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POLICY SYNTHESIS

FOOD SECURITY RESEARCH PROJECT – ZAMBIA

*Ministry of Agriculture and Cooperatives, Agricultural Consultative Forum, Michigan State University
and the Market Access, Trade and Enabling Policies Project (MATEP), Lusaka, Zambia.*

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POTENTIAL IMPACT OF THE KWACHA APPRECIATION ON ZAMBIA AGRICULTURE

by

John Fynn and Steven Haggblade*

Key Policy Messages

- Agricultural export earnings will fall by about \$106 million per year under a permanent Kwacha strengthening to 3,500 K/\$, according to our projections. Amounting to a 40% fall from 2005 levels, this revenue shortfall will reduce incomes for 190,000 farm households.
- Domestic food production will also be negatively affected as imported cereals, meat, dairy products, livestock feeds and processed foods force lower prices for domestic agricultural products.
- Zambia's poverty reduction strategy and national development plan depend on growth in export agriculture. Over the past decade and a half, that strategy has worked, as crop diversification and growth in export agriculture have driven rapid reductions in rural poverty. A permanent Kwacha strengthening threatens to reverse these gains, in which case Zambia will need to find an alternative motor capable of driving poverty reduction efforts.

THE STAKES: Agriculture employs 70% of the Zambian workforce and an equal number of the country's poor (Table 1). For this reason, Zambia's Poverty Reduction Strategy Paper focuses on the key role a prosperous agricultural sector must play in broad-based economic growth and poverty reduction. Even the urban poor, who spend over two-thirds of their income on basic staples, depend on growing agricultural productivity to maintain low food prices, which in turn largely govern their real income. Given agriculture's importance to the welfare of both the rural and urban poor, it is difficult to see how Zambia can achieve broad-based poverty reduction without

significant growth in agricultural output and productivity. Zambia is not unique in this respect: "Since 1700, virtually all instances worldwide of mass dollar poverty reduction began with a sharp rise in labour income due to higher productivity on small family farms." (Lipton 2005).

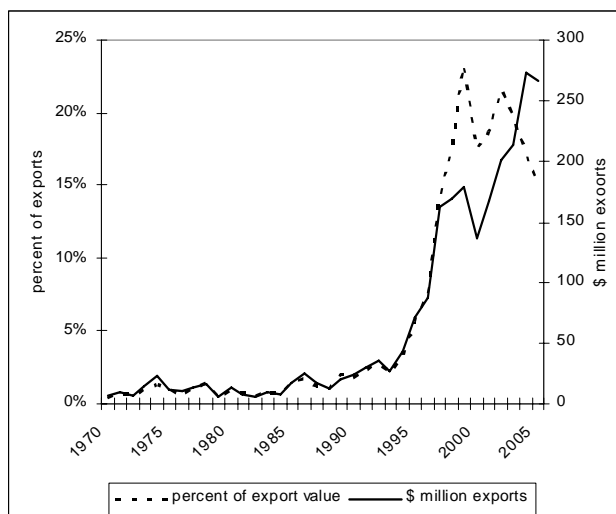
As a foreign exchange earner, agriculture has proven the most dynamic component of Zambia's export economy over the past decade and a half, since economic liberalisation began. In the 1960's and 1970's, agriculture accounted for less than 5% of total exports, while in the early years of the 21st century that share has risen to between 15% and 25% (Figure 1).

Table 1. Scale of Zambia's Agricultural Sector

	2000 - 2005
Agricultural GDP	
million 1995 USD	594
as percent of total GDP	17%
Exports	
value (million USD)	214
as share of total	20%
Employment	
millions	2
as share of total	71%
Poverty (% of poor population)	
agricultural households	70%
nonfarm households	30%
total	100%

Sources: World Bank (2002), Zambia 2000 Census, CSO (2004).

Figure 1. Trends in Agricultural Exports from Zambia



Agricultural exports such as cotton, flowers, horticultural products and tobacco have formed the core of Zambia's successful diversification away from dependence on volatile mineral exports (Figure 2). In value terms, these agricultural exports amounted to \$277 million in 2005, and they provided employment to 320,000 smallholders as well as 143,000 commercial farm workers.

IMPACT OF THE KWACHA STRENGTHENING: The rapid recent appreciation of the Kwacha has placed these gains at risk. The sudden strengthening of the Kwacha since November 2005 has reduced the Kwacha value of agricultural exports by 30%, forcing reductions in farmgate prices and eroding exporter profit margins. As in a classic case of Dutch Disease, large inflows of foreign exchange – whether from surging international copper prices, foreign aid or speculative financial inflows – have contributed to the strengthening Kwacha. The subsequent rapid appreciation of the Kwacha risks making much of Zambia's export agriculture uncompetitive on world markets.

The largest agricultural export employers – cotton, tobacco and horticulture – will experience the steepest reductions in farmer incentives, production and export volumes. Floriculture, because of its low domestic cost component, will face less pressure from a strong Kwacha, although recent increases in petroleum prices over the past several years have placed export margins under pressure.

