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Briefing

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Fertiliser Subsidies: Lessons from Malawi for Kenya

Since 2005/06 a large-scale agricultural inputs subsidy programme has been in place in Malawi, which, combined with good rains, has resulted in the country moving from chronic food insecurity to maize surplus. This in turn has excited interest in fertiliser subsidies in other countries, including Kenya (itself chronically maize deficit). In this briefing note we summarise some of the key lessons learnt from evaluation of the Malawi fertiliser subsidy to date. Some of these are directly applicable to Kenya. However, the agro-ecological political and market contexts of Malawi and Kenya are different, so we also consider how these differences affect the transferability of the fertiliser subsidy programme.

Lessons from the Malawi Fertiliser Subsidy

Lessons so far from the Malawi fertiliser subsidy programme include the following:

- In the first three seasons, the direct benefits from the subsidy, in terms of increased production and income for producers, outweighed the costs of the programme, including administrative costs. (1) This is unlikely to be the case in 2008/09, as costs have risen (Box 2).

- Following the first season, there were also large indirect benefits for poor households in the form of lowered maize prices and raised rural wage rates (2). Most Malawian households, including all of the poorest, buy more maize than they sell and many also rely heavily on hiring out their labour as a source of income.When the subsidy leads to lower prices, therefore, poor households benefit from the subsidy programme even where they are not direct recipients of subsidy vouchers and so see no benefit in terms of increased household maize production.

- Maize marketing policy is a major factor influencing the impact of fertiliser subsidies on the poor.

- In Malawi, for much of 2006/07, a government ban on maize exports depressed returns to fertiliser use, but benefited consumers. This was then followed by official maize exports that depleted national stocks, leading to subsequent price rises. Domestic maize prices were half of import parity levels in May-October 2006, one third of import parity in May-October 2007, but

Box 1: How the Malawi Agricultural Inputs Subsidy Programme Works

The subsidy programme was introduced in 2005/06, so in 2008/09 is into its fourth season. From the outset the programme encompassed both fertiliser and maize seed subsidies (and has subsequently expanded to include selected additional inputs and crops). However, fertiliser subsidies - intended mainly for maize production, but some for tobacco - dominate the programme. The subsidies are delivered in the form of vouchers which are distributed to qualifying households, currently by Ministry of Agriculture staff working in collaboration with village development committees. In both 2007/08 and 2008/09 the intention has been to distribute fertiliser vouchers to 1.7 million households, i.e. around half of the rural households in the country. Planned initial voucher distributions tend to be supplemented by secondary distributions. These represent adjustments to realities on the ground but also some patronage, the balance of which is difficult to discern.

In 2005/06 voucher recipients had to pay MK 950 (US$7.8) to "redeem" a subsidy voucher for maize fertiliser, meaning that a fertiliser voucher was worth roughly two thirds of the price of a 50kg bag of "maize" fertiliser (23:20 or urea). With rising fertiliser prices on world markets and domestic political competition for subsidy largesse, the value of the voucher has risen to over 90% of the price of a bag of fertiliser in 2008/09. Mainly for this reason, the cost of the programme has risen from an estimated MK 7200 million in 2005/06 to over MK 30 000 million (US$217 million) in 2008/09.

In all years private importers have been involved in the importation of fertilisers for inclusion within the subsidy programme. However, retail sales of subsidised fertiliser have been dominated by two parastatal agencies, ADMARC and SFFRFM. A few large input supply companies were allowed to participate in retail sales of subsidised fertiliser in 2006/07 and 2007/08, during which years they accounted for 25-30% of subsidised fertiliser sales. Their involvement was discontinued in 2008/09. Much of the subsidised seed has, however, been sold through private channels, including local agro-dealers, and this continues in 2008/09.

Source: Dorward and Chirwa 2009

equal to import parity in May-October 2008. High maize prices contributed to the estimated benefit:cost ratio above one for 2007/08, but were damaging for the poor.

- Delivering a subsidy through vouchers has enabled many poor households to benefit directly from the programme and many more could do so if the rules for voucher distribution were further modified. By contrast, flat-rate subsidies on fertiliser price or transportation mainly benefit wealthier farmers who already consume most fertiliser. Where vouchers are used, the fiscal cost of the programme is also readily monitored. However, distribution of vouchers is vulnerable both to political manipulation (for example, across regions) and to favouritism by local officials. This is especially so when targeting criteria are not clearly stipulated. Given the inherent difficulties in targeting, in Malawi some argue for a universal subsidy (voucher)entitlement, but of lower value per household.

