PARAMETERS, PERMUTATIONS AND POLITICAL ECONOMY: ZIMBABWE 1973/83 - 1986/96

By Reginald Herbold Green[1]

Even the longest journey
Even the longest journey begins with the first step.

- Confucian Proverb

Government has produced this short-term plan designed to provide perspective and serve as a guidepost during the transition period.... An average real economic growth rate of 8 percent....target... based on an assessment of the economy's past performance, existing productive capacity and anticipated deliberate action by government....

- Minister B. T. G. Chidzero
Transitional National Development Plan 1982/83 - 1984/85,
November 1982

Freedom is the right understanding of necessity.

- Karl Marx

Weak world economic performance since 1979 and successive droughts in Southern Africa since 1980 have sharply reduced the rate of Zimbabwe's growth.... The world economy, however, turned sharply upwards in 1983.... Growth prospects for Zimabababwe's foreign trade sector - and through it for the entire economy - are thus likely to be enhanced... But the ability to capitalize upon them depends crucially upon the extent to which output surplus to domestic requirements can be generated for export... As the World Bank's Africa Report concluded... a programme of policy reform can be sustained only through increased flows of concessionary aid.

- Zimbank, Economic Review,
March 1984

Strategy and Structure

Parameters - that is ratios representing basic economic structural relationships - are critical to economic strategy. They set bounds both on what is necessary and on what strategies a state can adopt with any chance of achieving the intended objectives.

These fairly brutal realities do not seem to be adequately perceived operationally by analysts, policy formulations or political decision takers. Neither simplistic reduction of ratios to a Harrod/Domar capitalist industrial growth path model, a F'eldman socialist industrial planning model nor one of their more mathematically sophisticated turnpike model descendants comes to grips with the parametric constraint issues. Either the simplifying assumptions integral to such approaches remove the critical issues from the model entirely or a more complex set of initial assumptions remove the basic questions from the model - rendering its results trivial in a policy and praxis sense - while failing to focus attention on their realism, correctness and implications. Similarly to speak of structural change and to demonstrate that a different set of institutional, technical and sectoral balance parameters would release constraints is either optimism of both the will (sound enough) and of the intellect (much more dangerous) or a simple failure to see the operational problem unless it is grounded on a recognition that one must start where an economy is with its present parameters and constraints and a reasoned, feasible process of altering those parameters and relaxing those constraints. Economic strategy is about making history but not about making it without regard to what has gone before and accumulated to be the present. Doing that of course may well make history in one sense but very far removed from the history the technical or political designers of the strategy intended.

This failure to address parametric relationships adequately has had particularly serious consequences in Sub-Saharan Africa - in some cases (e.g. Ghana) for a quarter of a century and, in all but a handful of countries, since 1979. Clearly it is not the only factor - corruption, waste, technical mistakes, political goals which placed little stock in economic development or growth whether defined in standard capitalist, welfare state, basic human needs or orthodox socialist terms, civil and external wars, drought and external economic shocks have all been relevant in varying degrees to the

performance of virtually all SSA economies. However, the failure to analyse and to act on the complex, objective nature of economic necessity and of the actual (or reasonably projectable degrees of freedom available) has been an important element in economic non-success (whether sustained or following a period of substantial success) and is one which it is within the power of SSA states - including Zimbabwe - to transform.[2]

The reasons the problem of failing to recognise and act within parametric constraints has become more widespread, more evident and more seriously damaging in Africa since 1979 appear to be threefold:

1. in a general sense key resources - both absolutely and relative to demands - have become scarcer. This increases the likelihood of attempting more than is possible especially if human resource constraints have been somewhat relaxed by education, training and institutional capacity development and/or past strategy/policy related successes have led to a belief that change and development are possible and are possible at an ever accelerating pace;

2. the nature (and tightness) of constraints within existing parametric ratios has been significantly altered (in general for the worse) by changes in the world economy since the late 1960s and, especially, since 1979. This is particularly true in respect to foreign exchange constraints related to import to production and import to fixed investment ratios. How binding these are depends substantially on the nature of global export and capital markets as well as on domestic ability to produce and to generate (previously) plausible investment opportunities;

3. internal political economic constraint alterations - especially where these required participation in economic progress or protection from economic decline of previously excluded groups, fractions of sub-classes with no comparable freedom to cut the existing take of previously privileged groups, fractions or sub-classes without severe production losses - have in some cases substantially increased the economic results which appear to be necessary - and are treated as such in decision taking - exactly when the constraints on achieving even past results have tightened.

Using Parameters: No Go Signs And Priorities

There are two applied uses of parametric analysis. The first to put it at its harshest is to identify what is not possible. e.g. if the overall ratio of imports to GDP in a small economy has been reduced to 20-30% overall and 50% for Gross Fixed Capital Formation and that ratio has been relatively stable for some years the viability of a short term strategy calling for a rate of GDP growth twice that of imports and a parallel rate of growth of investment twice that of consumption is nil unless very favourable specific export or capital inflow possibilities can be identified (or a very large initial external balance surplus and/or massive external reserves exist).

In one sense this justifies the perception of economics as the gloomy science. In another, it does the reverse. Economic strategy and policy are ultimately about who gets what, where, when, why and how (e.g. small peasant farmers; incomes - food - basic services; on present holdings - after resettlement - as wage earners outside agriculture; over what time frame; in what production relation's structure or sub-mode; via market prices, administered prices, wages, profit sharing, public input and services supply). In order to pursue them even moderately efficiently two sets of information are needed:

1. how much is available (at any point in time and over time) to be allocated;

2. what priorities for allocation are.

Neither by itself is a sufficient condition for a strategy - even in its own terms - to be reasonably efficient in operation. Priorities without ceilings on total allocations result in resolving contradictions by adding on additional resource uses; data on what is available without priorities for allocation may help avoid gross imbalances but are likely to lead to ad hoc or first come, first served solutions which are far from the best attainable (especially over time).

It is tempting to argue that parametric analysis should answer the first question and political economic struggle and praxis the second. Such a division does embody one reality - technical analysis is quite inadequate as a social or political decision making tool while social and political decision

taking unconstrained by technical information on what is not, and what is, possible is likely (often for the best of reasons) to attempt the former and thereby fail to achieve the latter.

However, the relationship is not as simple as that:

a. resources and resource constraints are not - especially in the short and medium term - fully homogenous and interchangeable. How much there is/can be to be allocated is in part dependent on specific questions of what (e.g. more staple food or more wine, more basic education or more postdoctoral science research), where (housing in Harare or in isolated rural areas), who (large commercial or small peasant farmer), etc;

b. some (indeed realistically all) answers to who, what, why, when and how do affect present and future totals available to be allocated negatively and/or positively. The most well known case in point is that more GFCF (and less consumption) now will - ceteris paribus - allow more production (however allocated) later.[3] Like most well known economic truths this oversimplifies but does capture certain key aspects of reality. But there are also sectoral, class and other implications, e.g. small peasant farmers in SSA tend to have lower import to output ratios, lower cash costs per unit grown, higher ratios of employment and labour income to output and greater need for (rather different) supporting services and infrastructure than large commercial farmers. A peasant oriented strategy therefore may very well have quite different parametric constraint and total output implications than one centred on large commercial farmers;

c. as the first two considerations suggest, the relationships are in fact inter-relationships and the practical way of taking both the availablility and priority aspects into a decision taking process is an iterative not a undirectional, one for all one.

Using Parameters: Relaxing Constraints

Examining permutations within parameters can make increased production, and production patterns more attuned to allocation priorities possible in the short run. For example in an economy in which production is held to 75% of capacity by foreign exchange parametric constraints and GFCF has an import content double GDP as a whole, generalised attempts either to raise GFCF (especially if NFCF is significantly positive) or to raise the ratio of savings to GDP are likely to prove counterproductive. Present GDP will need to be reduced absolutely and while future capacity will grow more rapidly future output will grow less rapidly or even decline.

