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Problems of African Macro and External Data and their Implication for Policy Making

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I. Introduction

Credible policy making in general and designing macro and external sector policy in particular requires reliable, consistent and internationally standard dataset. Either short-term planning or perspective planning are unthinkable without such database. It will be argued here that the more complex the social and economic problems of a country is the more it needs such data that is need for credible planning and policy formulation. Given, the complexity of the social, political and economic problems African countries confronted with, the paramount significance attached to carefully planning their course of action and formulate relevant policies need to be obvious. The scarcity of resources in Africa adds another argument for the urgency of this need. Such carefully thought-out and informed policy formulation is practically impossible without reliable, consistent and internationally standard data.

Since independence most African countries were following some sort of planning. These plans were usually derived from strategies adopted by the political leadership (Tanzania's 'Vision 2020', Kenya's 'Session papers' etc are cases in point). This era was followed in the 1980s by the assent of the 'Structural Adjustment Programs, SAPs' to policy arena in most African policy making circles. Recently this is being transformed in to what is called 'The Poverty Reductions Strategy Papers, PRSP'. Such continent-wide policy prescriptions are augmented by multilateral commitments such as 'Millennium Development Goals, MDGs'. The end of the 20th century also witnessed the increasing globalization of the world economy. The latter entails the need to understand that process so as to design policies that are relevant in the current world economy context. All this development requires developing a consistent, reliable and standard macroeconomic and external sector data. (The latter refers to trade and international finance data).

The current practice in African countries' policy making and the preparation of budget towards that end is being informed by the 'Poverty Reduction Strategy Papers' PRSPs. This in turn will be closely tied with the what is called the 'Medium Term Expenditure Framework (MTEF)'. Both the realization of PRSP and the use of MTEF requires an overall macroeconomic framework that ensures consistency in defining the aggregate resource envelop and how it is going to be spend, as well as forecasting of major macro aggregates three to four years ahead. In most African countries this is done using what is called the 'incremental budgeting approach' (where this year's budget is based on whatever increment made over the previous years). In few relatively advanced African countries a macro model is used to achieve that. The use of the latter is important because both the preparation of the budget and forecasting of key macro variables are made in a consistent manner. This approach does not

also allow changing any components of the budget in a discretionary manner (i.e. without taking the overall consistency framework into account). Macro models will also offer the ability to carry out policy analysis using counterfactual simulation. This is crucial for policy makers because it will help them to asses the implication of proposed policy or packages of polices before their implementation. Policy analysis conducted with the aid of such models avoids a partial analysis, and hence partial understanding, of issues of national significance by taking all possible inter-linkages in the economy that are not easily tractable by human mind. All such instruments can be used if only we have an accurate, consistent and internationally standard macro and external sector data set.

Thus, an important component of the design of adjustment or poverty reduction programs for developing countries and the macroeconomic diagnosis which precedes them requires a consistent and institutionally disaggregated capital account (saving investment balance, current account balance and source of external finance) database. Lack of such consistent database is quite apparent in the standard international data sources[1]. National data sources are not better either. In the context of Africa this problem can be seen in most of the data sources. Much of the macroeconomic analysis in Africa suffers not only from lack of accurate sources of data but also from inconsistency across different sources on the one hand and analytical inconsistency within an identified source on the other. A comparison of some of the macro economic variables across institution such as Central Banks, Central Statistical Offices and Ministries of Finance and Economic development can vividly shows this (See Alemayehu 1996, 2002). This is aggravated by the problem at the level of the source of data. A concerted effort is made by a number of international organization, including the UN agencies, to address this problem in. This has resulted in what is called 'System of National Accounts 1993 or SNA 1993'1993 (see UN *et al* 1993). Many African countries are moving towards adopting this system. However, this is not uniform across the continent. Even in countries where the SNA 1993 is adopted, the time series data before 1993 is still inconsistent both analytically and across reporting institutions.

As noted above, the first problem relates to the inconsistency across different source (i.e. macro variables obtained form different institutions do vary). The second major problem relates to analytical inconsistency in an identified source or reporting agencies. In macro data consistency between *National Account* and *Balance of Payments* data requires the net factor payment and current transfer computed from the National Account should be equal to the same item computed from the Balance of Payment. The existing African data set does not obey to this accounting rule (See Alemayehu et al 1992, Alemayehu 2000, 1996 for illustration).

Thus, clearly there are two problems on the macro and external data of most African countries: inconsistency across institutions and analytical inconsistency within an identified

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[1] A rigorous presentation of national accounting is done in the 17th century based on the Works of William Petty in England. This has been followed by the work of Gregory King (1696) who developed national income estimate for England and Wales showing per capita income, expenditure and saving. Numerous other writers developed the work over centuries reaching its highest in the pioneering work of R. Stone and J.Meade in collaboration with J.M.Keynes. The UN has also played a great role in standardizing it through its recommendation of the 'System of National Accounts (SNA)' which first appeared in 1953 (Luttik, 1992: 16-17). The new SNA (UN, 1993) tackled much of the problems discussed in this section. It seems now analytical consistency between BOP and SNA is finally achieved. However, most African countries has not followed this development.

source/institution. This paper attempts to highlight this problems so as to underscore their importance, and hence the need for some policy actions, to address them. The rest of paper is organized as follows. In section two I will focus on macro data by extending the problems discussed above. In section three I will discuss the extension of the problems discussed in the context of the macro data to the world economy context. Section four will concluded the paper.