- Before decisions are taken on targeting criteria or universal subsidy, the objectives of the programme should be clearly articulated. The concept of "productive safety nets" suggests that there is some overlap between reaching poor households and raising productivity, and this is indeed the case in Malawi. However, there is also some tension between these two objectives: the poorest households may not have the complementary labour or capital to make the most productive use of subsidised inputs. A modest degree of on-selling of vouchers by the poorest households isacceptable, especially if the secondary market for vouchers is such that they do not sell at a huge discount below face value. However, anecdotal evidence suggests that on-selling increased considerably in 2008/09, as the greatly increased value of each voucher raised the temptation for poor households to sell them.

- The private sector was involved in the distribution of subsidised fertiliser in 2006/07 and 2007/08, but has not been in 2008/09. One consequence of this has been long queues to access fertiliser at parastatal sales points, with quick access only for those who can pay 'tips'. This reduces the value of the subsidy to recipients. On the other hand, government and parastatal performance has also been improving in various ways over time, most notably in timeliness of tendering, hence also of delivery of fertiliser to production areas. Lack of trust between government / parastatals and the private sector is a big hurdle that has to be overcome both for improving efficiency of the subsidy programme and for long-run fertiliser market development.

- The introduction of the subsidy programme has led to a major expansion in the Ministry of Agriculture budget. However, most of this money goes on the subsidy programme. Expenditure on agricultural public goods, essential for long-term increases in agricultural productivity, has hardly increased and staff time is largely devoted to subsidy implementation. Thus, there is no clear exit strategy from dependence on subsidies. Introduction of a subsidy programme should be accompanied by a public debate

Box 2: Outcomes of the Malawi Subsidy Programme

In this briefing we focus on two major outcomes of the Malawi subsidy programme:

- The benefit:cost ratio indicates whether the direct benefits from the subsidy, in terms of increased production and income for producers (who may or may not be poor), have outweighed the costs of the programme. This is the case if the ratio exceeds 1.00.
- We also consider the consequences of the subsidy and associated maize marketing policies on households that buy more maize than they sell. Many subsidy beneficiaries in Malawi fall into this category, but so too do many even poorer households, who also rely heavily on hiring out their labour as a source of income.

In assessing outcomes, it should be noted that high maize prices raise the direct benefit:cost ratio of the programme, but at the same time dramatically reduce the indirect benefits experienced by poor maize consumers. An ideal outcome is a benefit:cost ratio greater than one achieved whilst maize prices are low (i.e. benefits driven by productivity gains, not high maize prices). This is what happened in 2005/06 and 2006/07.

Year	2005/06	2006/07	2007/08	2008/09
Benefit:Cost Ratio (medium response)	1.12	1.06	1.54	0.94
Impact on Poor Consumers	Strongly positive: maize price lowered, rural wage rate raised		High maize price bad for poor house-holds	Not yet known

By contrast, in 2007/08 a combination of adverse international maize prices and unhelpful domestic maize marketing policies caused maize prices to rise. High prices raise the benefit:cost ratio for the programme, but are disastrous for Malawi's many poor maize consumers. Social impacts of the 2008/09 programme are yet to be seen, but the rising cost of the programme means that direct costs are likely to exceed benefits unless a very high response to fertiliser application is achieved on farmers' fields

Source: Dorward and Chirwa (2009)

about the desirable balance between short-term subsidy expenditure and investment to achieve long-term development goals for the sector, plus means to increase the productivity of fertiliser use.

- In Malawi the details of the subsidy programme have become the main subject of political debate, with parties competing to appear the most generous in the subsidy that they would offer. This is an indication of the patronage appeal of the subsidy programme to politicians: the opposition would apparently like to use it in the same way if they came to power. Unfortunately, this means that there has been little political debate about how to improve the efficiency with which the subsidy is administered or targeted. Even the exclusion of the private sector from distribution of fertilisers for 2008/09 passed without critical comment from the opposition, despite the fact that this particular change is likely to be unpopular with farmers. Lack of critical scrutiny of a subsidy programme from an active opposition allows inefficiencies to grow, increasing the chances that the costs of the programme will come to outweigh the benefits.

We identify the following implications of this experience for Kenya:

- Firstly, there is little room for inefficiency in the administration of a subsidy programme if the production benefits are to outweigh the costs. However, unless there is a responsible process of design supported with analytical capacity, costs are likely to balloon over time. Kenya currently lacks a strong political opposition but recently Parliament has begun and must continue to play an important monitoring role.

