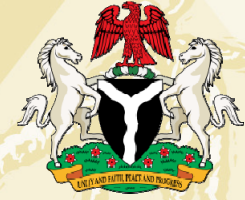




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Assessment of the 2009 Fertilizer Voucher Program in Kano and Taraba, Nigeria

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Despite many efforts to ease Nigerian farmers' access to quality and affordable fertilizer, it remains a key challenge for Nigerian agricultural policymakers. As a result, the Nigerian government is experimenting with implementing a fertilizer voucher scheme, which is intended to improve on the current fertilizer distribution system. This brief analyzes the application of input vouchers in the Nigerian states of Kano and Taraba in 2009. It explores the effect of the voucher program on the quantity and quality of fertilizer received; the timeliness of receipt, and the price paid by respondents.

Background of Fertilizer Subsidies and Distribution in Nigeria

Apart from 1997, when Nigeria completely liberalized its fertilizer sub-sector, the government has actively participated in the procurement and distribution of the product. When governments procured fertilizer independently and distributed it through sales agents and the extension system, there was poor quality control, interstate leakages due to price differences, congested ports, and demurrage charges. Other challenges associated with the government-led fertilizer sector were excessive storage costs, transit losses due to theft or poor storage facilities, and late delivery of fertilizer. With the government's exit in 1997, a drastic drop in fertilizer consumption was observed largely due to the private sector's lack of capacity to take over the administration of the process. Consequently, the Federal Government reintroduced a 25 percent fertilizer subsidy in May 1999. Recently, the Government has been seeking an approach for ending its involvement in the fertilizer procurement and distribution process.

The 2009 Fertilizer Voucher Program in Kano and Taraba States

Following previous attempts (on a smaller scale) in 2004 and 2008 to pilot an alternate delivery system for subsidized fertilizer, a voucher program was launched in the states of Taraba and Kano in 2009. The program was a collaborative effort between the government (Federal and State), private sector suppliers and dealers, and the International Center for Soil Fertility and Development (IFDC). It was designed to deliver subsidized fertilizer to 140,000 and 76,000 smallholder farmers in Kano and Taraba, respectively. This pilot, like the 2004 and 2008 programs, did not involve or accompany any substantial policy changes in the fertilizer sector, but rather addressed fertilizer distribution challenges.

Participating farmers were provided with vouchers, which were redeemable at certified agricultural input dealers within their local government of residence. The voucher provided a N2,000 discount per bag on two bags of Nitrogen Phosphorous Potassium (NPK 15:15:15) and one bag of Urea (46 percent Nitrogen) in Kano, and on two bags of NPK 15:15:15 and Urea (46 percent Nitrogen) in Taraba. Farmers were required to pay the difference between the market price and the N2,000 discount per bag.

Due to state level peculiarities, the program was administered slightly different in each state. In Kano, voucher recipients were required to be a member of a small farmer group, while in Taraba state the recipient could be a member of any organized group, not necessarily a farmer group. In Kano, a farmer group received a single voucher that entitled its members to a N2,000 discount per bag for three bags of fertilizer per member. In Taraba, each individual member of the organized group received a voucher and could purchase four bags of fertilizer at the discounted rate. In Kano, each farmer listed on the membership roster of a participating farmer group was required to contribute N6,000 each as a sign of the group's commitment to fully utilize the voucher. Thus farmers had to tie up their money early in the implementation of the voucher program and bear the risk of not receiving fertilizer they had committed funds to purchase in order to be eligible to participate in the program

The redeemed vouchers were taken by the agricultural input dealers to fertilizer wholesalers and importers who were responsible for gathering the vouchers and submitting them to the (voucher program) Project Implementation Team (PIT), which consisted of the fertilizer wholesaler and importers, IFDC, the state ADP, and the State Representatives. The team would verify vouchers against the appropriate lists. Once the total value of the reconciled vouchers was confirmed by the PIT, that value would be credited to the fertilizer wholesaler and importers' account (IFDC 2010).