II. Major Problems of Macroeconomic Data in Africa

The Accounting Framework: An Overview

In this paper I will not dwell upon the details of the relevant accounting framework for macroeconomic analysis in Africa. Harvey (1985), Trap (1993) and Lensink (1996) provide a good discussion of such accounting framework in African context. Rather, I will outline the procedure by which a consistent macro database might be built for African countries. By briefly discussing this procedure, I am hopping to point out at the problems in African macro data. I have applied the method for 21 African countries selected from three geographical regions (*North Africa*, *West and Central Africa* and *East and Southern Africa*). This database, comprising panel data for the period 1970-90[2] , and reported that in Alemayehu (2002), can serve as spring board for broad-based application in African countries. A major problem in constructing such consistent macro database is lack of consistency between the international data reporting systems of different institutions as well as reports by individual African countries. This can partly be addressed by the procedure that builds on earlier work, discussed in Alemayehu *et al.* (1992) and FitzGerald (1993), and is formalized into a formal accounting framework, which is outlined below.

The Accounting Framework

Since the emergence of Keynes' macroeconomics in 1930's[3] the Keynesian version of national income accounting has become the *de facto* accounting framework for macroeconomics. Thus, much of the data used in macroeconomic analysis today is theory, and more specifically Keynesian theory, laden. However, this is not a static phenomenon, thus change and progress in theories had and will have repercussions on data. Accordingly, the accounting framework relevant to open economy macroeconomics has undergone a constant process of improvement, although its essential features remain unchanged. In the following discussion, I will outline the framework that could be adopted in constructing a consistent database for African countries but is not done by majority of these countries, in particular for the period before 1993. Section three will outline how this effort might be extended, with the aim of improving the accounting framework of open economy macroeconomics, to the global context. The latter will define the accounting framework that need to be emphasized if African's desire to engage in the world economy in meaningful manner.

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2 This is basically similar to the time period used in the above-cited works.

3 This has its historical roots in the work of the French 'Physiocrat' Qusenay. A rigorous discussion of national accounting was also undertaken in England, during the 17th Century, based on the work of William Petty. This was followed by the work of Gregory King (1696, cited in Luttik 1992) who developed national income estimates for England and Wales showing per capita income, expenditure and saving. Numerous other writers have built on this work, over the centuries, culminating in the pioneering work of R. Stone and J.Meade, in collaboration with J.M.Keynes. The UN has also played a useful role in standardizing this work, through its recommendation of a 'System of National Accounts (SNA)', which was first introduced in 1953 (Luttik, 1992: 16-17). The new SNA (UN *et al* , 1993) tackled many of the problems which have been discussed in this section and, it would appear that analytical consistency between BOP and SNA has finally been achieved.

The cornerstone of an open economy macroeconomics accounting framework is the identity that links the internal balance with the external balance. Thus, in relation to the United Nations System of National Accounts this is the link between national accounts and the balance of payment. However, one problem which one might encounter in using such an accounting framework is the lack of institutionally disaggregated detailed data which could, to some degree, be resolved by resorting to various multinational data sources (See Alemayehu *et al* (1992) for details on this).

A typical feature of African countries is being recipient of foreign inflow with a deficit on the current account and domestic capital expenditure exceeding domestic saving. For such an economy total investment (I) should much with national saving (S) and net capital inflows or foreign saving (F). This may be addressed by way of the accumulation balance, which may be defined as,

$$\mathbf{I = S + F} \qquad [1]$$

where I is gross domestic investment, S national savings and F net capital inflows. The latter is defined as the net change in assets and liability position of the country, and is equal to the deficit of the current account of the balance of payments (i.e. the external balance), which is given as,

$$\mathbf{F = M - X + N} \qquad [2]$$

where M and X are imports and exports of goods and non-factor services, respectively, and N is net factor payment and current transfer *to* abroad. Combining these, disaggregated into public (g) and private (p) sectors and rearranging [1] and [2] yields,

$$\mathbf{(I_g - S_g) + (I_p - S_p) = M - X + N}$$

$$\mathbf{= F_g + F_p} \qquad [3]$$

This yields the basic identity which links the domestic investment and savings gap with the current account deficit or surplus, and hence the resulting capital inflow or outflow. Further disaggregation of each of the variables in equation number [3] may then be carried out, if possible, by consolidating the various data sources of a particular African country; if not, using multinational sources of data. For instance N and capital inflows may be disaggregated using the Balance of Payment (BOP) statistics and public savings and investment may be derived using Government Financial Statistics' (Alemayehu *et al.*, 1992 : 7-14).

