

POLICY BRIEF



FERARI

FERTILIZER RESEARCH & RESPONSIBLE IMPLEMENTATION



Photo by MoFA (Crop Services Directorate)

COST COMPONENTS IN THE FERTILIZER VALUE CHAIN AND IMPLICATIONS FOR ACCESSIBILITY BY FARMERS IN GHANA

The Planting for Food and Jobs program (PFJ) and Fertilizer Subsidy Program (FSP) of Ghana's Ministry of Food and Agriculture (MoFA) successfully increased fertilizer consumption from 240 kt in 2016 to 425 kt in 2019, due to low fertilizer prices through 50% subsidies. Our study¹ suggests that these prices come with non-competitive margins and discourage expansion of the downstream fertilizer distribution network to remote communities. This implies long travel distances for farmers, which adds up to GH¢ 3 per 50-kg bag and these factors if left unaddressed may hamper fertilizer use by farmers. Because the FSP could compromise the efforts of the PFJ, this policy brief provides suggestions to address some of the challenges.

IMPACT OF PFJ'S FSP ON FERTILIZER SECTOR DEVELOPMENT

A **smoothly functioning fertilizer value chain downstream** is a major determinant of fertilizer price and of accessibility by farmers. PFJ's fertilizer quota system increased the number of fertilizer importers and transformed some fertilizer distributors in Tamale into importers, making Tamale a major fertilizer hub (Figure 1). It decreased the number of transfer points and saved working capital of small-scale distributors in the Northern Region, which could potentially cut costs by 10–15%.

However, the FSP approach seems to have **skewed the distribution of margins** along the chain. Importers of FSP-subsidized fertilizer factor in their transaction and financial costs to hedge against macroeconomic fluctuations and make a profit margin of 6.2% (for urea). Distributors and retailers, on the other hand, incur high transaction costs that are not captured by the subsidies, resulting in margins of -17.2% and -15.9%, respectively. They tend to overlook the negative margins, as they use their own capital and make margins of about 0.2% and 1.0%, respectively. About 19% of distributors and 11% of retailers currently have loans and could face liquidity problems when repaying their loans at interest rates of around 24% (Figure 2).

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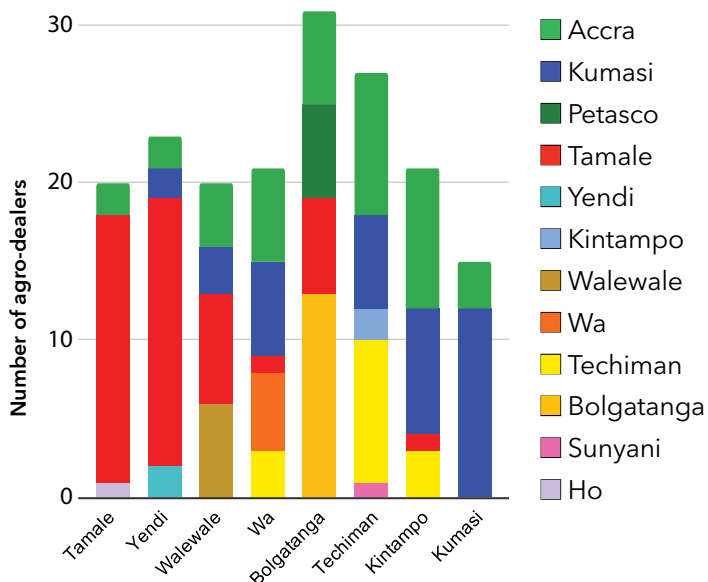
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<https://www.ifdc.org/projects/fertilizer-research-and-responsible-implementation-ferari/>

¹ Odionye, N., S. Dittoh, A. Laamari, W. Adzawla, I. Koffi, E. Afimia, W.K. Atakora, M. Jemo, and P.S. Bindraban. 2020. Fertilizer Cost Components and Their Effect on Fertilizer Profit Margins in Ghana. IFDC FERARI Research Report 4.

Figure 1. Sources of fertilizer sold in different cities



Weak fertilizer price transmission, based on fertilizer prices in Kasoa, Koforidua, Takoradi, Techiman, Mankessim, Sekondi, and Wenchi during 2013–2019, suggests externalities, asymmetric information, and lack of market competition that are hampering the smooth movement of goods and stable market prices. Commercial fertilizers, for instance, were found to be cheaper in the North East Region than regions closer to ports, such as Bono East and Ashanti (Figure 3). The high fertilizer transaction costs within the northern regions and the FSP externalities seem to erode fertilizer return on investment (ROI). The low ROI may be an underlying driver for the diversion of subsidized fertilizers into the open market to increase profit margins.