- Secondly, the second-round effects on maize prices and wage rates are critical if the poorest households are to benefit from a subsidy. These will only be achieved if the programme is implemented on a large scale. Allowing maize prices to fall as production rises is also fundamental to poverty impact. However, prices should not fall so far that incentives for producers to expand input use disappear. This means that fertiliser subsidies should be combined with output marketing policies designed to maintain maize prices within a band that is both remunerative to producers and affordable to poor consumers. In Malawi official interventions in output markets during 2007/08 did not meet these criteria, reducing the poverty benefit of the subsidy policy.

- Thirdly, a voucher-based system has the potential to deliver a much greater share of the benefits to poorer producers than a flat-rate subsidy on fertiliser prices, if political manipulation of voucher distribution can be contained and local allocation is done in a transparent manner.

The Contrasting Contexts of Malawi and Kenya

Malawi's food crop farmers are more homogeneous than Kenya's. For example, an average maize surplus producer in Kenya cultivates around 20 hectares, whereas an average maize surplus producer in Malawi cultivates around 1 hectare. Malawi is also more homogeneous than Kenya agro-ecologically. This has at least two important implications for fertiliser subsidy policy:

- Technically, whilst a modest universal subsidy (voucher) entitlement may be the most pro-poor option in Malawi, in Kenya it would be of limited benefit to the semi-arid and arid areas that comprise a large part of the country. Thus, some form of geographical targeting would have to be considered.

- Politically, whereas the top maize producers in Malawi are scattered across the three country's provinces, in Kenya they are heavily concentrated in a few districts of Rift Valley Province (Nyoro et al. 1999). Historically, these Rift Valley producers have used their considerable political influence to obtain high producer prices from NCPB, raising the cost of maize for the majority of the population (including both urban and rural poor) who rely on market purchases. However, in the past year the rents available from high producer prices have been squeezed by even more rapid increases in fertiliser prices, making a fertiliser subsidy an attractive option for them.

A fertiliser subsidy in Kenya could thus be designed in at least three ways.

- A Malawi-style subsidy could distribute vouchers widely across medium-high potential maize zones, thereby benefiting many poor rural households that are currently maize deficit, either directly through enhanced input access or indirectly through lower prices in local maize markets.

- A flat-rate subsidy (perhaps covering internal fertiliser transportation costs) would respond to political pressure from the producers of Rift Valley Province. Insofar as private fertiliser markets are competitive in the major medium-high potential maize zones, lower prices would also be passed onto smaller producers, although the benefits from such a subsidy would be proportional to fertiliser use. Such a subsidy would undoubtedly cover a lower proportion of the fertiliser price than in Malawi and the resulting fertiliser price could still be at or above 2007 levels, suggesting that uptake by poor households would be limited. Thus, whilst justified on the grounds of raising national food supply (productivity) and lowering prices for consumers, one would have to question the extent to which the subsidy would raise total fertiliser use, rather than restoring rents for those who have traditionally been large users of fertiliser in maize production.

- Administrative distribution of subsidised fertiliser to well-connected areas and producers would generate the fewest benefits to poor households, in terms either of direct access or of resulting lower maize prices. It would also come at the highest cost in terms of "crowding out" private sector distribution networks that have been developing successfully over the past 15 years and that are much stronger than in Malawi.

As in Malawi, a much more critical public debate is required about the objectives of fertiliser subsidies and the means to achieve these objectives.

References:

Dorward, A. and E. Chirwa (2009). The Agricultural Input Subsidy Programme 2005 to 2008: Achievements and Challenges. Inception Report for DFID Malawi on the Evaluation of MAISP 2008-09, School or Oriental and African Studies, January 5th 2009.

Nyoro, J., M. Kiiru and T. Jayne (1999). Evolution of Kenya's Maize Marketing Systems in the Post-Liberalization Era. Workshop on Agricultural Transformation in Africa, Nairobi.

Endnotes:

(1) Calculation of these benefits is complicated by several factors, including the extent to which the subsidy has generated incremental fertiliser use as opposed to displacing market purchases, and the magnitude of the production response to incremental fertiliser use. (The latter is not directly measurable due to the unquantified influence of varying rainfall patterns on production). The benefit:cost ratio for the 2006/07 programme ranged from 0.76 to 1.36 depending on the assumptions made about these variables. The figures in Box 2 assume a medium production response to incremental fertiliser use.

(2) Increased production in one season influences maize prices in the next. Thus increased production in the 2005-06 season influenced maize prices observed in the 2006-07 season. and so on.