The net factor payments and current transfer from abroad (N) are not consistently reported in the national accounts and the balance of payment of many African countries. In principle N can be derived from national account data by subtracting gross domestic saving (S_d) from gross national saving (S_n). That is $N = S_n - S_d$. Thus, it can be written,

$$N = NFP + NTR = S_n - S_d \qquad [4]$$

Where: NFP and NTR are net factor payment and net current transfer from abroad, respectively.

Another source for the net factor payment and current transfer is the *Balance of Payments Statistics.* This source can be used to disaggregate net factor payment and current transfer by public and private sectors. This includes net interest payment by government to abroad (NIg), grants received by the government from abroad (Gr), workers' remittances received from abroad

(Rem) and interest payments made by the private sector to abroad (NIp). The major adjustment lies in dealing with the discrepancy between the national account estimate of the net factor payment and current transfer from abroad (S_n - S_d) and that derived from the balance of payments statistics. There is a huge discrepancy between these sources for almost all African countries and in particular for their data before 1993. Depending on the assumption about the accuracy of national account data vis-à-vis the balance of payment, there are two options in dealing with this discrepancy in the short-run which I have dealt with elsewhere (see Alemayehu 2002).

Apart form addressing the consistency problems, a further important dimension of the database problem in Africa is the need to disaggregate trade and financial data. First, a disaggregated stock of financial data needs to be set out. This in turn needs to be reconciled with flow of financial data. Many of the African countries international data doesn't obey this rule. In relation to trade data, total exports and imports need also be disaggregated by the SITC classification relevant for Africa. Currently most African researchers are using the UNCTAD's *Annual Commodity Yearbook*. This has, however, problems in African context and highlighted in section 3.

Although the framework outlined above offers a short terms solution by allowing correcting inconsistency and disaggregating the data by institutional sectors, it is not with out problems. First, it doesn't address the root cause of the inconsistency problem and merely tries to make the best use of the existing database. Second, the methodology might result in a systemic bias (over or under estimation) for some variables. Despite these problems, it is clear that the database construction using this framework brings together seemingly separate statistical sources of information and shows, ideally, the data should match given the logic of integrated accounting framework that ties the variables together. Otherwise all policy discourse based on current African data could well be misleading.

Institutionally speaking, the problems noted above require an umbrella organization such as the Economic Commission for African to lead the process of working on macro and external sector data of the continent. The ECA then can disseminate such authentic, consistent and region-based database using electronic media. This will not only ease the burden that African country pose on international organization such as the World Bank, which are currently providing such data base – such as the 'African Economic Indicators'-, but also help reduce the dependence on World Bank (and occasionally on IMF) to get an African country time series data.

III. The External Sector Data

Globalization is both a challenge and an opportunity for Africa. The art of overcoming the challenges and exploiting the opportunities requires informed policy making, as well as designing strategic intervention. The later in turn requires rigorous research and human capital formation that deals with global financial markets, global trade, as well mastering the rules of the game such the World Trade Organization. The first step in that direction is to understand how the global economic system functions (ie., how each countries' external sector functions, how the global trade and financial system works and related issues). This can be done primarily by working on trade and finance data as well as by having information about how the global market works. So far African countries have lagged behind in this respect. Most countries neither mastered how the global economy, at least what is relevant to them, work, nor built such database which would have informed their researchers and policy makers. With export-oriented growth policy taken as the main strategy by most African countries, the need for such information is extremely vital. As a starting point to realizing such

objective, regional economic research centers such as the ECA need to pay attention to the following two problem areas highlighted below.

External Finance: Foreign Capital Inflow

The extremely low level of domestic saving in Africa on the one hand, and the dire need to have high level of investment on the other (which is vital for growth and poverty reduction) has meant an increasing need for external financing. This brings about the issue of handling foreign capital inflow in an integrated open economy macro framework. The foreign capital inflow (F) into the economy is defined as the net change in the external asset (ΔA) and liability (ΔA) position: i.e.

$$F = \Delta L - \Delta A \quad (5)$$

For public and private sectors this can be given as

$$F_g = \Delta L_g - \Delta A_g + \Delta R \quad (6)$$

and

$$F_p = \Delta L_p - \Delta A_p \quad (7)$$

Where ΔA and ΔL represent the changes in assets and liabilities, F is the foreign capital inflow with the subscripts, g and p, denoting the public and private sectors, respectively, and ΔR is the change in reserves.