However, as the example illustrates, in the short term parametric constraint based analysis can be seen as making the best of what is. In the context of a developing economy what is tends to be widely - and realistically - perceived as highly unsatisfactory. In the context of SSA today not simply is that so but, the implications over time of what is for what will be are even less acceptable. On the 1979-85 record, present structural relationships and ratios in a majority of SSA economies require an overall rate of growth of GDP less than that of population.[4]

Therefore for medium and long term strategy and policy formulation, a critical role of parametric analyis is identifying which ratios need to be altered if constraints are to be relaxed. If the primary constraints are external balance related then either lower import to GDP ratios or higher export to GDP ratios (or both) are critical to higher capacity utilisation, growth rates (of overall output or basic services or enterprise surpluses) and employment. If the overall import/GDP ratio is low and the economy small the main thrust may well need to be on the export side and may well actually raise the import/GDP ratio. From that point in analysis two further questions arise:

1. how can the changes to relax constraints be accommodated within existing constraints (concessionary bridging finance, fortunately or unfortunately, being available only in limited amounts and windfall export oriented GDP growth spurts - however well managed - tending to be limited in duration)?

2. What are the specific structural and item potentials for export oriented production on the supply side and what are their prospects (and the potential for national policy altering them) on the demand side globally and in particular markets?

Macro - Sectoral - Micro

Basic parameters are at macro or sectoral level. In principle they can be computed at sub-sectoral and micro level. However, there are four problems with such an exercise:

a. beyond some point a proliferation of parameters will lead to more fog than light;

b. sub-sectoral and micro parameters may not be very stable over time for exogenous and/or endogenous reasons;

c. the time and professional personnel required to compute a complete set of relationships down to micro level is mind boggling (especially as it would not provide an adequate base for project analysis even when/if done);

d. at least for SSA (including Zimbabwe) the data do not exist.

Macro-parameters can, strictu sensu, provide answers only to macro questions. In respect to determining what is possible/impossible at any one time and what routes forward within or by altering parameters are possible, the macro level is critical. It is in that sense that the World Bank is quite correct in arguing that SSA has been hampered by inadequate applied macro economic analysis informing political economic strategy and policy and to support the Bank's view (which it is somewhat coy in expressing) that real and structural (as well as monetary and pure) analysis needs greater attention within macro analysis and policy (a view which the IMF does not share).[5]

However, in proceeding from macro strategy and policy to particular decisions it is not possible to operate solely on the basis of macro or even broad sectoral relationships. These are critical to identifying where to look, e.g.

if the overall import/GDP ratio is 25% but the direct plus indirect import/GFCF ratio is 50% then the inputs into GFCF (from building materials through structural steel and machines to contracting and design, as well as heavy maintenance and spares) are flagged as sub-sectors for examination in seeking to relax foreign exchange constraints. Beyond that point the follow up probably needs to be less formal - at least at present. This is especially true in cases in which one project would affect several parameters - e.g. expanding and diversifying a steel mill to incease exports and improve its interface with domestic GFCF, substituting imported hydroelectric for additonal domestic thermal power to reduce the incremental GFCF/GDP ratio and to increase export potential via balanced (counter) trade expansion agreements. So long as a coherent, iterative process is sustained and the parametric constraints (and their relaxation) kept in sight, the need for computing an infinite number of relationships down to micro level is not self evident.

Parameters And Political Economy

From a political economic perspective two broad criticisms of a parametric approach arise:

First, that it does not take into account political economic reality either in a static or a dynamic sense; and second, that it is inherently status quo oriented - echoing the IMF in one variant of this line of criticism.

The first criticism is partly false and partly based on a misunderstanding (whether by the advocate or the critic) of what parameter based analysis can expect, or be expected, to achieve. Such analysis does contain - indeed focuses on - certain aspects of political economic reality. The need for interaction between allocation priorities (basically outside, albeit interacting with, parametric constraint based approaches) has already been discussed. Similarly it is a sound precept that to change reality one first needs to understand it - political economy is one of the arts of the possible and neither will, perspective nor altered class relations can either totally or instantly alter those aspects of the possible underlying structural ratios. What is true is that there are aspects of political economy which do not lend themselves to this analytical approach (or tool kit) and which may have an

impact on the ratios, e.g. a personal income ceiling of $2,000 per household would have a marked effect on demand patterns, useable capacity (capital stock), import/GDP and export/GDP ratios and, in principle, ones which could - and, since they are not obvious or simple, would need to be - estimated and then used in testing resource availability and makeup relative to allocational priorities. Use of parameters to identify the limits of the possible and of how they can be changed over time is a partial, analytical or technical approach, it is neither an ideology, a paradigm nor an all encompassing economic theory.

Like input-output analysis (which in one sense is a sub-category of parametric analysis), this approach is not in itself linked to any one political economic paradigm or ideology. Its only internalised normative values are orderliness and avoidance of waste (whether from attempting the impossible by overallocating available resources or failing to attempt the possible by achieving less in respect of a given set of priorities than would be possible with a different output and relative balance of satisfaction of the priorities mix). Arguably waste is a greater political economic evil in a socialist paradigm for the development of a poor country than in a capitalist one - certainly President Nyerere's branding it as a sin suggests that he would support such an interpretation.

It is quite true that concentration on limitations can lead to such great caution as to fail to attempt what is possible - conservatism in a non-ideological sense. However, it is equally true that a more common problem in SSA today appears to be to attempt the impossible (and to fail to attain it) because its impossibility is not perceived. To attempt the impossible, curse fate (or history or God) and die unsubmitting certainly can have a romantic grandeur to it and may under extreme circumstances be the least bad course of action available. But it can hardly be the normal pattern of applied economic analysis or strategy and is particularly unsatisfactory when the analytical and decision taking practitioners are by no means the principle losers (or in the case of policies leading to extreme food shortage, the human beings dying).

That parametric analysis is a version of the IMF's analytical and modelling approach is a rather weird criticism. The IMF's basic model operates in monetary not real parametric relations and, indeed, assumes that proper

adjustments in the macro monetary sphere can achieve massive and rapid relaxation of external balance, employment and food supply constraints. A parametric approach based on real structural relationship ratios is very near to being the opposite of the IMF's. Indeed one limitation of the approach is that it does not specify when price alterations would be appropriate and have a significant impact on output and its allocation (and therefore gives little or no evidence on the costs of not making them if they conflict with specific political economic priorities). For example the relationships may gibe some indication of a probable impact of the price of foreign exchange on export/GDP ratios but very far from a precise costing or an indication of what changes in those prices (exchange rates) would yield what results in terms of exports and, more particularly, whether these would to a significant extent represent additional versus shifted output. Therefore, it would be a more valid criticism to argue that at all levels (macro, sectoral, sub-sectoral and micro) this approach needs to be complemented by analysis of the probable directional and quantitative impact of specified monetary and price changes.[6]

Modelling

A parametric approach is by definition based on measuring a number of key structural relationships over time and using these ratios to test what is possible at any point in time and what would be possible over time were specified changes in these ratios to be achieved. Therefore by definition it requires quantitative economic modelling.

Modelling requires data, selection and a working set of ideas about what relationships are critical and stable (subject to modification if the data require[7]). This is not because an economic model falls under one dictionary definition of model, "a small imitation of the real thing", but because simplification is necessary if understandable results are to be achieved and especially if they are to be achieved in time to be of use in testing strategy and policy proposals and in informing decisions. In practice further constraints are imposed by what data, of what accuracy is available over what time periods and by the degree and frequency to which there have been exogenous (to the economic structural relations and relationships albeit not necessarily to the country) shocks.

Very few such models have been constructed in Africa. In the course of its cooperation with the African Center for Monetary Studies in relation to African external debt and its management, UNCTAD commissioned six case studies: Guinea - Bissau, Ghana, Madagascar, Kenya, Ivory Coast, Zimbabwe - based on use of the UNCTAD econometric models for these economies as organisational and projection matrices.[7]

It was hoped that these exercises would enhance the capacity to utilise the models for direct policy formulation and evaluation purposes, provide projections of viable economic scenarios (with special reference to external balance, debt and debt service) and facilitate development of external debt management systems. Unfortunately the results fall short of hopes - partly because of limitations within the models but more because the models and projections, whatever their limitations, reveal the basic structural weaknesses (in some cases macro unviability without radical structural transformation) of the economies studied.