Under a permanent strengthening of the Kwacha at 3,500 K/\$, our projections suggest that agricultural export earnings will fall by roughly \$106 million per year, affecting 190,000 farm households (Table 2). For the farms that remain, largely those who are most efficient and also debt-free, competitive pressures will favour increased mechanization using cheap imported equipment at the expense of local labour. Thus, even the farms that survive will face strong pressure to reduce employment. At a 2,500 exchange rate, our budget estimates suggest that export agriculture will largely disappear from Zambia.

Figure 2. Trends in Zambian Copper Exports

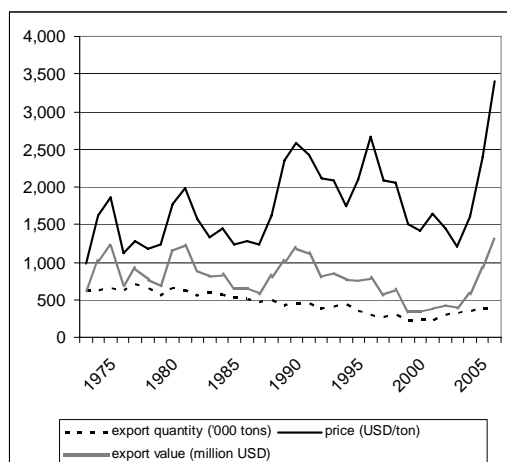
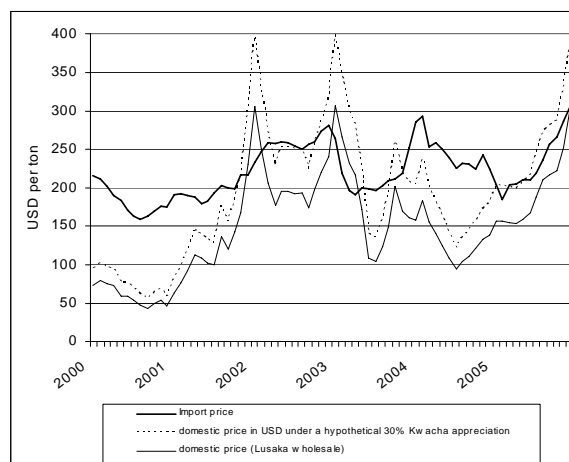


Figure 3. Trends in Import and Domestic Prices of White Maize



Though export agriculture will bear the brunt of the Kwacha appreciation, domestic food production may also be affected. Over the past decade and a half, as maize production has trended downwards, imports have become more competitive and Zambia has tended to import with increasing frequency. Looking forward, a permanent strengthening of the Kwacha will make imported maize, wheat, wheat flour, dairy products and poultry even more competitive with domestic production. During the past six years, under a hypothetical 30% appreciation in the Kwacha, import prices of maize would have fallen below domestic lean season prices for roughly four months at a stretch, compared to one month, on average, in the past (Figure 3).

This suggests significantly larger maize imports – on the order of 200,000 tons per year – coupled with corresponding downward pressure on maize prices and farmer production incentives. The foreign exchange cost of this shift would be in the range of \$40 million to \$60 million per annum and would imply a reduction in domestic production of about 20% with associated loss of income earning opportunities for rural communities.

TRANSITION YEAR PRESSURES:

During the current 2005/06 crop year, the timing of the abrupt Kwacha appreciation – after farmers had purchased inputs, begun field preparations and planting – has placed even greater pressure on farm profits. Most farmers have purchased imported inputs at a 4,500 exchange rate or above, raising their Kwacha input costs, while they will export at a 3,500 exchange rate or below, suffering a 20% to 30% fall in Kwacha revenues.

Countering this financial pressure, however, is the bumper harvest anticipated this season due to abundant, well-spaced rainfall. Smallholder cotton, maize and tobacco farmers can expect to see yields anywhere from 15% to 25% higher than normal. This output windfall will serve to moderate temporarily the fall in Kwacha output prices. In the current transition year, smallholder cotton producers will likely see returns fall only slightly, by between 5 and 10%, rather than the full 25% fall that would occur with a strong Kwacha in a normal rainfall year (Table 3). While favourable weather will cushion farmers during the 2005/6 season, reversion to normal yield levels in coming seasons will likely result in large-scale small farmer exit from export agriculture (Table 2).

Table 2. Projected Impact of a Kwacha Appreciation from 4,500 to 3,500 per USD on Zambian Agriculture

bv	Current Scale		Anticipated Reduction	
	Production (\$ millions)	Employment (thousands)	Net Exports* (\$ millions)	Employment (thousands)
Export Crops	\$277	463	\$106	190
Domestic staples	\$281	511	\$75	30
Total	\$557	975	\$181	220

* For domestic crops, a Kwacha appreciation will increase imports.

EFFECTS OF THE ORIGINAL 2006 BUDGET PROPOSALS:

The initial revenue proposals submitted with the 2006 budget place still further pressure on farm profits. Though these measures have been subsequently modified, the original budget revenue proposals would have affected Zambia's 300,000 smallholder outgrowers significantly. Unable to meet the K200 million ZRA threshold for VAT registration, the proposed standard VAT rating for agricultural products would raise their purchased input costs by 17.5%, disadvantaging them compared to large farmers who would remain able to deduct the VAT paid on inputs.