Data pertaining to changes in the assets, liabilities and reserves of the public and the private sector are reported in US dollars in the Balance of Payments Statistics of the IMF (BOPs). Central banks of most African countries also report such data but the level of disaggregation is extremely limiting. The changes in the assets of the public sector (ΔA_g) correspond to the sum of the figures reported in BOBS (old version, lines 53 - 55, 62 - 64 and 84 -85), while change in recorded (R) private sector assets (direct investment abroad, portfolio investment, other long-term assets, and short term assets), ΔA_p, refers to BOPS lines 45 - 48, 56, 59, 69 - 71, 77 - 79, 89 and 93 - 94. The changes in the liabilities of the public sector (ΔL_g) are reported as the sum of the figures in BOP lines 86 - 88 (for other, short term liabilities). Net flows corresponding to long term external debt transactions (including bonds) by the public sector borrowers are usually reported in World Bank's *Debtor Reporting System* (DRS) or its Global Development Finance. Recorded private sector external liabilities (ΔL_pR) are the sum of direct foreign investment inflows and equity investment (BOP lines 49 - 52, 60 - 61); long term external debt transactions, including bonds, by private sector borrowers from the DRS, and short term private sector borrowing (BOPS lines 90 - 92 and 95 - 97). The changes in official reserves (ΔR) are the sum of the figures in BOPS lines 98 - 111.

The net inflow of foreign capital to the public sector could be derived as in equation (6). In case of the private sector, however, the derivation is complicated by factors such as: (i) the unrecorded accumulation of private external assets (ΔA_pu), (ii) errors and omissions (BOPS line 112), the balancing item of the balance of payments; this item is assumed to show unrecorded short term (private) capital movements (referred as FpURCA in equation 8); and (iii) the discrepancy in the national accounts and balance of payments figures for net factor payment and current transfer (referred as F_pURNA in equation 5). The inflows of foreign capital to the private sector are consequently derived from the following:

$$Fp = (\Delta L_pR - \Delta A_pR) + F_pURCA + F_pURNA) \quad (8)$$

The errors and omissions item in the capital account of the *Balance of Payments* (F_pURCA) is a balancing item which refers to an unrecorded capital inflow when positive and an unrecorded outflow when negative.

The major problem in African external sector data as formulated above are:, (a) first it generally doesn't obey to the above accounting rule, most importantly F_pURNA is not zero, (b) there is no disaggregated financial data in the database of most African countries, (c) times series data of these variable is missing, and finally (d) there is no consistency between such flow data and the stock of external finance data such as debt.

Like that of the macro data discussed in section 2, African researchers and policy makers heavily rely on international financial institutions such as the World Bank and IMF to get international finance data. The problems noted above require an umbrella organization such as the Economic Commission for Africa to lead the process of working on such external finance data of the continent. The ECA then can disseminate such authentic, consistent and region-based database using electronic media. This again eases the burden on international financial organizations, which are currently providing such database, however incomplete they may be. After all this is an African data and the responsibility of generating, authenticating and providing such information should primarily be rest on African regional economic research centres.

External Trade: Imports and Exports

The other important data in the external sector relates to trade data. Here African policy makers need to know not only what there exports and imports are but also what other countries are exporting and importing and what the global pattern of trade and finance is. This, in particular is important for Africa because the price for African exports are invariably set in the global market. Understanding such market is crucial to ensure Africa's informed integration in the world economy. The starting point here is to compile consistent, reliable and up-to-date export and import related data along the framework outlined in the previous section. This task can began first by compiling the domestic data of each country.

This can be followed by re-examination of the relevance of the data that African countries are currently using to analyze their trade. For instance one of the problems in using the UNCTAD database (Annual Commodity Yearbook) in African context is that UNCTAD has used weights that are not relevant for African countries. If the weight is changed to reflect the reality in Africa, the implications for results such as terms of trade deterioration could be different. In other words, one might question whether the averaging method employed by UNCTAD, accurately reflects the world prices facing African economies. In order to answer this question the UNCTAD price is re-calculated in Alemayehu (2002), by weighting it by the level of each African region's exports. This comparative analysis offers the following conclusions. Firstly, for Africa as a whole, the *food* price index is similar in both the UNCTAD study and in this study. For the North Africa region there was a difference between these two price series in 1970s and late 1980s. For the West and Central Africa region the UNCTAD series shows higher prices up to the early 1980s, at which time these prices fell into line with the price series used within the present study. For the East and Southern Africa region, the UNCTAD series understates the regional indices. Secondly, for *tropical beverages* the UNCTAD price series is nearly identical with the regional price series computed in the study noted. Thirdly, for *agricultural raw materials* for Africa as a whole, the UNCTAD series overstates the actual price faced by African economies. Such over-estimation is likely to be particularly great in relation to East and Southern Africa countries. Fourthly, for *mineral, ores and metals* for the whole of Africa, the UNCTAD series overstates the actual price faced by African economies. With the exception of the

1980's, such over statement is severe throughout the period. However, for the East and Southern African region, this index understates the price faced during the early 1970s and late 1980s.

This result has profound implications, not only in relation to previous studies in Africa, but also to other studies which use world prices to analyze the impact of such prices at a regional and country level. Obviously elasticities computed from such studies will be biased if there is a variation between the regional and world prices (as listed in UNCTAD or IFS series), even if these have an identical trend. Thus, the first task African research centers need to do in relation to African trade data is to construct and price and volume index for African export and imports and correct the current problem. Again ECA is situated in the best place to do that.

