTOR

The principal economic agents in the food trade network are identified as: foreign suppliers, brokers, importers, wholesalers, reexport traders, retailers, enterprises and households. Our analysis focuses mainly on the agents located in The Gambia; however, we will discuss their links with foreign suppliers. Each economic agent has a set of functions which are defined by his/her position in the marketing channel. In some cases, certain functions overlap and/or are carried out by more than one agent simultaneously.

As mentioned, seven major importers of food commodities were identified in the survey. They represent the leading supply channel for flour in the country. All are located in the capital city of Banjul where they have access to excellent communication with the rest of the world. Typically, these traders engage in importation on a regular basis mostly from

Western Europe, handle the port requirements and custom clearances, and store the merchandise in their depots until sold. The commodities are sold in large and small wholesale quantities varying from a few tons to a few hundred tons. Thus, these traders assume the roles of both importers and wholesalers. Their clients are the reexport traders, smaller wholesalers/large retailers and medium scale enterprises, such as modern bakeries in the case of flour.

The second major category of agents in the supply channel are wholesalers. The typical wholesalers represent numerous entrepreneurs who buy solely from importers and not from foreign sources. Most wholesalers, like most importers, deal with more than one food commodity to diversify their businesses. Diversification helps ensure some amount of sales and profits where there are sudden changes in prices or availability of these commodities. Each wholesaler normally deals with only one or two importers because they build a strong customer-supplier relationship which has some advantages with regards to financing their purchases as will be discussed later. Their major clients are small scale reexport traders, small local retailers, small scale enterprises and households. Most of the wholesale activity is concentrated in Banjul.

Retailers constitute the third and last category of agents in the trading channel. They are scattered throughout the country. The role of retailing is assumed by small wholesalers/ large retailers as well as by small retailers. The latter group is represented by small corner shops in the local markets and neighborhoods which carry a variety of consumer items. These retailers buy from several suppliers, often from the larger wholesalers and occasionally from the importers.

Bakeries and households constitute the local end users of flour in The Gambia. The medium scale modern bakeries typically purchase flour as often as twice a month from importers and occasionally from wholesalers. On the other hand, small scale traditional bakeries purchase mostly from retailers, as often as every day, and occasionally from wholesalers when they buy in larger amounts. The terms and conditions associated with the sale of flour by importers, wholesalers and retailers will be discussed in the next section.

IV. FINANCIAL FLOWS

A well defined set of formal and informal financial instruments and relationships have been developed in the food commodity trade. The formal financial contracts are mainly represented by the standard letter of credit utilized by all of the importers which are obtained almost exclusively from offshore foreign financial institutions under competitive conditions. The informal financial relationships are largely manifested in supplier credit contracts used to promote commodity sales among importers, wholesalers, retailers and their respective customers in the domestic markets. Table 1 presents a summary of the typical financial contracts used at each stage in the marketing channel.

The terms and conditions that characterize a letter of credit are competitive interest rates of 1 percent per month, service charges of 2-5 percent, short term structure of 30-120 days and collateral requirements of a 25-75 percent advance deposit. The most significant advantage of this financial instrument is the flexibility it provides traders in the importation of commodities. Traders have a high turnover of commodities and, thus, require large amounts of working capital to finance their purchases. In addition, importers find that this financial instrument is an acceptable and convenient means to pay their suppliers. Hence, a letter of credit is a useful and efficient financial instrument for meeting the demands of most creditworthy importers.

Suppliers credit predominates in the wholesaling and retailing of food commodities. This contract helps domestic customers, i.e. wholesalers, retailers and enterprises, avoid the many problems of the inefficient, risk averse domestic banking system and is used by suppliers as a marketing tool, especially at times of excess supply. The suppliers credit contract typically involves a down payment of approximately 25-75 percent at the time of purchase with the promise to pay the balance by a particular future date which often ranges from one to 60 days. Clients frequently complete the payment, acquire a new consignment of goods and request suppliers credit once again. The terms and conditions are characterized by implicit interest rate charges that average 2-5 percent per month. The close supplier-customer relationship serves as a collateral substitute.

A significant feature of these credit transactions is that each individual agent in the marketing channel is able to grant credit to his customers in amounts much smaller than the amount of credit he received from his supplier and for a shorter period of time. These informal domestic contracts can often be cleared by the time that an importer has to pay for the letter of credit. Through frequent contact with customers, suppliers are able to screen clients for credit sales and to enforce repayment.

V. IMPLICATIONS FOR THE FERTILIZER SECTOR

The analysis conducted of the flour subsector provided information about the marketing channel for this important commodity and the financial arrangements that facilitate its trade. A logical question to ask is whether or not the agents and financial contracts that facilitate trade in this subsector provide the conditions necessary for successful privatization of the fertilizer subsector. Are some of these agents likely to be able to take over and efficiently operate the fertilizer business? This issue is analyzed in this section.