Zimbabwe was seen to pose special problems because of strategic priority shifts at independence. The independence strategy has been a high growth one for a very specific reason: maintaining the operational efficiency of SSA's most complex and technologically sophisticated economy was perceived to depend on retaining large numbers of Europeans over the next decade and, therefore, of limiting declines in their real income while national politacal economic goals and political stability required significant increases in services to and real incomes of the African citizens. To reconcile these requirements with internal balance was believed to require an 8% GDP growth rate and to marry that to external balance a high export growth and a high net foreign borrowing rate.

In fact Zimbabwe - at least substantially but not wholly because of new protectionist barriers to its exports and two successive droughts - had by 1982 slipped to negative GDP growth, high inflation and wide external imbalance. Projections in the UNCTAD study suggest severe difficulties in restoring growth consistent with viable external balance and debt management barring sharp external economic environment improvement.

A scenario positing a four year 3% GDP growth consolidation period (exports 4%, imports 2.5% - the latter despite the fact that present levels are below

those essential to adequate utilisatiton of existing capacity) and a subsequent 6% GDP growth (exports 7.8%, imports 6% - the former implying sustained, high OECD growth) pattern raises debt service from under 10% in 1981 to 23 to 24% at the end of consolidation and to 27 to 43% at the end of nine years. The lower estimates assume 85% on 8-9% interest (40% of which over 30 years including 10 years grace) and the higher only 45% at those rates with 50% at 12% interest (and 7 years duration including one years grace). At the higher external finance cost levels neither is the debt service ratio manageable (especially as it continues to rise even at the end of the period) nor would the implicit 350-400% increase in external debt be available. The lower cost ratios seem somewhat too optimistic about overall availability of semi-concessional finance and, its average grace and maturity periods.

Assuming the 85% semi-concessional finance were available and raising export growth to 7.8% in the consolidation period and 10.5% thereafter (which seems to assume a world iron and steel boom or a remarkable upturn of the other independent Southern African economies' external balance positions and, therefore, ability to import from Zimbabwe) were possible allows restoring GDP growth to 5% during consolidation (with 4.5% import growth) and 8% thereafter (with 10.5% import growth. At the same time the debt service ratio is held to 15% at the end of consolidation and 19% (basically static) thereafter.

This scenario is probably plausible in terms of political economic stability and investment/productivity "absorption" constraints. Were it attained then the credit - albeit on slightly poorer terms - might well be available as Zimbabwe would look (and be) a good risk. The import/GDP growth ratios are plausible. Unfortunately the export growth requirement is not - 1982/90 is hardly a propitious period for iron and steel and products led achievement of Newly Industrialising Country (NIC) status nor do the other independent states of SSA (and more particularly SADCC plus Kenya) have foreign exchange earning growth prospects to make a regional export led growth scenario at this pace seem feasible.

These UNCTAD commissioned models and studies do not provide detailed external account/domestic production parameters. Nor have they been used in the exercises reviewed (with the exception of Kenya[8]) to identify priorities so much as to project what combinations of rates of change would be internally consistent. What they do demonstrate is that the key constraints are external

balance and import capacity ones, that these - except in the very short-run - are exacerbated by unselective external borrowing and that given currently plausible export growth rates and historic import/GDP ratios viable recovery scenarios are either implausible or only marginally practicable and at risk from even moderately worse than projected external contexts and/or shocks.

A much more elaborate exercise was conducted for the Group of 77 by UNCTAD under the leadership of Sidney Dell, Edmund Bacha and G. K. Helleiner over 1982-84.[9] Its primary purpose was to assess constraints on and possibilities for adapting to changed international economic environment both historically (primarily 1980-83) and in the medium term (to 1990). The Zimbabwe case study by X. M. Kadhani and R. H. Green[10] provides the data base and broad perspectives for the present study.[11]

Key Constraints: External Balance, Employment, Food

For most SSA economies external balance, employment and food supply are the key constraints - the former in the sense of limiting real growth and leading to severe internal imbalances, the second in the rather different sense of creating barriers to full use of productive resources and therefore to equitable participation and distribution patterns and the third by exacerbating the results of the first two and placing particular burdens (up to and including death) on poor people and vulnerable groups.

The traditional analysis of the road to current external account imbalance starts by positing unsustainable increases in domestic consumption (and/or of augmented investment not balanced by reduced domestic consumption spending and/or by increased net long term capital inflows) and in imports. From this starting point it is relatively easy to prescribe cuts in both domestic consumption and in imports and - perhaps less uniformly - increased domestic investment and savings together with higher medium to long term foreign capital inflows.

However, even gross external and internal imbalances can come wholly or dominantly from other causes:

a. a fall in the terms of trade reducing earned import capacity (and real

national command over resources);

b. a rise in the real cost of external capital with similar consequences;

c. real export declines or stagnation relating to sluggish growth of world - or main export market as to country or commodity - trade;

d. sectoral or micro shocks, especially weather, which sharply reduce production and exports (and/or require increased imports);

e. shifts from consumption to investment if the latter has a higher import content than the former and/or if attempts to compress consumption are strongly resisted and result in higher prices rather than a shift in actual resource allocation between consumption and investment.

f. structural characteristics of the economy which - taken together with world economic structures and trends - result in a low incremental export to GDP ratio and thereby cause even modest GDP growth to become unsustainable.

Under these conditions it remains true that compression of GDP will reduce external Current Account Deficits and, perhaps, alleviate some aspects of the consequential internal imbalance. It is however much less obvious that:

1. such a restoration of external balance can achieve a socio politically viable macro economic or distribution position, the lack of which is likely to prevent restoration of internal balance;

2. reducing consumption in favour of investment affects primarily achievable future GDP growth rather than present output levels; or

3. rigorous contraction is economically efficient in terms of future GDP growth and of exports for the economy concerned and also for the growth of world trade and the global economy.

The Case of Zimbabwe

Zimbabwe - while clearly showing some signs of conventional overheating in 1981/1982 (as in 1973/74) - would appear to fit the case of imbalances whose causes do not lie basically in rapid demand expansion. In 1981 real output per capita stood at 94% of its 1974 peak. Over 1973-1984 real GDP growth averaged 1.5% versus about 6% over 1965-1973 and lagging a population growth rate of the order of 3.5%[12] with capacity utilisation in the opening year 97%, in the closing one 84% and 85% for the twelve year average. These performances hardly suggest sustained overheating or a dash for growth nor do they offer any very unambiguous evidence that more fixed investment leading to higher output potential would have raised the actual growth rate as opposed to reducing capacity utilisation, consumption and achieved output still further.

A quick review of 1973-1983 Zimbabwean (over 1973-79 strictly speaking Rhodesian) economic statistics strongly suggests that external events- especially in respect to trade and borrowing opportunities and terms but also to weather - have dominated both domestic economic performance and, with a lag, domestic economic policy. Therefore, analysis of the Zimbabwean economy's performance over the past two decades and especially since 1973 can perhaps most usefully be begun by examining its international economic performance and parameters and moving from them to domestic economic structure, performance and policy. This is not to deny that there is a feedback from domestic policy and performance to international but to suggest that the basic causal relationships run in the opposite direction.

The combination of low savings rates, low average actual output growth, low capacity utilisation and recurrent severe problems in constraining external current account deficits (CAD) to manageable levels raise questions as to whether and how domestic savings ratio increases would have raised actual output. Given the higher ratio of direct and indirect imports to gross fixed capital formation than to other elements in GDP, it is necessary to examine critically the proposition that higher domestic savings ex ante would have reduced both consumption and actual output, possibly to a degree resulting in little change in ex post savings or capacity growth.

This proposition is not the same as support for government recurrent budget

deficits - reducing such deficits and (pari passu) private saving might be an appropriate policy response for domestic balance and distribution reasons even when an overall increase in the ex ante savings ratio target would be undesirable.