Once such African based data is generated the second problem relates to locate how Africa is placed in the context of the world economy both in terms of trade and finance. This requires not only a consistent external and macro data in each individual country but also a consistent data based at world scale. This can be done by developing a global accounting framework which is outline below. Such accounting framework is important to: (a) first to understand the pattern of trade and finance in world which is crucial to locate Africa's place in the world trade and financial interaction, (b) to develop a global model that is instrumental to forecast and analyze the impact of external shocks (which could be advanced countries' policy related or global market related) on Africa, (c) it can also be used to prepare 'Economic Outlook of Africa' which takes into account the ongoing globalization.

An Integrated Framework: The World Accounting Matrices

Vos (1988, 1989a), Luttik (1992) and de Jong and Vos (1995b) have developed a global accounting framework, which organises trade and financial data by source and destination. This framework, termed the World Accounting Matrix (WAM), consists of four sub-matrices. These are labelled (1) current; (2) capital account transaction by origin and destination; (3) gross domestic investment, and; (4) gross national saving. These sub-matrices are supplemented by an assessment of stocks of international assets and liabilities as well as GNP (See Diagram 1 below).

The WAM approach assumes the existence of a direct link between current and capital account flows, the domestic resource gap and balance of payments. Employed within a global context, this implies that world export of goods, services and transfers should equal world imports of goods, services and transfers, and, thus, that the world current account should sum to zero. World foreign saving should also sum to zero, since some countries will be in surplus, while others in deficit, in each accounting year. Similarly, global saving should equal global investment. For the world economy, comprising *i* countries, this may be summarized[4] as follows (See Vos 1988, 1989a; Luttik 1992, de Jong and Vos 1995b).

$$S_i - I_i \equiv E_i - M_i + R_i \equiv \Delta FA_i - \Delta FL_i + (\Delta RES_i + EO_i) \qquad [1]$$

$$\sum_i^n (S_i - I_i) \equiv \sum_i^n (E_i - M_i + R_i) \equiv 0 \qquad [2]$$

[4] The Global consistency of balance of payment statistics was discussed, more than two decades ago, by Mundell. He explored, in general terms, the point that the balance of payment position for all countries should add to zero. This is also referred as 'Cournot's law' (See Mundell, 1968: 143-147).

$$\sum_{i}^{n}[(\Delta FA_i - \Delta FL_i) + (\Delta RES_i + EO_i)] \equiv 0 \qquad [3]$$

Where S= Gross national saving, I= Gross domestic investment, E= Export of goods and non-factor services, M= Import of goods and non-factor services, R= Net factor income and current transfer from abroad, –FA= Change in total external financial assets, –FL= Change in total external financial liabilities, –RES= Change in reserves, EO= Errors and omissions.

The WAM rests on Eq.1, which is the basic accounting framework for each country. For the world economy, the conditions under Eq. 2 and 3 will then follow logically.

These equations form the basic identities for the world economy. Based on these relationships, countries and regions are linked, within the WAM, through trade and financial matrices, organized by origin and destinations (Luttik, 1992: 22). This WAM framework, in matrix format, is set out in Diagram 1. The Northeast quadrant shows gross domestic investment, the Northwest quadrant summarizes the current account, the Southwest quadrant, national savings and the Southeast quadrant the flow of funds account. These flow categories may be combined with satellite matrices/vectors and applied to stock data (See Luttik 1992 for details).

Diagram 1: A World Accounting Matrix for n countries

	1	2	...	n		1	2	...	n	
1	A_{11}	A_{12}	...	A_{1n}	X_1	I_1				I_1
2	A_{21}	A_{22}	....	A_{21}			I_2			
.	.							.		
n	A_{n1}	A_{n2}	....	A_{nn}	X_m				I_n	I_n
	M_1		...	M_n	C_T	I_1		...	I_n	I
1	S_1				S_1	B_{11}	B_{12}	...	B_{1n}	C_1
2		S_2				B_{21}	B_{22}	....	B_{21}	
.			.			.				
n				S_n	S_n	B_{n1}	B_{n2}	....	B_{nn}	Cn
	S_1		...	S_n	S	D_1		...	D_n	F

Source: Luttik (1992), P.34

The WAM improves upon existing global accounting frameworks in a number of specific respects. First, by maintaining consistency at a global level. Second, by explicitly allowing for aggregation or disaggregation within its framework. Third, by showing the origin and destination of transactions. Owing to these attributes, the WAM may usefully serve as a database for the analysis of trade and finance within a global framework.[5] A WAM for 1990, which includes Africa, is show in Annex 2 for illustration. The African data in the 1990WAM reported in Annex 2 is grouped according to whether it relates to North Africa (NA) or Sub-Saharan Africa (SSA). The NA data is used directly, while an adjustment is made to the SSA data. Thus, in relation to SSA, a two step process is adopted. First, regional data for all countries within West and Central African (WCA) and East and Southern African (ESA) regions is compiled, based on the UN-ECA classification. Then, since this regional

[5] See de Jong and Vos (1995a) for a recent analysis of trade and finance, using a WAM. An earlier analysis is also contained in FitzGerald and Luttik (1991).

data obviously does not tally with the WAM based data, the WAM based SSA data is allocated between WCA and ESA regions, based on the proportion of the two derived from the regional data compiled. This data base is used in Alemayehu (2002) to model African in the global context. This is an area where Africa's regional economic centres, such as the ECA, need to engage.