The large private food traders have accumulated considerable experience and knowledge over time in their trading activities. They have market contacts, storage and transportation facilities, knowledge about international trading, and established relations with offshore financial institutions. Nonetheless, there are important differences between flour and fertilizer that will affect the private sector response to the privatization of the fertilizer sector. Table 2 presents a summary of these factors grouped into possibilities for a) scope economies, b) scale economies, and c) access to finance.

Four factors suggest that food traders might achieve scope economies if they decided to enter the fertilizer trade. If they expand into fertilizer, these dealers could easily use or expand their existing transportation and warehousing facilities, the trade linkages established between importers, wholesalers, and retailers, and the existing retailer outlets in villages and towns. Furthermore, their established creditworthiness with offshore financial institutions may be adequate for letters of credit and working capital loans. The important advantage that established food traders have with their multiproduct businesses is the flexibility of shifting among commodity lines and, therefore, being able to make a profit and survive better in an uncertain dynamic market as compared to a undiversified, single product specialized fertilizer business.

The scale of probable fertilizer operations does not provide a strong incentive to the food traders, however, and this is a major constraint. The food commodity trade, flour in particular, operates on a fairly large scale. Four principal factors suggest that private traders would find it difficult to achieve scale economies in the fertilizer trade, especially if they expect that there will be several competing agents for the small market. First, the total volume of domestic fertilizer demand is much smaller than for flour and more subject to potential government and donor intervention. Second, the crop production cycle for which fertilizer would be used is much longer than the consumption or production cycle for flour, so there is a slower turnover of inventory. Therefore, sellers have fewer contacts with buyers and have less opportunity to monitor them as potential borrowers. Third, there are no good substitutes for flour whereas manure can partly substitute for fertilizer if the fertilizer-crop price ratio deteriorates. Fourth, there is great uncertainty about reexport demand for fertilizer. Some unreported cross border fertilizer imports apparently have occurred from Senegal, and it is unclear what conditions would be required for The Gambia to serve as an entreport for regional fertilizer imports.

The differences in financial requirements between flour and fertilizer also pose a major obstacle. Flour traders have established efficient access to financial sources which appear to be reliable and reasonably priced. It may be difficult, however, to transfer these same techniques to the fertilizer business because a letter of credit is granted with specific commodity and term conditions. Problems may exist either a) in the acquisition of offshore capital, or b) in the granting and recovery of loans in the domestic market.

The rapid sales turnover and the decreasing term structure of loans in the marketing channel allows food traders to sell their stock on credit to their customers, yet get repaid in time to pay their credit obligations. The crop production season is several months long, however, so credit given in the fertilizer channel must be for a longer term. This means that importers must get longer term credit which may not be readily available or competitively priced even from offshore sources. If they fail to get longer term credit, a mismatch in term structure will emerge: traders will borrow short but will provide longer term suppliers credit to wholesalers/retailers for their seasonal loans to farmers. Interest charges (or foregone discounts) for credit sales will have to be substantially higher for fertilizer credit to compensate for the larger interest expense. Furthermore, because of less frequent monitoring, it is riskier for wholesalers to lend to retailers and retailers to lend to farmers for longer term fertilizer credit than for shorter term food commodity credit. Moreover, fertilizer loans are made for an inherently risky farming enterprise which involves larger size loans and implies larger potential losses than loans made for food commodities. This is true for suppliers credit at all levels in the fertilizer trade channel. A final critical problem in The Gambia is that the marketing of the single most important crop, groundnuts, is not yet privatized, so fertilizer dealers will not be able to develop interlinked contracts in which fertilizer loans would be deducted from the proceeds of groundnuts sold to the same agents.

VI. CONCLUSIONS

The objective of this paper is to examine the operations and linkages of traders involved in importing, wholesaling and retailing of food commodities, especially flour, in order to explore the feasibility of them expanding into the privatized fertilizer market. The interesting feature in the Gambian markets is that the letter of credit that importers utilize in their operations is acquired from offshore foreign financial institutions while the majority of wholesalers and retailers draw upon the domestic informal channel of suppliers credit. Thus, it is clear that financial market segmentation exists in The Gambia.

The analysis showed that the agents at all levels in the food commodity trade channels may realize some economies of scope if they expand into the fertilizer sector. But in terms of economies of scale and access to financial contracts, the requirements for flour and fertilizer are quite different. New specialized fertilizer traders would likely experience problems in achieving scale economies and access to finance for their business, and it is unclear if they would enjoy any major offsetting advantages. A critical problem concerns the lack of linkage with farm commodity markets. The repayment of fertilizer loans made to farmers in many countries is facilitated through input-output linkages. For example, food processors, traders, cooperatives, etc. purchase farm commodities so they deduct the cost of fertilizer advanced from the purchase price of the commodities acquired. Unless the groundnut trade is fully privatized and food commodity traders in The Gambia begin to acquire farm products, they will not be able to develop these linkages that have been effective elsewhere in enforcing loan contracts.