ADDRESSING THE ECONOMIC CHALLENGES

These challenges are not insurmountable, as the MoFA has continually improved the FSP for greater impact. Examples include the introduction of a new fertilizer formulation for higher productivity in 2019 and the establishment of designated retailers in border towns to curb fertilizer smuggling to neighboring countries.

Figure 2. Cost breakdown of subsidized urea

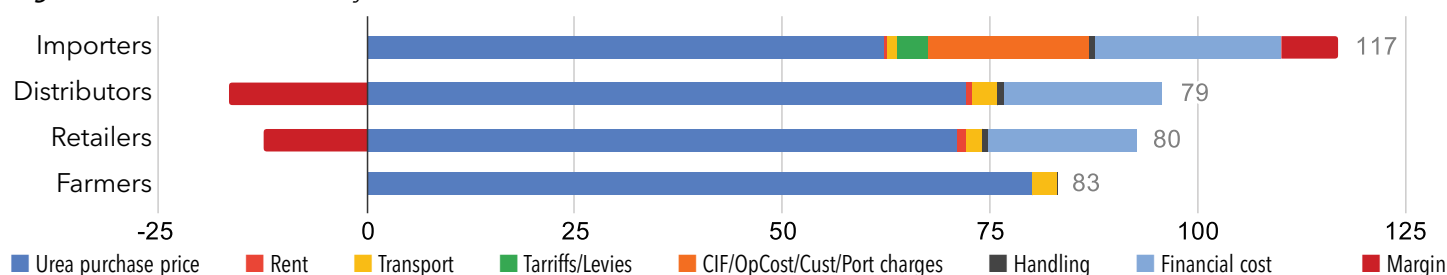
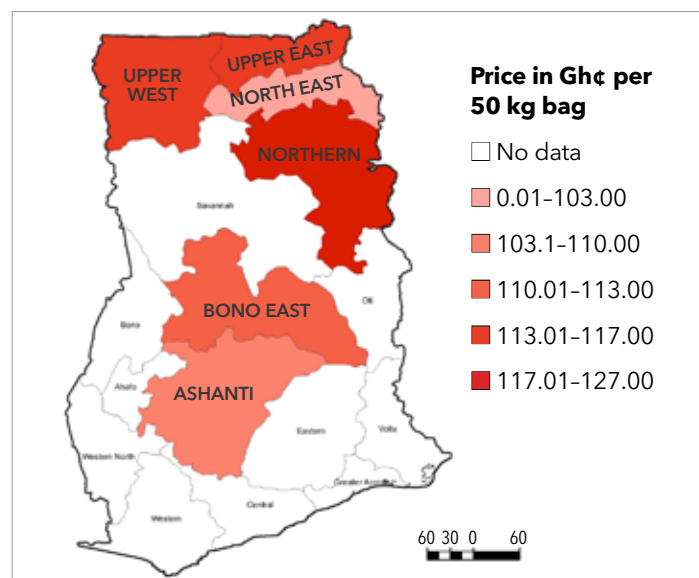


Figure 3. Retail prices of commercial urea in study area



- ✓ An **inclusive subsidy negotiation** via a multi-stakeholder platform comprising MoFA, the private sector, civil society organizations, and research entities could ensure that the costs through the last-mile of fertilizer delivery to targeted farmers are proportionally distributed among actors, secure appropriate ROI, and galvanize private sector involvement.
- ✓ A **cost-benefit analysis of the FSP** could help identify alternative investments with high ROI and social impacts, as well as options for exit plans for subsidy interventions.
- ✓ An **in-country fertilizer subsidy credit scheme**, in line with the *Abuja Declaration*, could give value chain actors access to low interest loans, unlock economies of scale, and lead to upward mobilization, as seen in Tamale where distributors became importers.
- ✓ Some retailers and distributors provide **micro-credit in the form of inputs** to farmers in exchange for money or part of the harvest. The MoFA could analyze the pros and cons of such an approach to partially address the farm input challenge and poor commodity market access.