Department for International Development Malawi and Zambia

Food Security and Methodology in Malawi and Zambia

DCP/RtVP 52

Final Report ©

In Association with

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enterplan
CREATING A NATURAL ADVANTAGE

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Abbreviations and Acronyms

PPP	Purchasing Power Parity
CSB	Corn Soya Blend
DSM	Dried Skimmed Milk

This report has been prepared for DFID by Philip White of the Overseas Development Group, University of East Anglia, through the DFID Economist Resource Centre Framework. The views expressed herein are those of the author and do not necessarily represent the views of Enterplan Limited.

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Notes to Accompany Summary Data Table on Cash, Food and Agricultural Input Transfer Schemes in Malawi and Zambia

General Features of Table

Purpose

1 The purpose of the accompanying table is to provide summary evidence on cash transfer, food distribution and targeted agricultural input schemes in Malawi and Zambia, in a form which allows simple comparisons of objectives, costs and transfer value across schemes of different types and in different countries. The goal of this exercise is to feed into DFID's ongoing discussions on the design and implementation of cost-effective safety nets with partner governments.

2 While the initial focus is on schemes in Malawi and Zambia, comparisons could be extended to other countries where DFID has similar concerns, such as Ethiopia.

The Design of the Table and Information Included In It

3 For ease of use, the table is designed to present information on each scheme across a single printed page, one row per scheme, in a simple Excel spreadsheet format. This means that information must be limited to a small core set of scheme attributes, with only basic details on each. The set chosen here includes the most essential qualitative and quantitative evidence needed to compare costs of scheme transfers in a policymaking context. It excludes important information types that would be required for a full analysis of individual schemes, such as those relating to the nature of chronic deprivation, risks and vulnerabilities amongst target groups, costs to beneficiaries of accessing support, incentive effects of schemes, institutional capacities, monitoring and evaluation arrangements, or a systematic approach to gender and other social dimensions. Moreover, no attempt is made to assess wider costs and benefits or the extent to which schemes achieve their various social objectives.

4 The table includes columns for basic qualitative features of schemes: title, form of transfer, years of operation, objectives, implementing agencies, donors, period and frequency of transfers, target groups, targeting method and precision. The final column is for useful notes including references to information sources and other relevant documents.

5 Quantitative data to be entered into the table includes beneficiary numbers, total annual scheme cost, the quantity transferred to each beneficiary per year and a rough estimate of the range of its local value ('average', 'high' and 'low') expressed in

cash terms or, in the case of cash transfers, in terms of the amount of maize that this cash could purchase in local markets. These data are used to calculate the following statistics which can be compared across schemes:

- total annual cost per beneficiary;
- annual overhead costs per beneficiary, and
- the average cost per beneficiary of transferring the equivalent of US$1.00 or 50kg of food.

Testing and Refining Table Design, and Possible Further Developments

6 The initial design of the table has already been tested and refined using available data for a small sample of recent, current or proposed schemes in Malawi and Zambia. A cross section of schemes in the two countries has been chosen, covering direct cash transfers, cash for work, 'development' and 'protracted relief and recovery' food aid and agricultural inputs provision. Information shown for these schemes should be checked as in some respects (noted in the final column) it is illustrative only. As more data and a wider variety of schemes are considered, it is to be expected that further refinements to the table may be called for.

7 This exercise is intended to facilitate simple, rough-and-ready and easily accessible comparisons between social transfer schemes using a minimal amount of data. For a more detailed comparative assessment of schemes a number of further developments might be considered:

- A relational database (for example, in MS Access) could be designed from which scheme information could be extracted and presented in different formats and at different levels of detail and aggregation. The database could include text and memo fields for substantive textual information, as well as numerical and calculated fields. It could also include links to existing word-processed documents, and pass data to spreadsheets where necessary. While permitting a more systematic and rigorous approach to information storage and retrieval for a large number of schemes in many countries, a database of this kind would involve an initial design process followed by designation of responsibilities for database maintenance and use to staff trained for this purpose.
- A possible variant of the database approach is the use of 'pivot tables' in Excel. These allow information in a standardised data table to be cross-tabulated in many different ways, and summary statistics presented and charts prepared for all or part of the dataset. These manipulations require some familiarity with pivot table operations and can produce misleading results if not properly managed. If the necessary expertise can be relied upon and the number of schemes in the database becomes large, pivot tables may add value to this exercise, perhaps linked to database management software.
- A more flexible approach to further development might be the compilation of a series of short scheme briefing documents, in standardised format, to