Employment: Real and Definitional Problems

Employment growth rates in SSA have tended to be substantially below those of GDP if measured by recorded wage employment. When measured by economically active proportion of population the results are less clear, partly because the definition of economically active for small scale agriculture[13] is such as to distort the overall picture when there are shifts in the size of that sector relative to the economy as a whole and partly because data on self employment of all kinds are fragmentary, discontinuous and of low reliability. Open unemployment has increased but is limited by the fact that in SSA the very poor cannot afford to be unemployed.

However, the apparent ability of the small scale agricultural and non-agricultural "informal" sectors to act as sponges to sustain the ratio of economically active persons to population is not as reassuring as it may seem at first glance. The land constraint on small scale agriculture in many SSA economies is such that the marginal productivity of new entrants - whether by overcrowding or by entry onto submarginal land - is often below the absolute poverty line. In some cases the result of more intensive use is clearly severe ecological damage notably - but not only - in the Sahel, northern and north-western Ethiopia and the western Sudan. "Informal" sector self employment is unlikely to be very productive in the context of a stagnating or slowly growing economy - in the services sector it may well exhibit properties analogous to small scale agriculture (e.g. dividing up an only maraginally increased volume of retail business and 'expanding' into providing services saleable only at very low prices and worker incomes prices). Therefore, the priority for expanding employment - defined as wage employment plus self employment productive enough and fairly remunerated enough to meet basic household consumption needs - is a very real one.

Again the Zimbabwe research[14] suggests that the employment constraint in Zimbabwe is a severe one. Real per capita consumption of Africans fell

steadily (more rapidly than GDP per capita) from the early 1970's through 1978. After a brief sprint over 1979-81 it has fallen again and is probably not significantly above 1970-73 levels. Wage employment has over 1973-84 exhibited three characteristics:

a. a 1% a year decline related to growing labour displacing increases in capital intensity and/or to improved quality of the labour force (as both education levels and average length of service - at least to 1980 - have increased the second possible cause may be significant);

b. an increase (decrease) on average equal to one half of the previous year's change in GDP;

c. a downward shift in the absolute level (with no very evident trend shift to date) related to sharp wage and salary increases over 1979-81 and concentrated in large scale agriculture where the increases were longest plus, perhaps, a partial reaction in 1984 when employment stagnated rather than falling as would have been expected.

Genuinely productive self employment data are non-existent. However, until 1980 average per person output in small scale agriculture was falling rapidly while the "informal" sector's real output can hardly have been growing at the over 5% a year apparent increase in persons dependent on it.

For average employment to grow as rapidly as population would apparently require a 9% annual rate of growth of real GDP (.5 times 9% minus 1%). External balance, savings and sectoral constraints suggest no such rate can be achieved (or at any rate sustained) in the forseeable future. Increasing labour intensity in the medium and large scale portion of the economy does not seem likely to raise wage employment growth more than - say - 1% a year. Therefore, attention needs to be directed to how reasonably productive "informal" and, especially, small scale agricultural productivity could be raised to allow growth rates of economically active persons in these sectors of - say - 4 to 5% a year and of overall output by them of - say - 5 to 6% a year.

Food Availability: Trends And Crises

SSA suffers from declining availability of food per capita. Food output per capita has been on a declining trend for at least a quarter of a century in the region as a whole and in a majority of countries.[15] Thus the nearly ubiquitous post 1979 declines do not represent something new - as they do for GDP per capita - but a continuation of an existing trend relationship. That they have led to more crises - including mass starvation when war, extreme poverty or governmental imcompetence/lack of priority aggravated the basic food shortage - in the years since 1980 than ever before (including the 1970s Sahel and Horn droughts) is in large measure the consequence of the long standing (or more accurately long falling) trend which has increaased the numbers of vulnerable people and areas and decreased the margins above severe malnutrition or starvation available to cope with seasonal and cyclical fluctuations below the trend.

In principle there are alternatives to domestic food consumption, i.e. commercial food importation and/or food aid. However, use of the former - which was widespread over 1974/75 in even poor economies determined to avert death from starvation or extreme malnutrition facilitated diseases (e.g. Tanzania) - is increasingly impractical because the forex constraint is becoming increasingly binding. It is still a viable option for Botswana (whose increasing emphasis on crop husbandry presumably relates rather more to rural income and productive self employment than to either macro food supply or forex constraints) but for few - if any - other SSA economies.

To date food supply has not been a constraint on the Zimbabwe economy. However, that fact should not give rise to complacency about the future. Over 1965-1980 the growth of agricultural production was about 2% a year, i.e. well below the rate of growth of population. The reason this did not result in a food supply crisis in the late UDI period was that the balance between export/industrial and food crops shifted in favour of the latter (in part because of sanctions' effect on prices received and - at least in the case of tobacco - quantities saleable). In 1984 substantial maize imports were necessary.

The unsatisfactory trend has been obscured by 1980-81 experience. 1981 was a record crop year for four reasons:

1. price incentives;

2. relaxation of constraints on imported input and equipment supply;

3. initial extension of access to support, infrastructural and commercial services to African farmers;

4. abnormally favourable weather.

The realisation that medium term food supply problems existed - especially if livestock became more grain intensive - grew over 1982-84. Hopefully it will not again be lost to sight because 1985 is again a record harvest year - and one of above average weather.

In the case of food supply, however, projection of the pre-Zimbabwe relationships on either the production or demand side is more than usually risky:

1. the extension of access to support services, infrastructure and commercial services to African farmers has changed the output capacity of those farmers (in the communal as well as the settlement areas) dramatically and is continuing to do so;

2. to the extent that Africans have higher real cash incomes and/or ability to grow food, a higher rate of growth of demand for food (and possibly of the composition of demand) is also likely.

The former may well have raised the trend rate of growth from 2% to above 3% but the latter makes a rate of growth of demand for food significantly above that of population a distinct probability. This does suggest that the gap between agricultural output and food demand growth trends is narrower than during the late UDI period - i.e. the food constraint has been somewhat relaxed, or at least postponed -, in itself a notable achievement and one demonstrating that political economic priority shifts toward egalitarianism can have distinct positive output results. It is not, however, enough to demonstrate that this constraint will not become binding by the early 1990s[16]

The balance of this presentation will consist of a brief review of the Zimbabwe economy since UDI and especially over 1974-83; a more detailed analysis of that period and a consideration of the parametric relationships/constraints revealed and some of their strategy/policy implications.

Zimbabwe - An Introductory Overview

Any economic analysis of Zimbabwe needs to take account of the very special conditions arising out of the illegal declaration of independence (Rhodesian rebellion) of 1965 and the accession to independence in 1980. The former led to certain constraints on external trade and financial flows while the latter had significant positive effects on both counts. Further there are some significant discontinuities arising from the very divergent political economic perspectives and priorities of the Rhodesian Front and of ZANU(PF).

However, there are also very substantial continuities in economic constraints, parameters, performance and - to a surprising extent - policies. Many of the constraints confronting the Smith regime in 1973-75 and those facing Prime Minister Mugabe's government since 1982 are remarkably similar. So too are some, though by no means all, of the policies seriously canvassed and/or adopted. It would be a mistake to suppose that the response to economic structures, parameters and constraints is totally independent of the political economic stance of a state's leaders. The 1975-1978 pattern of current external account balance, falling real GDP, recurrent budget balance, falling real African wages and rural incomes, falling real fixed investment and stable or rising per capita European consumption per capita was a result quite consonant with what the Smith regime saw as its dominant concerns. It would not be so today for ZANU(PF). But it would be an even greater mistake to assume that political economic will has total freedom to override international and domestic economic structures and parameters - especially in the short or medium run.

Over 1964-1973 Rhodesia (as it then was) attained a growth rate of about 6% a year. The initial shock of economic sanctions and other costs of the illegal declaration of independence were fairly rapidly overcome and an altered pattern of inter and intra sectoral growth actually produced a better

performance than that of the late 1950s and early 1960s. However, GDP growth appears to have exceeded that of capacity and a substantial surplus in capacity at UDI - especially in manufacturing - was used up by the early 1970s.