IV. Conclusion

This paper attempted to show that credible policy making in general and designing macro and external sector policy in particular requires reliable, consistent and standard dataset. It is argued in the paper that the more complex the social and economic problems of a country, the more it needs such data which is crucial for informed planning and policy formulation. Given, the complexity of the social, political and economic problems African countries confronted with, the paramount significance of carefully planning their course of action and formulate relevant policies need to be obvious. The scarcity of resources in Africa accentuates the need to use their meager resources optimally. This requires informed policy formulation. In the context of macro and external sector policy formulation this means having reliable, consistent and internationally comparable database which is crucial to make a diagnosis of the African economic crisis. If the diagnosis is not right, surely the remedy suggested couldn't work. Diagnosis of the economic ills of the continent depends on having accurate and reliable macro and external sector database.

Since independence most African countries were following some kind of planning that is usually derived from strategies adopted by the political leadership. This was followed in the 1980s by the implementation of 'Structural Adjustment Programs, SAPs' in most African countries. Recently this is being replaced by 'The Poverty Reductions Strategy Papers, PRSP'. Such grand policy prescriptions are augmented by multilateral level commitments such as 'Millennium Development Goals, MDGs'. The end of the 20th century also witnessed the increasing globalization of the world economy and hence the need to understand that process. This is crucial to design policies that are relevant in the current world economy context. All this requires developing a consistent, reliable and standard macroeconomic and external sector data.

In short an important component of the design of adjustment programs for developing countries and the macroeconomic diagnosis which precedes them requires a consistent and institutionally disaggregated macro and external sector data. This is missing in most African countries. We in particular noted that the following to be the major problems in African macroeconomic and external sector data:

a) Most series are analytical inconsistent. This relates to the fact that most African macro data do not obey to basic macro economic identities.
b) There is a wide spread inconsistency across reporting institutions in each African country. It is not uncommon to find the data reported by central banks being different from Central Statistical Offices and the latter from that of the Ministries of finance.
c) Policy analysis, as well as designing plans and strategic engagement in the global economy requires an in-depth research using times series macro and external data.

This is lacking in most African countries. In countries where such data is found they are widely dispersed and difficult to trace.

d) It is also often the case that analysis conducted using the current macro and external sector data gives counter-intuitive results. In particular, it is not often inconsistent with micro level based analysis that is based on household income and expenditure survey data. This shows possible problems at the design, collection, and compilation of macro and external sector data.
e) Individual African countries do also pay extremely little attention to data related to the world economy. These are however crucial to design policies that will ensure a meaningful integration of Africa in the world economy.

Addressing these problems, crucial as it is, could be beyond the economic and human capital capacity of most ministries and statistical offices in Africa. One way of addressing this resource constraint is to pull the existing human and financial resource at regional or continental level. We have noted that the ECA is best situated to do that. This is worth being done by regional centers of economic policy research, instead of individual countries, such as the ECA because the economies of scale in such endeavor are enormous. A two stage approach can be followed.

In the first stage, the ECA in collaboration with country level statistical offices and data users can attempt to make the best use of the existing data set. This will basically begin by stock taking of what we have, what the problems are and what can be done in the short to medium run. At practical level this can be done along the lines outlined in this paper. In the second stage an attempt to bring about lasting solution should be tried. This requires capacity building at each country level, standardization of definitions, reporting and compiling of macro and external data relevant for policy makers at continental level. The latter will have a target of, among other things, addressing the root cause of the data inconsistency problems noted in the paper, providing each country' statistics generating offices with technical back-up by the regional think thank such as ECA, ensuring availability of major macro and external sector data set for African policy makers and researches on electronic media, building the capacity to use such data for policy formulation. When all these are done, we will be one step ahead in making informed policy making in Africa. The latter is crucial for reducing. and hopefully eradicating, poverty in the continent in a reasonable period of time.

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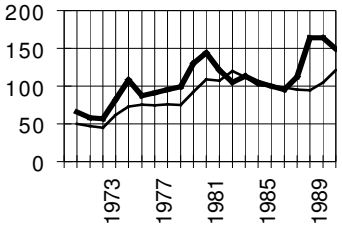
Annex 1:

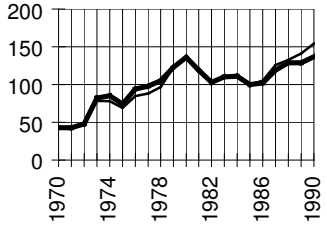
The UNCTAD Price Series and Its Relevance to Africa

Diagram .1 The modified and actual UNCTAD price series (WCA, 1985=100)