accompany this summary spreadsheet data table. The *Social Assistance in Low Income Countries Database* currently under preparation for DFID[1/] provides standard textual information at a summary level (one page per scheme) and might be considered sufficient for this purpose. A similar approach is currently being piloted for a 2005 UNICEF project, and involves compilation in spreadsheet format of an inventory of cash transfer social protection programmes in 15 countries of East and Southern Africa.[2/] Alternatively, a series of more substantive (two to four page) documents, one per scheme, might be preferred. In either case, sections therein could be accessed via links to and provide further detail on respective parts of the summary spreadsheet.

Notes on Table Columns (a) to (w)

8 Columns marked * require numeric data, used to calculate the statistics in columns (o), (t), (u) and (v) which are marked ** and shaded.

(a) Scheme Country and Title

Specifying country first allows the table to be easily sorted by country. Titles should be those used in project memoranda or concept notes where possible.

(b) Form of Transfer

This may include cash, food, crop inputs and so on, or vouchers, which can be exchanged for these commodities. This column may be used to sort schemes by type.

(c) Year(s) Operated

Starting with the range of years of scheme operation allows schemes to be sorted by start year. Qualifying information such as months of start or finish can follow.

(d) Scheme Objectives

Social protection schemes have different and often multiple objectives. A succinct listing of these allows the scheme to be assessed in its own terms, and helps to avoid a misleading preoccupation with efficiency of transfer as the sole criterion for scheme comparisons.

(e) Implementing Agencies

On formal schemes these are most often government agencies, though international and national non-governmental, community-based, other civil society organisations may be involved. Use of acronyms saves space, but it may help to list these in a separate glossary.

1/ Armando Barrientos and Roger Smith, University of Manchester, February 2005 (1st draft)

2/ This exercise is led by Stephen Devereux, Institute of Development Studies, UK (S.G.Devereux@ids.ac.uk)

(f) Donors

Donors can be specified using acronyms where these are widely known.

(g) Transfer Period and Frequency

This column covers both the time of year of scheme operation, and the frequency of transfers.

(h) Spatial Coverage

Specifies what area of the country is covered by the scheme, either by name or in terms of number of districts or other administrative areas.

(i) Target Group

The intended target group for the scheme, as stated in project documents.

(j) Targeting Method

Basic method of targeting, foe example, non-targeted, geographical, administrative, community or self targeting, or combinations of these. Also targeting criterion where space allows (for example, <80% wt/age standard for children under-five).

(k) Inclusion Error

As one measure of targeting precision, this is the proportion of actual beneficiaries who are not in the intended target group and should therefore not be receiving transfers. This is often not known, but it may be possible to comment on this type of targeting error in qualitative terms. Sometimes a design estimate is included in project documents.

(l) Exclusion Error

This is the other main measure of targeting precision, and is the proportion of the intended target group, which should be receiving transfers but is in practice excluded from the scheme. Again, only qualitative comments may be possible.

(m)* Direct Beneficiary Numbers Per Year

The number of beneficiaries directly receiving transfers per year (averaged across scheme years where applicable). 'Direct' beneficiaries are those registered for direct receipt of transfers from the scheme, and may be household heads, individuals or occasionally groups. In comparing schemes it should be borne in mind that in some cases each direct beneficiary may pass on transfers to a number of indirect beneficiaries, such as household members.

(n)* Total Cost ($'000/yr)

This is total scheme cost per year in dollar terms, averaged over scheme life where applicable and including administrative costs. The basis on which cost is expressed (current or base year prices and exchange rates where applicable) should be noted

in column (w). For cross-country comparisons it is often preferable to express costs in purchasing power parity (PPP) terms to allow for differences in price levels between countries.[3/] However the differences in PPP conversion rates between Malawi and Zambia are marginal for the purposes of this exercise so market exchange rates have been used. If costs of technical assistance (scheme advisers etc) are excluded, this should be mentioned in the final column.