Still more onerous is the proposed turnover tax withholding provision. Under this provision, unregistered smallholders would face a 45% withholding on their revenues. On top of a 30% exchange rate reduction in Kwacha earnings, this would amount to a 75% reduction in output price received at harvest time. Under this scenario the largest group of the small-scale export producers, the smallholder cotton farmers, would see returns fall to roughly K1,500 per day (Table 3). Those smallholders who live in close proximity to a ZRA office and are able to register will be required instead to pay a 3% turnover tax. If exporters or buyers are permitted to deduct and remit the 3% to ZRA on behalf of the small holders, the impact of the 3% tax will be marginal.

However, under individual filing, the transaction costs of this payment would amount to roughly 40% of the average cotton farmer's current profit, reducing returns to K2,600 per day and precipitating large-scale exit from smallholder cotton farming.

Both the VAT and withholding tax provisions initially proposed in the 2006 budget would tend to discourage formal marketing of agricultural produce and drive producers instead to informal markets, where neither tax is imposed. Many animal health experts fear that this diversion from formal markets, with their health and sanitation controls, could have serious repercussions for the control of livestock and poultry diseases.

POLICY IMPLICATIONS: The cause of Zambia's rapid Kwacha appreciation remains the subject of vigorous public debate. Observers typically point to one of three possible explanations: surging copper export earnings, a foreign exchange windfall precipitated by the HIPC completion, and large inflows of portfolio investment in local treasury bills.

Whatever the cause of the Kwacha appreciation, the consequences appear serious for agricultural exporters. Results from this study suggest that the current boom in foreign exchange inflows risks

crippling the engines of Zambia's highly successful agricultural export diversification. The negative impact on the tourism industry, though not studied here, may prove equally severe. Once copper prices return to normal and foreign aid and speculative financial inflows recede, Zambia appears likely to revert to a copper-dependent export economy, without an alternative foreign exchange earner. As in the classic case of Dutch Disease, the current foreign exchange windfall risks doing long-term structural damage to agriculture.

Governments who have successfully managed similar foreign exchange windfalls to the advantage of their agricultural producers have used the windfall earnings to promote, rather than impede, economic diversification. Their main tools have been active management to avoid excessive exchange rate volatility, sterilization of foreign exchange earnings to avoid currency appreciation, strict controls on government spending in order to combat inflation, and significant public investment in agricultural technology and infrastructure. To date, the Zambian government has adopted none of these measures. Clearly, government macro economic and fiscal policies affect all sectors of the economy, not just agriculture.

Table 3. Exchange Rate and Tax Implications for Smallholder Cotton Farmers

	Returns to labor (K/day)
Exchange rate impacts	
a) K 4500 per dollar	6,488
b) K 3500 per dollar	4,824
c) K 2500 per dollar	3,161
Tax Changes (at 3,500 exchange rate)	
d) VAT on inputs	4,514
e) 3% turnover tax, exporter pays	4,316
f) 3% turnover tax, farmer pays	2,577
g) Withholding tax	1,545
Transition Year Yield Effects (at 3,500 exchange rate)	
h) 600 kg/ha	2,953
i) 800 kg/ha	4,603
j) 1000 kg/ha	6,252

So any policy response will require careful consideration of the potential implications for the service and manufacturing sectors as well. This study, which has focused solely on agriculture, suggests that under the current exchange rate level and policy

environment, Zambia risks losing roughly one-third of its agricultural export base over the medium run, thereby seriously undermining current economic diversification and poverty reduction efforts.

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John Fynn and Steven Haggblade. 2006. "Potential Impact of the Kwacha Appreciation and Proposed Tax Provisions of the 2006 Budget Act on Zambian Agriculture" [Food Security Research Project Working Paper No.16](http://www.aec.msu.edu/fs2/zambia/wp_16.pdf). Lusaka: Michigan State University http://www.aec.msu.edu/fs2/zambia/wp_16.pdf

* INSTITUTIONAL PROFILES

The Zambia National Farmers' Union (ZNFU) is a private, non-political association representing its 33,000 small scale and 510 large scale members. The mission of the ZNFU is to promote and protect the interest of members as farmers, individuals, corporations and other organizations involved in the business of farming in order to achieve sustainable economic and social development. The ZNFU conducts consultations and fact finding efforts through its network of regional offices and through its seven commodity committees and thirteen

specialized associations. The Research and Development Department at the ZNFU Secretariat is staffed by two economists, John Fynn and Ellah Chembe.

The Food Security Research Project (FSRP) is a collaborative program of research, outreach and local capacity building, between the Agricultural Consultative Forum (AFC), the Ministry of Agriculture and Cooperatives (MACO), and Michigan State University's Department of Agricultural Economics (MSU). The Zambia FSRP field research team is comprised of Jones Govereh, Steven Haggblade, Misheck Nyembe, and Stephen Kabwe. MSU-based researchers in the Food Security Research Project include Antony Chapoto, Cynthia Donovan, Thomas Jayne, Nicole Mason, David Tschirley, Michael Weber, and Zhiying Xu.