Rhodesia was very significantly affected by the economic events of 1973-74. Because they coincided with domestic overheating (97-98% capacity utilisation) and a highly import intensive expansion of GFCF, they led to a massive CAD. The domestic response was in a sense an ultra orthodox demand cutting strategy albeit one centred on achieving a visible trade surplus and near balance on current account rather than on domestic demand management per se and one eschewing use of active interest or exchange rate policies. Its effects on GDP, GFCF, capacity utilisation and income distribution have been noted above.

In 1979 there was a small GDP recovery but a continued decline in both GFCF and domestic savings. Somewhat ironically this was the result of the intensified liberation struggle. Military spending increases forced the recurrent budget into deficit despite Reserve Bank and Treasury policy, and thereby raised both personal and public consumption and the CAD. 1980 was a transitional year - to independence, to an expansionist economic strategy, to higher capacity utilisation and to rapid increases in internal and external imbalance as signalled by cost of living and CAD increases. The constraints were not fully perceived (nor binding in the short run) because of an opening 24% surplus productive capacity, reversal of much of the sanctions damage to the terms of trade and much greater access to (and willingness to draw on) external sources of capital.

1981 was a boom year - in some ways reminiscent of 1973-74. Overheating was apparent in some sectors, the terms of trade turned sour. Further a record grain crop raised rural personal incomes and investment (by the state) in inventories thereby adding to the inflationary pressure from wage increases and a continuing recurrent budget deficit. By mid-1982 both the CAD and government recurrent deficits were perceived as unsustainable and policy became restrictionist. Combined with bad weather and continued terms of trade deterioration at least through mid-1983, the restraints led to GDP falls in 1982 and 1983 (and at best nil growth in 1984) and GFCF decline in 1983 and 1984 with limited changes in domestic savings and very partial restoration of the CAD to manageable levels. Unlike 1974-1978, active interest and exchange

rate policies were instituted[17] and upper income group real personal consumption was treated as the least - as opposed to the most - necessary component of expenditure on GDP to defend.

1965-1973: The UDI Boom Years

In 1965 the Rhodesian Front regime in Southern Rhodesia entered into rebellion with a Unilateral Delaration of Independence. This was intended to preserve settler political power and settler/company economic dominance. The initial result was that international trade sanctions were imposed, and to a degree enforced,[18] exacerbating the export marketing problems already created by the loss of fully tariff and quota free access to the Botswana, Malawi and Zambia markets. As a result in 1966 GDP fell.

However, the necessity of reorganizing the economy to regain a viable external balance - in the absence of significant access to external financial flows which were even more inhibited by sanctions than was trade - and to sustain the "Rhodesian way of life" combined with the presence of substantial surplus capacity to allow growth led to a much more targeted strategy of state interventionism resulting both in structural change and in relatively rapid GDP growth over 1966-1973.

Agricultural balance was shifted toward maize, sugar, cotton, tea and coffee as well as meat and away from tobacco (the crop whose market access was most affected by sanctions) as a result of a combination of passing on part of border price changes and of protection pricing for domestic food and raw materials backed by access to credit and some export subsidies.[19]

Highly favourable treatment was provided for mining leading to substantial expansion by foreign firms especially in respect to nickel, ferrochrome, asbestos and steel. Similarly exchange control/import licensing provided incentives to manufacturing in general and to intermediate goods and to metal products and engineering in particular. They allowed a shift in the domestic terms of trade in favour of manufacturing. This shift did not raise sectoral surplus or real wages. Therefore it can be taken as representing the real cost of import substitution in manufacturing. Prior to this period however, the internal terms of trade were 'biased' in favour of agriculture so that

there was no general "allocation efficiency" case, even in the short run, against this shift.

The central economic policy issue was perceived as achieving a financeable CAD with a trade surplus (with a large visible goods surplus more than offsetting a moderate non-factor services deficit), limited factor payments and remittances and moderate external borrowing (largely from or via the Republic of South Africa). This strategic focus gave rise to:

a. detailed BOP projections linked to macro-economic forecasts to identify potential CAD levels;

b. detailed foreign exchange allocation machinery to hold down import levels;

c. fiscal, credit and wage policies designed to back up the forex allocation system by avoiding upsurges in demand;

d. increasingly sophisticated parallel marketing (sanctions busting) to preserve global market access through intermediaries (albeit at a substantial cost - perhaps 15% on imports and 20% on exports by the late 1970s);[20]

e. servere constraints on factor payment and remittance outflows which both built up blocked balances (forced foreign reinvestment at - then - low interest rates) and induced already present foreign firms to engage in substantial reinvestment based on the low opportinity cost of such programmes when the funds were, in any event, not remittable[21] combined with the fact that domestic growth and parallel marketing of exports provided prospects for profits on these investments;

f. increases of the power of the Reserve Bank and the Treasury to control forex use, government recurrent account balance and specific price - tax - financing - ownership interventions in directly productive sectors.

Ironically, sanctions therefore both provided an incentive for systematic import substitution and gave access to foreign funding (unremittable external factor earnings) to carry out manufacturing, mineral and to a lesser extent

agricultural expansion. The restriction on external factor payments was critical because, even including non-remitted foreign factor earnings domestic savings hovered between 15 and 20% of GDP or slightly below the not very high GFCF rate. The relatively low rate of growth of capacity - perhaps 4% a year - was consistent with the higher - about 6% - GDP growth rate because of the initial 20-25% surplus capacity which had fallen to 2-3% by 1973-75. In manufacturing the surplus was in capacity initially designed to serve the Federation market while in agriculture it was partially in un or underutilized land whose more intensive cultivation (in large part by capital and energy intensive techniques including pump irrigation) became viable at post-UDI price ratios.

Late in this period serious attempts were made to step up investment partly to avert the danger of hitting the capacity ceiling, partly to raise exports (particularly of steel and ferrochrome) and partly to reduce import dependence further. However, these led to overheating (as exemplified in price changes) and taken together with the 1973-74 petroleum price changes and 1974-75 collapse of metal prices resulted in an unmanageable rise in the CAD.

1974-1979: Recession and the End of Rhodesia

The 1974-79 strategy of the Reserve Bank and Treasury was to regain external balance. While reduction of inflation, limitation of consumer subsidies and maintenance of government recurrent account balance or surplus were to some extent targets in themselves, they - indeed all aspects of macro-economic policy - were primarily tools for reducing the current account deficit which ballooned from $ USA 5 million in 1973 to $ 165 million in 1974 and $ 230 million in 1975 (see Table 9). Their success in their own terms is indicated by the fact that over 1976-78 the Current Account Surplus averaged $ 13 million. This was achieved despite steady erosion in the terms of trade which fell from 107.5 in 1973 to 100 in 1975 to 81.4 in 1978.

Their price is visible in the performance of GDP, GFCF, savings and factor shares (see Tables 1, 2, 6, 7). From a 1974 high of $ USA 3,331 million GDP in 1975 prices fell to $ 3,010 (by about 10%) in 1978. Per capita the decline was by over 20%. GFCF in constant prices fell by virtually 50% from its 1974-75 peak to 1978-79 or from nearly 25% of GDP to 14%. As a result

potential output growth which had risen to about 5% over 1973-76[22] fell to under 1% between 1978 and 1979 albeit the falling GDP meant that capacity utilisation fell from 97.5% over 1973-74 to 75% over 1978-79.

Employment growth, which was moderately buoyant through 1975 thereafter turned negative. With a 3.5% annual growth of population this meant very substantial increases in unemployment and in very low income "informal" sector self employment especially because African "tribal lands" were increasingly incapable of providing even subsistence for a majority of the households relegated to them. 1974-1979 exacerbated this problem rather than creating it since, as noted above, the employment growth trend is 1% annual labour shedding plus half the previous year's per centage output change so that a 9% GDP growth trend would be necessary even to maintain the ratio of wage and salary earners to population.