(o) Cost Per Beneficiary ($/yr)**

This column is calculated as (n)/(m)*1000 and represents the total scheme cost per beneficiary in dollar terms.

(p)* Transfer Amount Per Beneficiary Per Year

The amount in cash or kind transferred per direct beneficiary per year. It is helpful to specify units: i.e. '$' in cash transfer programmes and 'kg' in food distribution programmes (in Excel these units can be specified as currency or custom number formats respectively). In the case of agricultural inputs the composition of the input package should be specified in text form.

(q)*, (r), (s) Estimated Equivalent in Cash ($) or Maize (kg) – 'Average', 'High', 'Low'

To allow comparison between transfers in cash and those in kind, an attempt should be made to estimate the annual value of transfers to beneficiaries in food (maize) and cash terms respectively in local markets. Ideally, a weighted average of local market prices for the commodities in question at the point and time of transfer should be used. Thus cash transfers can be expressed in terms of kg. of maize which this cash could purchase locally, while food and input transfers can be expressed in terms of the dollar equivalent of cash that could be raised by selling them in local markets. Estimation of these equivalents is complicated by:

- spatial differentiation of prices across the area covered by the scheme – for example higher fertiliser prices in remoter areas;
- intraseasonal price changes during the period over which transfers occur;
- dollar exchange rate changes during this period;
- transaction costs to beneficiaries, either inflating the real transfer value if they would otherwise have purchased the commodity in local markets, or deflating it if they choose to sell rather than use it, and
- lack of data on all of the above.

3/ PPP conversion factors are published in the World Bank's *World Development Indicators* and are available on the World Bank website (www.worldbank.org) under International Comparisons Programme

The valuation method chosen may well be a 'quick-and-dirty' one, but is worthwhile attempting in any case. For in-kind transfers prices of the constituent commodities in the transfer package need to be gauged to arrive at a combined package value. For example, in addition to maize (grain or meal), food transfers usually include pulses and other food commodities such as corn soya blend (CSB), dried skimmed milk (DSM), vegetable oil, sugar, iodised salt, high protein supplements etc. which may make up a substantial portion of their value. If lack of data precludes any such estimation, the cost of procurement and transport of the transfers can be used as a proxy. In either case, details should be given in column (w).

In recognition of the variability of food and input prices, an attempt should also be made to indicate the range of such variation over the scheme period using *high* and *low* values in columns (r) and (s). While not used for calculating statistics in columns (t)-(v), these estimates (which can be in percentage or qualitative terms) can be particularly useful in indicating the way in which the value of transfers to recipients can diverge from that given as 'average' as market conditions change seasonally, by location or in response to drought or other factors. Such price movements can profoundly alter the relative merits of cash and in-kind transfers, especially in the transition between periods of chronic food insecurity and severe food crisis.

(t) ** Average Overhead Cost ($/ben/yr)

This provides an indication of the absolute average annual 'overhead' cost of delivering transfers to each beneficiary. It is calculated in the spreadsheet as the difference between total cost per beneficiary (column (o)) and the cash value of the transfer (column (p) for cash and column (q) for in-kind transfers). In the minority of cases where in-kind transfers have an estimated average local value higher than the scheme costs of delivering them, this overhead will be negative and the apparent cost-effectiveness of the scheme will be high. *It should be noted, however, that a high positive 'overhead' does not necessary represent an inefficient scheme. Many schemes aim to provide benefits beyond simple transfers, such as implementation of public works programmes to enhance community assets, the establishment and operation of revolving credit funds, or training, costs of which appear in this index as 'overheads'.*

(u) Avg. Cost of Transfers Equivalent to $1.00**

This is an indication of apparent relative efficiency of transfer, being the average total cost of transferring $1.00 or its in-kind equivalent. Like column (t) it is a comparison of column (o) with column (p) or column (q) (for cash and in-kind transfers respectively) but as a ratio ((o)/(p) or (o)/(q)) rather than the difference between them.[4/] Exceptionally, for in-kind transfers with a negative value in column (t), (u) will be less than $1.00. The same caveat applies to column (u) as to column (t): a high value does not necessarily indicate a lack of cost-effectiveness where scheme objectives go beyond the transfers themselves. Conversely, a low value may hide failures of accountability and targeting which seriously reduce real cost-effectiveness.