Data and Methodology

The data used in this study comes from 640 households in Kano and 360 households in Taraba. In each state, interviewed households were chosen from 10 randomly selected Local Government Areas (LGAs), which are administrative units operating under each state.

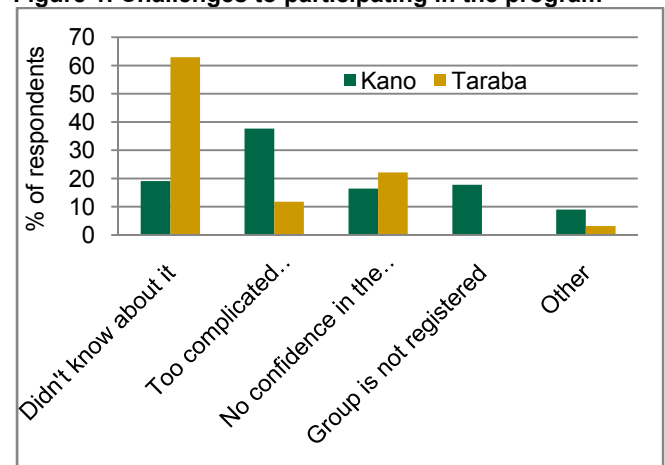
Consequently, this study explores the effects of program participation, household characteristics, and location on each of the four outcomes using linear and non linear models of multivariate analysis where the outcome variables are continuous and binary, respectively.

Results

Participants in the voucher program in Kano were mainly farmers who had used subsidized fertilizer in the past, were formally educated, were members in a farmer group that purchased fertilizer together in 2009, and belonged to households with larger livestock holdings. For Taraba, participants had also achieved a higher level of education than non-participants, and were more likely to have received subsidized fertilizer in the past. Results indicate that the likelihood of respondents participating in the voucher program strongly depended on the local government they resided in.

For those in the survey who did not participate in the voucher program, the main reasons were the complicated participation process, a limited awareness about the program, and a lack of confidence.

Figure 1. Challenges to participating in the program



Source: Liverpool-Tasie, L.S.O., A.,B Banful and B. Olaniyan 2010. An assessment of the 2009 fertilizer voucher program in Kano and Taraba, Nigeria. . NSSP Working Paper # . International Food Policy Research Institute

Note: Kano: Number of observations=609; Taraba: Number of observations= 257

Access to subsidized fertilizer

Besides the private market, the voucher program is one of several sources of subsidized fertilizer for farmers. Particularly in Kano, but also in Taraba, several subsidy programs already existed, with these programs typically utilizing the traditional fertilizer distribution mechanism. Table 1 shows that participation in the voucher program significantly increased the likelihood of receiving

fertilizer, even after controlling for previous access to subsidized fertilizer. Furthermore, program participation increased the quantity of subsidized fertilizer received compared to non-participants. In Kano, close association to the farm group president was an important factor affecting the number of bags participants received. This indicates that while groups are a possible mechanism to distribute fertilizer, inequities within groups is an important issue to consider for guaranteeing equal access to products by less influential farmers.

Price Paid by Voucher Program Participants

Under the inefficient traditional delivery system, farmers typically are forced to pay higher than the announced subsidized prices, often almost identical to the market price. The results show that voucher program participants paid higher prices for subsidized fertilizer received through the program compared to their counterparts who received subsidized fertilizer from other sources outside the program. However, they paid significantly lower prices compared to those who purchased directly from the market.

Timing of Received Fertilizer

In the past, the delivery of subsidized fertilizer has been consistently late. With this pilot program, on average, participation in the voucher program did not improve the timeliness of fertilizer receipt; and in some locations it actually increased the likelihood that the product was received late. State and local government policies and infrastructure quality are what determine the timeliness of fertilizer.