This is a major structural problem. 9% growth is unsustainable on external account unless and until the ratio of direct and indirect investment to GFCF can be reduced to - say - 30% from its present level of 56% (45% capital goods imports to investment plus 20% import component in the 'local' 55%) and/or the export growth trend can be raised to - say - 8 to 10% which would require major breakthroughs in exports of manufactures. Rapid growth in rural self employment at productivity levels allowing household consumption power (cash and self provisioning) comparable to the minimum wage would reduce the pressure for rapid growth of wage employment, but itself requires effective land procurement for resettlement and design of less infrastructural capital and service personnel intensive settlement programmes.

Within the consumption total the settler share rose. (Africans were the sufferers from real wage and employment falls and those most affected by the under 2% agricultural output growth.) As a result over 1973-78 it is probable that CAD reduction was bought at the price of falling output and investment, decreasing savings and falling African consumption but not at the expense of total or even per capita European consumption. This was a result consistent with the regime's priorities and its supporters' demands - growth could be postponed, Africans could be marginalized, the "Rhodesian way of consumption" was crucial to survival as its erosion would cause rapid contraction of the European skilled personnel and military manpower reservoir.

The tools used by the RBR and Treasury did not include either an active interest or exchange rate policy. The bank rate was constant at 4.5% from 1965 through 1979 and the Treasury bill rate actually fell from 3.83% to 3.57% over the same period. The exchange rate was devalued by about 16% relative to the USA$ from 1973-74 through 1978-79 but it is doubtful that the 10% odd changes in 1976 and 1978 were central either to policy or to performance. Nor can it be argued that limits on credit expansion to the enterprise sector were normally binding - with few exceptions the period was characterized by excess financial institution liquidity.

Forex allocation and government recurrent account surpluses were the principal control instruments. The former limited output (via the 20% non-capital goods import content in GDP which by 1973 was no longer easily compressible) and investment (via its higher direct capital goods and indirect import content of local purchases import content) as well as skewing the latter toward buildings and construction and away from plant and machinery. It also limited purchasing power through its impact on employment and profits while the maintenance of government recurrent account surpluses also depressed effective demand. As a result low growth in personal real incomes (declines for Africans) held demand for consumer goods down[23] in parallel with exchange control constraints on supply. Similarly declining profit rates paralleled by rising excess capacity lowered the animal spirits of entrepreneurs reducing investment decisions as well as funds for carrying them out thus reducing pressure on the limited forex allocations for non-strategic capital goods imports (which in turn limited enterprise demand for bank credit and made the falling domestic savings rate consistent with low interest rates and high financial institution liquidity).

Over 1973-78 the chimurenga (liberation) war had limited macro-economic impact. Some farmers were driven out, military service reduced availability of skilled - professional - managerial personnel, military spending held down that available for infrasturcture and for extending and upgrading health - education - agricultural services for Africans. But the main cause of the recession was not the military side of the war but the import and spending constraints imposed to regain and maintain current external account balance. In that sense the impact of sanctions on access to external finance, export volume and the terms of trade did have a more serious economic impact than has usually been recognised. Unfortunately it is also arguable that the greatest

impact was in reducing capacity growth and in postponing necessary import intensive maintenance and equipment replacement and thus has had to be paid by independent Zimbabwe since 1979.

In 1979 - ironically - the war produced a mild (1.4% on GDP) recovery despite clearly having become far more damaging physically in terms of disrupting agricultural production and diverting labour. The rise related to increased government spending resulting in a large recurrent deficit which reflated demand. A secondary cause was European and selective African salary and wage increases intended to reinforce and broaden the regime's support base. While profits rose, GFCF did not and savings fell. With the CAD swinging from a surplus of $ USA 46 million to a deficit of $ 88 million, allocations for capital goods imports were not to be had and the past recession and ongoing politico-military disintegration created a climate quite unpropitious for taking fixed investment decisions.

Independence, Transition and Boom 1980-82

Zimbabwe became independent in April 1980 after a brief formal return to crown colony status for the pre independence electoral period and the formation of the independence government. Initially the changes in economic policy amounted to relaxation of restraint - on imports, incomes, borrowing - more than specific changes of direction. In government spending they were concentrated on extending public services to Africans rather than in changing the structure of government activities.

Because with independence there was a once for all terms of trade recovery (with the end of sanctions) plus access to external finance (both commercial and concessional) and at independence there was 24% unused capacity and a low external debt (a heritage of Rhodesia's lack of access to most external capital markets), GDP grew over 11% in 1980 and over 15% in 1981 taking capacity utilisation back to 95%. Gross fixed capital formation - made possible by greater access to capital goods imports and to both domestic and external credit as well as by higher profits and encouragd by the rising profits and buoyant market - recovered from 13.7% of GDP in 1979 to 14.8% and 15.5% in 1980 and 1981 peaking at 17.5% in 1982. In constant price terms it grew over 60% albeit even then it was only barely over 80% of its 1974-75

level. Capacity rose by a little over 1% in 1980 (1979 GFCF) 1.5% in 1981, and just under 3% in 1982 and 1983 (1981 and 1982 GFCF respectively).

Wages and salaries for Africans were sharply increased both by scale changes and by removal of de facto job access restrictions while grower prices were raised sharply for the 1981 harvest year to provide incentives for both settler and African farmers. While taxes were raised and recurrent revenue rose rapidly, expenditure on health and education, on demobilisation and security and on increased wages grew so rapidly that - despite an unchanged stated policy of achieving recurrent balance or surplus - the government recurrent deficit was not only not closed but tended to widen.

Employment, which had fallen from 1.05 million in 1974 (40% up on its 1965 level) to 985 thousand in 1979, grew just under 3% in 1980, 2¾% in 1981 and under 1% in 1982. This very low rate given 1980 and 1981 GDP growth is probably explained by major minimum and low income wage increases - especially in agriculture where 1982 employment was 18% below 1979 versus a 19% increase in non-agricultural employment.

Taken together with rising capacity utilisation these factors prevented full reversal of the 1979 surge in inflation. Inflation was 6% in 1977, 16% in 1979, 13% in 1980, 9% in 1981 and 11% in 1982 as measured by the implicit GDP deflator.

Since the Zimbabwe dollar actually appreciated against the USA dollar in 1980, fell back to its 1980 rate in 1981 and was substantially devalued only in 1982 significant overvaluation built up threatening the viability of much of the mining sector, deterring growth in manufactured exports and building up large government export subsidy costs in respect to steel and agricultural exports.

Given 1982-84 devaluations, on a 1975-1984 purchasing power parity ratio the Zimbabwe $ was by 1984, 15-20% undervalued vis a vis the USA $ (see Table 5). However, as the latter is overvalued and the USA is not a leading trade partner, overall the Z$ is not self evidently either over or undervalued. Because of the 1983-4 collapse of the RSA Rand (now clearly undervalued on a purchasing power parity basis), there are specific problems in respect to that currency. RSA is a secondary export market and also a direct competitor with Zimbabwean manufacturing and agriculture not only in Zimbabwe but in key

regional export markets, e.g. Botswana, Malawi, Mozambique, Swaziland and Zambia.

Net factor payments and remittances increased steeply from Z$ 114 million in 1979 to $ 117 million in 1980, $ 146 million in 1981 and $ 269 million in 1982. In part this related to increased emigrant and pension remittances which more than offset the revival of grant aid, but dominantly it related to increased interest and dividend payments. The former flowed from rising interest rates and debt levels and the latter from an unsuccessful attempt to increase foreign equity investment by reducing limitations on dividend remittances.

The cumulative impact of this independence relaxation boom was to cause the evolution of a 1978 current account surplus of Z$ 46 million and a 1979 current account deficit of $ 88 million to 1980-81-82 CAD's of $ 198, $ 575 and $ 719 million respectively. Clearly the immediate post independence growth rate was unsustainable on government and external balance accounts, on capacity expansion and - as the 1982-3-4 droughts following 1981's record harvest have shown - in respect to weather as well. However, it is critical to realize that these increases came after a period in which GDP per capita and total GFCF had declined steadily since 1974 and in neither case even restored 1974 levels and on the accession to power of a government committed to improving African incomes and access to services but constrained not to reduce real European consumption rapidly because their skills and enterprises were still crucial from a production viewpoint.