4/ This is an alternative expression of the reciprocal ratio ((p)/(o) or (q)/(o)) which is often referred to as 'alpha value', being the proportion of scheme costs represented by actual transfers.

(v)** Avg. Cost of Transfers Equivalent to kg50 food

This is akin to column (u) except that it indicates the cost of transferring kg50 of food or its cash equivalent. For food distribution programmes dominated by maize, it shows the average total cost of delivering a kg50 bag of maize to recipients, calculated as (o)/(p)x50. The term 'food' rather than 'maize' reflects a recognition that for many food distribution programmes maize accounts for only a portion of the transfer in value terms (though still more than half in most dry-ration programmes). For cash transfer schemes, (v) is calculated as (o)/(q)x50 and shows the total cost of providing enough cash for beneficiaries to buy a kg50 bag of maize locally. For inputs programmes no maize equivalent has been calculated in column (q)[5/] and so this index is not applicable. Like columns (t) and (u), column (v) needs to be interpreted with caution.

(w) Notes and References

This column is for very brief notes on:

- other information important for comparing this scheme with others, for example, non-transfer benefits; fiduciary risks; methods of valuation; market conditions at point of transfer (for example, major food or commodity price changes), institutional constraints to implementation; links to other formal schemes or informal or market-based social protection mechanisms; and other key factors affecting scheme performance;
- explanatory notes in relation to entries under specified columns (a) to (v);
- sources of information for this scheme, or references (or hyperlinks) to key documents providing further information on the scheme.

5/ To do so would invite confusion between the rate at which inputs packages could be directly exchanged for maize in local markets, and the amount of maize that could be produced on-farm using the package. The latter depends on several other factors and is beyond the scope of this exercise.