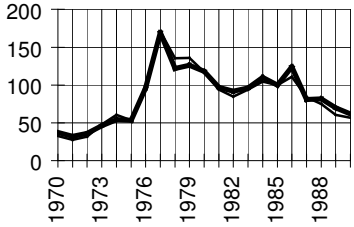
Minerals, ores & metals



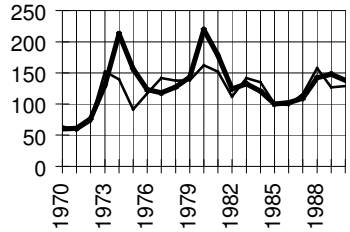
Agricultural raw materials



Beverage



Food (excluding beverages)

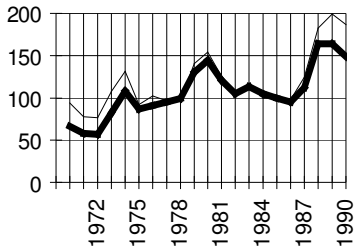


UNCTAD commodity price series

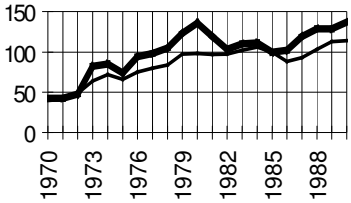
UNCTAD price weighted by export of West and Eastern African region (usinç UN-WCA classification)

Diagram .2 The modified and actual UNCTAD price series (ESA, 1985=100)

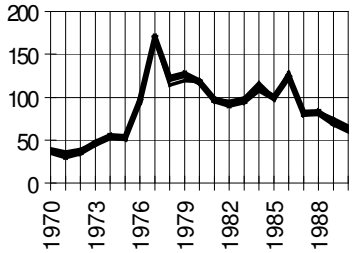
Minerals, ores & metals



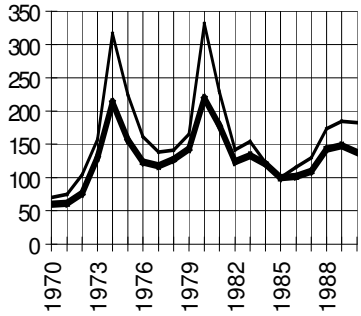
Agricultural raw materials



Beverage



Food (excluding beverages)

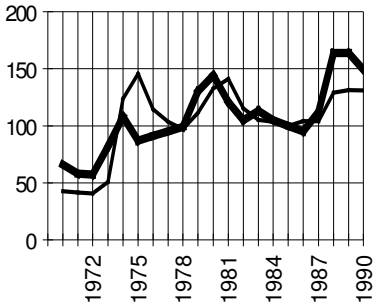


UNCTAD commodity price series

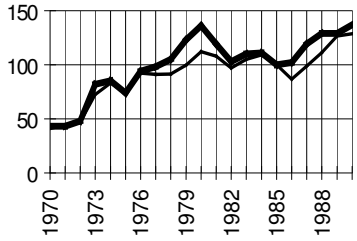
UNCTAD price weighted by export of East and Southern African region (using UN-ESA classification)

Diagram 3 The modified and actual UNCTAD price series (NA, 1985=100)

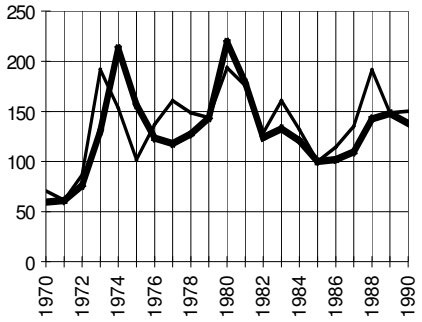
Minerals, ores & metals



Agricultural raw materials



Food (excluding beverages)



UNCTAD commodity price series

UNCTAD price weighted by export of Northern African region (using UN-NA classification)

Source: Alemayehu Geda (2002)

Annex 2

Balanced World Accounting Matrix (WAM) for 1990 (in Billions of US $)