Government economic strategy was not consolidated in comprehensive form until the November 1982 Transitional Plan.[24] By that time the CAD and domestic government recurrent deficit growth had already forced retrenchment, but the Plan represents the broad strategy first partially outlined before independence and then refined and consolidated during the first two years of independence. This strategy represents a clear break with that of the previous regime. However, while it affected sectoral and spending policy over 1980-1982 (i.e. while the Plan was under formal preparation), it did not have comparable influence on macroeconomic - especially fiscal and monetary - policy. Planning was at that time a separate Ministry and neither the Treasury nor the RBZ took the new strategy seriously, sought to relate their macro policy to it nor even entered into a serious dialogue to try to

reconcile their attempts to continue the old macro strategy with the quite divergent growth and allocation goal embodied in the new strategy during the process of their crystallisation and embodiment in the Transitional Plan. The long term commitment was to equity, socialism and increased living standards. The short run macro economic targets were:

a. 8% GDP annual growth with goods production to rise faster than that of services;

b. raising GFCF from 19% in 1981/82 to 23% in 1984/85 and of domestic savings (net of stock changes) from 11% in 1981/82 to 17% in 1984/85;

c. raising wage employment 3% a year;

d. increasing the share of imports in GDP to 26% and of exports to 23% implying a 10.4% annual turnover growth and a slight trade deficit reduction over 1981/82 - 1984/85;

e. financing about 37½% of 1981/82 - 1984/85 gross capital formation from net external borrowing, grants and investment;

f. at an average inflation rate of 15% a year.

These projections were broadly internally consistent. Given the steady inflation of GFCF prices relative to those of other GDP components there may be some doubt that 26% GFCF would lead to 8% capacity expansion or that the medium term import elasticity of growth is as high as 1.3 but these are fairly secondary issues. The Plan envisaged over 5% real annual consumption growth (allowing 5% per capita increases for Africans consistent with no significant falls in European personal real incomes), a sharp increase over 1974-1979 growth but only a moderate one over 1965-1973 backed by very high levels of GFCF and savings with a high - but by no means unique for low and lower middle income countries - ratio of net capital inflow to GFCF. The employment target - even with high growth - was actually below the population growth rate. The external finance target seems to have been influenced by the level of Zimcord pledges on the mistaken belief that these represented bankable, rapidly disbursable commitments of concessional funds to which export credits and commercial finance would be additional.

Given the post 1973 economic slump, the targeted rates were not incredibly high technically with one exception - export growth. Here the expectation was to break from approximate stagnation to over 10% annual real growth - a target suggesting that this figure was either a residual after computing all other targets needed to sustain 8% growth or the product of massive macro optimism with mimimal sectoral and product cross checks. Certainly no serious attention as to how such a shift in the balance of production and in market penetration could be achieved was attempted. Articulated policies and resource allocations for doing so are notably absent from the plan. The creeping reduction of export prices from overvaluation - which took place over 1980-82 was very inconsistent indeed with attaining this target - especially given the importance presumably attached to rapid growth of mineral and manufactured exports (and of investment in capacity to produce them).

1982-1984: From the Macro Economics of Relaxation to the Macro-Economics of Crisis Management

The Zimbabwean policy response to the 1982-1984 CAD crisis in its basic elements was initially quite similar to that of the Rhodesian regime over 1974-75 at least at the macro-economic level. In respect to distribution there have been significant differences with lower real wages cut less (e.g. increased to offset food subsidy reductions), famine relief a top priority (running to about 10% of recurrent spending in 1983/84) and education, health and African agricultural service provision continuing to expand rapidly.

At macro level there are on closer examination two differences: the use from late 1982 of an active exchange rate policy starting with a large devaluation and followed by a downward float taking the Z$/USA$ rate from 1.3 at the beginning of November 1982 to about 0.85 by the middle of 1984 and 0.65 by mid-1985; the institution of an active interest rate policy which bank rate from 4.5% to 9% during 1981 and the Treasury bill rate from 3.3% to over 8% in the same period with a subsequent rise to 8.5% while bank minimum overdraft rates have risen from 7.5% at the beginning of 1981 to 13% since September of that year.

However, the basic instruments have once more been forex allocation and

attempts to restore the recurrent government budget to balance. The former has been bolstered by preferential credit and foreign exchange allocations to exporters (probably critical together with devaluation to sustaining mineral and allowing increases in non-traditional manufactured exports) and by a greater government and business awareness of the need to bolster non-traditional exports especially to Zimbabwe's two regional markets (South Africa and SADCC/PTA) but also globally (e.g. beef to EEC). This more balanced approach to forex allocation to bolster exports as well as to constrain imports reflects in part the absence of the particular constaints confronting the illegal regime. However, it also reflects a greater Treasury commitment to trying to restore balance by increasing supply not just by cutting demand. Recurrent budgetary balance has not been regained - indeed even in constant price terms it has widened with the 1985/86 Budget showing no signs of a reversal - despite serious attempts. This is partly because drought, externally backed insurgency in Zimbabwe and Mozambique (where Zimbabwe troops are deployed for transport protection), the momentum of basic service expansion and subsidies to railways, steel and agricultural marketing have raised nominal recurrent spending far more rapidly than recurrent revenue which has been hit by the real erosion of its import, manufacturing and profits bases. Again, however, there has also been a judgement that draconic revenue increasing measures (or more draconic subsidy cuts) would decrease production (and achieved revenue) and savings rather more than they would either consumption or the CAD.

In terms of balance restoration 1982-83 efforts have been less successful than those of 1974-76. Real imports were cut perhaps 10% in 1982 and again in 1983 and 1984 but the apparent CAD in current Zimbabwe dollars rose from $ 439 million to $ 533 million to $ 535 million over 1981-82-83. However, adjusting for year to year swings in domestic gold held by the Reserve Bank the pattern becomes $398 to $551 to $446 million. Converting this to current USA$ the resultant CAD is $ 575 million in 1981, $ 719 million in 1982 and $ 439 million in 1983, an indication that the 1982 restrictions did not bite fully until 1983 but then did have a significant impact reducing the CAD by over 40% in USA$ terms. 1984 preliminary data suggest a stepping up of this trend.

The apparent production cost has been similar to the previous retrenchment with a 2% real decline in 1982, 3.5% decline in 1983 and perhaps 1% growth in 1984. However, in part this result relates to 1982-84's run of three

consecutive droughts which would have reduced GDP growth even had the external balance and import allocations been healthier.

Employment fell by perhaps 2.5% in 1983 and stagnated in 1984. Savings recovered slightly from a 1981 low of low of 9% of GDP to 9.6% in 1982, 10.5% in 1983 and probably 11-12% in 1984 but GFCF fell from 17.5% in 1982 (up on 1981's 15.5%) to 16.4% in 1983 and probably under 15% in 1984.

1984 saw draconic limitations on remittance of dividends, branch profits and rents, forced investment of blocked balances in low income government paper and a 6 to 10 year lag before phased repayment of principal over 6 to 10 years and compulsory acquisition for Zimbabwe $ of the local trustee held external securities pool. These were designed to avert or limit further reductions in visible imports, other than grain, cover emergency grain imports and fill the gap caused by breakdown of the IMF standby.

They have provided very substantial interim savings on invisible account - perhaps $ 200 million in 1984. In respect to blocked balances they have permanently reduced servicing cost and provided a low cost, medium term phasing out of the principle while the tightened dividend and remittance regulations taking effect in 1986 will also yield continuing gains.

Current Account Defecit Evolution 1978/80 - 1981/83: An Analysis of Causation

Zimbabwe's current account deficit on the face of it ballooned from 1.3% of potential output over 1978-80[25] to 8.1% in 1981, 10.1% in 1982 and 6.5% in 1983 (Table 7). This record radically understates the true deterioration because a 4% gain could reasonably have been expected from reversal of the negative impact of sanctions/intermediation on the terms of trade. In fact that gain was achieved but was submerged in negative developments on terms of trade and other heads so that the overall ratios to be explained are 12.1%, 14.1% and 10.5% respectively. An estimate of the contribution of different causal factors is set out in Table 8.