Summary Data on Cash, Food and Agricultural Input Schemes in Malawi and Zambia

(a) Scheme country & title	(b) Form of transfer	(c) Year(s) operated	(d) Scheme objectives	(e) Implementing agencies	(f) Donors	(g) Transfer period & frequency	(h) Spatial coverage	(i) Target group	(j) Targeting method	(k) Inclusion error	(l) Exclusion error	(m) Direct beneficiary numbers per year	(n)* Total cost per year ($'000)	(o)** Cost per ben. ($/yr)	(p)* Transfer amount per ben. per year	(q)* Estimated equivalent in cash ($) or maize (kg) Average	(r) High	(s) Low	(t)** Average overhead cost ($/ben/yr)	(u)** Avg. cost of transfers equivalent to: $1.00	(v)** kg50 food	(w) Notes & references
Zambia: Pilot Social Cash Transfer Scheme, Kalomo District	Cash	2004 - 2005	1) Reduce extreme poverty & food insecurity; 2) Test feasibility of SCTS in SP strategy	MCDSS/PWAS	GTZ (+ ADB from 2005)	All year, monthly	Kalomo District (2 blocks)	10% poorest & most incapacitated hhs.	Selection by Community Welfare Assistance Committees (CWACs)	Target: <20% at CWAC level. Actual: "very low"	Target: <20% at CWAC level. Actual: "not as good"	1,027	84	$82	$72	kg 600	kg 720	kg 450	$9.79	$1.14	$6.82	(n) & (o) exclude GTZ advisory costs. Successful pilot. ADB to fund from early 2005 under Zambia Child Welfare Project. District Social Welfare Office capacity as key constraint. *Source:* GTZ Project Reports
Zambia: Proposed National Cash Transfer Scheme	Cash	2005/06 - 2007/08 FY	Reduce extreme poverty thru' regular cash transfers to chronically food insecure hhs	MCDSS/PWAS	DFID, Germany	All year, monthly	National	10% poorest & most incapacitated hhs.	Community selection (CWACs)	Target: <20%?	Target: <20%?	200,000	18,500	$93	$77	kg 638	kg 850	kg 425	$16.00	$1.21	$7.25	Design based on Kalomo pilot. Proposed DFID contribution £6m + £0.5m design costs. *Source:* DFID project concept note, Jan/Feb'05.
Malawi: Public Works Programme	Cash	2002-2006	Reduce extreme poverty and create public assets through cash for work schemes	NEC, MASAF, CRIMP, National Roads Authority, District Assemblies	WB, DFID	All year, monthly	National	Poorest hhs (esp. female headed) with available labour	Self + community selection	Low: limited by low wage rates, community targeting	Moderate to high: scale limited by capacity to manage schemes	210,000	11,500	$55	$22	kg 186	kg 303	kg 121	$32.76	$2.49	$14.71	Expected provision of 12.5m workdays/year Works to include earth roads, small dams, flood protection etc. Constraints: logistic & management capacity; maintenance of assets created. *Source:* National Safety Nets Programme 2002-2006, FEWS NET price data
Zambia: Targeted Food Security Packs Programme	Crop inputs	2000/01 onwards	Improve crop production and household food security	PAM/MCDSS	Germany	Oct-Dec, single transfer	National	"'Vulnerable but viable" hhs	Community (CWAC) + NGO/CBO selection	High? 'Viability' not well defined.	High. Distribution targets not reached.	120,375	5,485	$46	Seed: 4kg maize, 15kg legume. Ferts: 100kg	$31	$59	?	$14.74	$1.48	n/a	(m): 4-year avg. (target: 200,000). (q): avg. current procurement + distribution + training cost. Problems: poor funds disbursement, low crop returns, lack of impact indicators. *Source:* RuralNet SP Assessment Study (2004), AMIC Bulletins
Malawi: Extended Targeted Inputs Programme (ETIP)	Crop inputs, vouchers	2002/03	Increase food output; promote fertiliser use & legumes; improve food security	MoAI, TIP Logistics Unit (TIPLU)	DFID, NORAD	Oct-Jan, single transfer	National	Universal coverage of smallholder farming hhs	Community selection (Village Task Force)	Very low	Low: 22%	2,728,500	30,000	$11	2kg maize & 1kg legume seed + 15kg ferts for 0.1ha	$8	$10 (North)	$7 (Cntre)	$3.00	$1.37	n/a	Incremental maize production 353,000mt or 159kg/beneficiary. (r),(s), (t): illustrative only. Constraints: seed quality & delivery, fertiliser misuse, late pack delivery. *Source:* Levy, (2003) Starter Packs & Hunger Crises
Zambia: WFP Assistance for Refugees from Angola & DRC (PRRO 10071)	Food	2004-2005 (24 months)	1) Maintain nutritional status of refugees in 6 camps; 2) improve that of vuln. groups 3) facilitate return of Angolan refugees	WFP, NGOs	USA, Japan, Canada, Switz., Germany, Norway, Ireland	All year, monthly	6 camps in Zambia + transit camps in Angola	Refugees, mainly from Angola and Congo	Administrative	Low	Low	93,500	11,378	$122	kg 223	$49	$63	$42	$72.97	$2.50	$27.22	Food basket includes maize (73%), pulses (20%), veg oil, salt, HEPS, HPBs. (q), (r), (s): basket valuation at local market prices. Benefits include income generation training & support. *Source:* WFP project document, AMIC marketing bulletins, FEWS NET bulletins
Malawi: WFP Country Programme	Food	2002-2006	1) Improve nutritional status of vulnerable groups; 2) increase primary school enrolment & attendance; 3) create assets to boost food security	MoHP, WFP, NGOs, DoLG	UN, USAID, EC, other	All year, various	12 districts	Malnourished under-5s, pregnant/ nursing mothers, primary school pupils, food insecure hhs.	Geographical (VAM) + administrative	Low?	High in unselected districts	132,000	4,223	$32	kg 97	$21	$27	$18	$10.86	$1.51	$16.50	Rations include maize, CSM, veg oil, pulses, sugar, DSM. Benefits include community asset creation, a revolving credit fund for soya and vegetable seeds, and associated training. *Source*:WFP Country Programme 2002-2006. (q), (r), (s) based on FEWS NET price data.

Exchange rates used: US$1.00 = ZMK4,700=MWK105