Quality of Received Fertilizer

A commonly cited issue with subsidized fertilizer is that it is adulterated or underweight. A voucher program, particularly the 2009 program which only worked with 3 suppliers (such that substandard products could more easily be traced back to the supplier) should improve the fertilizer delivery along these dimensions.

However, those participating in the voucher program did not provide farmers with better quality fertilizer. Indeed, program participants were more likely to take issue with the quality of fertilizer received than were non-participants.

Table1. Voucher program participation and expected outcomes (based on regression analysis)

Outcome variables	Voucher program Participation	
	Kano	Taraba
Price of NPK paid relative to other		
Price of Urea paid relative to other	129.0	-241.7**
Price of NPK paid relative to market price	-453.2***	-854.2***
	-353.7**	-1016***
Timeliness	0.452**	0.387
Quality (Underweight bags)	0.017	0.870***
Quality (Foreign substances mixed with	0.281	1.214***
Quality (Foreign substances mixed with	0.070	0.209

Source: Liverpool-Tasie, L.S.O., A.,B Banful and B. Olaniyan 2010. An assessment of the 2009 fertilizer voucher program in Kano and Taraba, Nigeria. . NSSP Working Paper # . International Food Policy Research Institute
 Note: *** p<0.01, ** p<0.05, * p<0.1. Each regression included a full set of local government area dummies to capture location specific effects.

Respondent Perceptions of the Fertilizer Voucher Program

Respondents in both states indicated a positive attitude towards the 2009 voucher program and similar schemes. Ninety percent and 98 percent of voucher program participants in Kano and Taraba respectively, indicated that if the program were available next year, they would participate. Similarly, 85 percent and 90 percent of non-participants indicated an interest in participating in such a program. The overwhelming reason for intending future participation among respondents was the cheaper price of the fertilizer received.

For respondents who indicated they would not participate in the future voucher program, the major reason in Kano was that only those who were well connected were able to participate in the program. In Taraba, financial limitations as well as the prevalence of other hidden costs like bribes tended to be the more prevalent reasons provided.

Conclusions

This study analyzed an input voucher program in Kano and Taraba states in 2009. In Kano, wealth and education were distinguishing factors associated with participation. This indicates that the poorest and least educated farmers might have been excluded either due to cumbersome program requirements or limited resources. While wealth did not distinguish participants from non-participants in Taraba, the characteristics of program participants

indicates that the less educated were somewhat excluded from the program. Program participants in both Kano and Taraba were more likely to have previously had access to subsidized fertilizer. However, participating in the program significantly increased the likelihood of receiving fertilizer and increased the quantity of subsidized fertilizer received compared to non-participants. Program participants paid higher prices for subsidized fertilizer received through the program compared to their counterparts who received subsidized fertilizer from other sources outside the program. However, they paid significantly lower prices compared to those who purchased directly from the market.

Timeliness of fertilizer availability appears to be beyond farmer control. The timeliness of fertilizer availability are determined by state and local government policies and the condition of corresponding infrastructure. This implies that the efficiency of programs like the voucher program

may be improved by interventions to ensure that the product is purchased in a timely manner (largely imported) and distributed directly to states and local governments. Similarly, participating in the voucher program did not provide farmers with better quality fertilizer. In contrast, program participants were more likely to complain about the quality of the fertilizer received than non-participants.

Though respondents opined that the implementation process could be improved, for example, by incorporating better targeting mechanisms to ensure wider participation, they considered the program to be a useful avenue to increase farmer access to affordable fertilizer. Major complaints about the program, worthy of consideration by program implementers were the complicated, burdensome participation process as well as the exclusion of the poor and unconnected.

This brief is excerpted from the Nigeria Strategy Support Program (NSSP) Working Paper on Assessment of the 2009 Fertilizer Voucher Program in Kano and Taraba, Nigeria. It is intended to promote discussion; its content has not been formally peer reviewed, but the content has been reviewed by at least one internal and/or external reviewer.

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