The standard policy prescription calling for the privatization of markets in Sub-Saharan Africa represents a first step in improving economic performance. The process of privatization is complex, however, especially in countries with large parastatal operations where private firms have long been repressed. It cannot be assumed that under privatization private firms will automatically emerge to provide efficient and timely services. This study in The Gambia has shown that there are serious constraints even for firms already marketing other food commodities. The Gambian example suggests the need for detailed microeconomic analysis of each privatization case in order to identify the constraints that may hinder the drive for privatization. Ironically, some of the private sector constraints to be faced in many Subsaharan African countries will undoubtedly represent the type of problems which prompted the creation of many marketing parastatals in the first place.

Table 1 Characteristics of the Financial Contracts Used in Food Commodity Trading

Characteristics of the Financial Contract	Contracts for: Importing	Wholesaling	Retailing
	(1)	(2)	(3)
Type of Contract	Letter of Credit	Suppliers Credit	Suppliers Credit
Type of Financial Market	Formal	Informal	Informal
Length of Loan (Days)	30-120	7-60	1-7
Size of Loan (Dalasis)[a]	840,000 - 14,000,000	7,000 - 50,000	50 - 500
Interest Rate (% per month)	1%	0	0
Fees or Implicit Charges (%)	2-5	2-5	2-5
Collateral / Substitutes	25-75% Cash Deposit	Supplier - Customer Relationship	Supplier - Customer Relationship
Delinquency Rate	None Reported	Few Cases Reported	Few cases reported
Default Rate	None Reported	Few Cases Reported	Few Cases Reported

a: US $ 1 = approximately 9 Dalasis

Table 2 Comparison of Flour and Fertilizer Trade

Characteristics		Flour	Fertilizer
I.	Scope:		
	Infrastructure	Exists	Could be used
	Wholesaler - retailer linkages	Exists	Could be used
	Villages retailers	Exists	Could be retailers
	Creditworthiness	Exists	May be used
II.	Scale:		
	Nature	Primary input	Secondary input
	Total volume	More than 100,000 tons	± 10,000 tons
	Production cycle	Daily	3-9 months
	Turnover	Rapid	Slow
	Substitutes	None	Manure
	Reexport channels	Large	Questionable
	Foreign assistance	Minimal, little distortion	Large, large distortion
III.	Finance		
	Length of loans	1-120 days	6 months or more
	Risk of lending	Limited	Potentially large
	Monitoring borrowers	Frequent	Infrequent
	Enforcement of repayment	Adequate	Insufficient
	Market interlinkages	Not needed	Would require groundnut marketing

REFERENCES

AID, Critical Issues for American Investors in Gambia, Multinational Strategies, Inc. in association with LAABAT-ANDERSON Inc., October 1991.

Arthur Young, "Financing Privatization under Limited Capital Conditions," Report Prepared for the USAID Bureau for Program and Policy Coordination, November 1986.

Baydas, Mayada and Richard L. Meyer, "Commodity and Financial Flows in The Food Market Sector," in Financial Markets in The Gambia, 1981-91, Douglas H. Graham, Richard L. Meyer and Carlos, E. Cuevas (eds.), Report to the USAID mission, Banjul, The Gambia, December 1992, The Ohio State University, Columbus, Ohio.

Boomgard, James J., Stephen P. Davis, Steven J. Haggblade, and Donald C. Mead, "A Subsector Approach to Small Enterprise Promotion and Research," GEMINI Working Paper No. 10, January 1991.

Lieberson, Joseph M., "A.I.D. Economic Policy Reform Programs in Africa: A Synthesis of Findings from Six Evaluations," A.I.D. Program and Operations Assessment Report No. 1, Center for Development Information and Evaluation, United States Agency for International Development, Washington, D.C., December 1991.

MAC Group, "Capital Markets and Privatization," Report Prepared for the USAID Bureau for Program and Policy Coordination, Washington, D.C., May 1987.

Nagarjan, Geetha, Douglas Graham, and Richard Meyer, "Commodity and financial Flows Through the Fertilizer Marketing Channels," in Financial Markets in The Gambia, 1981-91, Douglas H. Graham, Richard L. Meyer and Carlos, E. Cuevas (eds.), A Report to the USAID mission, Banjul, The Gambia, December 1992, The Ohio State University, Columbus, Ohio.

Radelet, Steven C., "Economic Recovery in The Gambia: The Anatomy of an Economic Reform Program," Unpublished Ph.D. Dissertation, Harvard University, Cambridge, Massachusetts, 1990.

Rexford, Alene A., and Bernard Katz (eds.), Privatization and Investment in Sub-Saharan Africa, Praeger, New York, NY, 1992.

World Bank, Sub-Saharan Africa From Crisis to Sustainable Growth: A Long-Term Perspective Study, The World Bank, Washington, D.C., 1989.