	Current Account											
	USA	JAP	GERM	UK	ODC	EEU	LDCot	NA	SSA	OBC	INT	TOTAL
Curretn Account												
USA	0.0	106.6	40.0	60.7	248.6	6.0	169.5	6.5	5.6	22.4	2.1	668.1
JAP	103.7	0.0	24.8	27.3	107.9	4.0	110.2	2.6	6.4	25.4	9.3	421.8
GERM	51.4	18.0	0.0	52.8	305.6	19.1	52.8	5.3	4.9	6.0	6.8	522.8
UK	67.3	39.7	39.2	0.0	184.2	6.8	33.9	2.2	8.3	6.7	2.2	390.5
ODC	240.8	95.1	286.3	196.0	735.7	34.2	167.8	23.6	27.8	26.4	23.1	1856.8
EEU	4.8	4.7	16.7	3.9	37.3	38.6	26.5	1.8	1.0	0.6	0.2	136.1
LDCot	198.4	113.9	55.4	32.7	168.9	21.6	125.7	5.6	7.3	61.5	3.6	794.6
NA	6.1	1.2	6.4	2.5	29.5	1.9	6.0	1.1	0.4	0.4	5.8	61.3
SSA	13.6	2.9	5.6	2.9	30.0	0.6	3.9	0.3	4.3	0.7	2.1	66.9
OBC	40.8	17.5	10.6	13.9	17.3	1.2	53.2	1.0	1.4	8.1	3.9	168.9
INT	6.0	2.7	6.1	4.1	24.1	0.3	12.8	1.0	1.5	0.5	16.2	75.3
Subtotal	733.1	402.4	491.1	396.8	1889.1	134.5	762.2	51.0	68.9	158.7	75.3	5163.2
Capital Account												
USA	814.0											814.0
JAP		993.8										993.8
GERM			380.8									380.8
UK				167.6								167.6
ODC					1164.5							1164.5
EEU						318.1						318.1
LDCot							766.4					766.4
NA								33.7				33.7
SSA									17.6			17.6
OBC										44.4		44.4
INT											0.0	0.0
Sub total	814.0	993.8	380.8	167.6	1164.5	318.1	766.4	33.7	17.6	44.4	0.0	4701.0
Change in Reserves												
Errors & Omissions												
Total	1547.1	1396.2	871.9	564.5	3053.7	452.6	1528.7	84.6	86.5	203.1	75.3	9864.2

WAM 1990 Continued

						Capital Account							
	USA	JAP	GER	UK	ODC	EEU	LDCot	NA	SSA	OBC	INT	Subtot	Total
USA	879.0											879.0	1547.1
JAP		974.4										974.4	1396.2
GERM			349.1									349.1	871.9
UK				174.0								174.0	564.5
ODC					1196.8							1196.8	3053.7
EEU						316.5						316.5	452.6
LDCot							734.1					734.1	1528.7
NA								23.3				23.3	84.6
SSA									19.6			19.6	86.5
OBC										34.2		34.2	203.1
INT											0.0	0.0	75.3
Subtotal	879.0	974.4	349.1	174.0	1196.8	316.5	734.1	23.3	19.6	34.2	0.0	4701.0	9864.2
Capital Account													
USA	0.0	15.0	9.5	28.5	44.7	0.7	2.0	1.3	0.1	-3.2	1.7	100.3	914.3
JAP	2.6	0.0	16.3	32.8	50.8	1.3	8.7	1.3	0.5	1.4	-1.2	114.5	1108.3
GERM	3.2	0.0	0.0	21.2	31.6	0.0	2.6	-0.1	0.3	3.9	1.3	64.2	445.1
UK	4.5	6.9	25.5	0.0	89.4	0.0	7.2	2.0	1.2	3.3	1.0	141.1	308.7
ODC	29.7	62.0	50.4	55.4	176.4	0.8	69.1	6.9	3.7	11.9	6.9	473.4	1637.9
EEU	0.0	-0.1	4.5	-2.3	-1.6	-0.4	0.1	0.0	0.0	-0.1	0.6	0.6	318.7
LDCot	20.5	16.8	1.9	3.5	16.5	-0.5	0.0	0.0	0.0	2.4	9.8	71.0	837.4
NA	0.2	-0.1	0.2	0.0	-0.2	0.0	0.2	0.0	0.0	0.0	1.0	1.1	34.8
SSA	0.2	-0.1	0.1	0.6	3.0	0.1	0.4	0.0	0.0	0.0	3.4	7.7	25.3
OBC	4.5	2.0	0.4	0.9	4.0	0.0	0.3	0.0	0.0	0.1	0.2	12.4	56.8
INT	2.1	5.1	2.8	4.1	11.0	0.1	2.6	0.3	0.2	0.3	0.6	29.2	29.2
Sub total	67.4	107.5	111.6	144.7	425.5	2.2	93.3	11.8	6.1	20.0	25.4	1015.5	5716.6
Change in Reserves	-0.2	-0.3	-0.7	0.0	0.1	1.0	-1.5	-0.4	-0.2	-0.1	2.3	0.0	0.0
Errors & Omissions	-32.0	26.8	-15.0	-10.0	15.5	-1.0	11.5	0.1	-0.2	2.8	1.5	0.0	0.0
Total	914.3	1108.3	445.1	308.7	1637.9	318.7	837.4	34.8	25.3	56.8	29.2	5716.6	15580.7

Note

USA=United States of America, JAP=Japan, GERM=Germany, UK=United Kingdom
ODC=othere developed countries (i.e., Canada, France, Italy, Belgium, Luxembourg, Denmark, Greece; Ireland, The Netherlands, Portugal and Spain; Austria, Iceland, Norway, Sweden, Switzerland and Finland; Australia, New Zealand, Israel and South Africa),
EEU=Easter Europe; LDCot=Developing Countries excluding Africa, OBC=Official Banking Centers; =International Organizations; NA=North Africa and SSA=Sub-Saharan Africa.

Source: Alemayehu Geda (2002)