External shock - initially dominated by global and regional recession impact on trade growth but with terms of trade losses rising to equal importance in 1982 and larger in 1983 and with the impact of interest rates significant and

rising - account for 28%, 38% and 59% respectively of the annual deteriorations. Debt burden was relatively insignificant until 1983 and even then accounted for under 8% of the widened gap. Indeed relaxation of profit remittances (a domestic policy measure) was much more significant in 1981 and 1982 and of about the same magnitude in 1983.

Domestic policy changes (including profit remittances) accounted for 57%, 30% and 18% of the annual deteriorations. The main element was the attempt (successful in 1981 and to a degree in 1982 and 1983) to operate the economy nearer to capacity - a not unreasonable goal since the base period utilisation rate was about 75% (See Table 6). The rise in the share of GFCF - again the result of a deliberate policy to raise very low rates in the base period and one which never led to regaining 1973-75 real GFCF levels (see Table 6) - had only a slight effect. In 1981 general import control relaxation accounted for 14% of the increase in CAD/Potential Output ratio but in 1982 and 1983 import controls were if anything, tighter than in the base period. Similarly while allowing the real purchasing power parity of Z$ to float up while its inflation was above the global average accounted for perhaps 4 to 5% of the 1981 and 1982 deterioration but by 1983 measured on a purchasing power parity basis the Z$ had been adjusted downward enough to increase tradeability marginally vis a vis the base period.

A special factor in Zimbabwean experience was the capital rehabiliation shock. At independence much of the plant, machinery and transport equipment portion of the capital stock was obsolete and/or life expired and another substantial portion had deferred maintenance to make good as a direct result of the intensity of forex restriction after 1974. As a result the direct capital goods import share in GFCF rose from 31.7% in the base period to 47.2%, 59.3% and 51.0% in 1981, 1982 and 1983 respectively accounting for 18%, 27% and 16% of the respective increases in the annual CAD/potential output ratios.

This decomposition suggests that regaining the CAD ratios of 1978-80 without significant global economic changes would require not merely a once for all reduction in GDP but also quite possibly negative "equilibrium" rates of growth of capacity and of achieved GDP. For example:

1. assuming no further terms of trade deterioration or interest rate rises;

2. elimination of the negative recession impact;

3. continued exchange rate adjustments to sustain tradeability;

4. total reversal of the profit remittance relaxation (i.e. near blocking of non-interest factor payments); and

5. return of the capital goods imports/GFCF ratio to 45%; then

capacity utilisation and investment share trends would have to be negative (i.e. lower capacity utilisation and a lower share of GFCF) by about 5% (of potential output). This would imply 60% capacity utilisation and 8-10% GFCF. As 11-15% of GDP in constant prices is needed to maintain capacity this implies steady decline in potential output.

Such a scenario is not viable in political economic terms since at least medium term real income increases for the African majority are socio-politically imperative while continued or accelerated decline in the white minority's real income will lead to a rate of exodus causing severe output (including export output losses) because of the Rhodesian heritage of inadequate training and experience for African managers, professionals, large scale farmers and skilled workers.[26]

1984's CAD is likely to turn out to be about half 1983's. External factors and GFCF import content increase will in that event cover virtually all of the increase over the base period since capacity utilisation is down to 84% and the policy changes increasing invisible outflows have been reversed.

Unfortunately, the better 1984 (and probable 1985) outturn is no cause for believing basic constraints have been relaxed. Export volume probably rose in 1984 by 6 to 8%; but this is still an average of -0.5% a year since 1974 or +0.5% since 1979. Given the probable reversal of overvaluation related 1980-82 losses (with the reversal of devaluation) and the encouragement to manufactured exports from special credit and import allocations as well as stagnant domestic demand and low capacity utilisation, there is no evidence as yet of a sustainable 4-6% growth trend of exports.

Visible imports almost certainly declined in volume terms even before

adjusting to strip out the abnormal maize imports. While they probably rose about 15% in Zimbabwe $ terms, the Zimbabwe $ cost of a relatively stable currency such as the Dmark rose abut 22% and a 7% decline in average nominal price of imports seems unlikely.

Key Parameters and Constraints

Five key constraints can be identified from the parametric relationships in the Zimbabwean economy. These are the ratio of imports to GDP, the growth of exports, the level of net capital inflows and factor payment/remittance outflows, employment and growth of GDP (and perhaps more particularly consumption). A potential sixth is food supply, i.e. rate of growth of food production relative to that of population. The first three - as constraints - can be aggregated as the overall external balance constraint.

Zimbabwe - like most other SSA economies[27] - shows a significant correlation between real import growth and fluctuations and real GDP growth. The ratio of non-capital goods imports to GDP is about 21% while that of direct capital goods imports (50%) and indirect import content of domestic inputs (20% times 50% = 10%) to GFCF is about 60% (see Table 8).

The former is relatively stable and - for an economy of Zimbabawe's size - relatively low. There would appear to be limited scope for reducing it much further - in normal weather years agricultural imports are very small, the domestic content in much of the manufacturing sector is low. Some reduction in the ratio of operating imports and final products to total imports can be achieved in power (via coal fired thermal plants) and fuel (via hydrocarbon distillation from sugarcane, molasses and/or coal) but at a very high and highly import intensive capital cost and with consequential power and fuel price increases negatively affecting exports via increased costs of production (e.g. in mining and ferrochrome smelting) and transport (more generally).

The capital goods imports/GFCF ratio has - as discussed in the preceeding section - been much more volatile and is much higher than that for the economy as a whole. Given the desirablity of reducing the overall external balance constraint on production and in particular on restoring GFCF - at least in the medium term - to levels consistent with 5-6% growth of capacity, this would

appear to be the medium term priority sector for import substitution.

Export Growth is critical primarily because it results in earned import capacity. At least since 1965 Zimbabwe (and Rhodesia before it) has not been an export growth led economy in the sense that the export sector grew faster than the rest of the economy and pulled it along. To allow higher imports, restoration of real export growth is a priority. However, even assuming return to a sustained 6% growth in world trade a sectoral analysis of Zimbabwe's exports raises doubts about its ability to achieve a comparable level.

Traditional agricultural exports are hampered by sluggish world demand growth. More critically they are likely to prove supply constrained because the 1973-1984 trend rate of agricultural production growth is barely over 2% - below both population (and therefore food requirements) and any acceptable manufacturing (and therefore domestic agro industrial use) growth rate. If this supply constraint is to be reversed significant changes in the agricultural trend growth rate will need to be achieved.

Unless and until significant world demand recovery is achieved, the mining sector - excluding gold and ferrochrome - will stagnate or decline, especially in respect to asbestos where no sustained demand recovery is ever likely given increasing perception of the hazards accompanying its use. The import value of gold exports (and probably their quantitative growth) depends on the world gold price which would appear unlikely to rise significantly until real interest rates decline by at least a half.

Ferrochrome and steel (Zimbabwe's traditional manufactured goods exports) face particularly unfavourable world market conditions. However, they can be expanded and diversified and over the longer term would appear to face at least moderately favourable market prospects justifying interim support (e.g. in power subsidies for ferrochrome) and capital injections for modernisation and restructuring (especially in respect to steel).

Zimbabwe's geographic position gives it a natural advantage vis a vis non-Southern Afrian economies on exports to South Africa, Botswana, Zambia, Malawi, Mozambique, (probably) Swaziland, and - given restoration or rehabilitation of rail links probably at least no disadvantage in respect to

Angola, Tanzania and (perhaps) Kenya.

In respect to its eight partners in the Southern African Development Coordination Conference (and to Kenya which like Zambia, Tanzania, Malawi, Lesotho and Swaziland is a member of the Eastern and Southern African Preferential Trade Area) much (not all) of Zimbabwe's manufacturing sector either produces goods not produced in its potential regional markets or has cost advantages. Unfortunately, increased exports to most of these markets would seem to depend on formal or de facto countertrade agreements; only Botswana is in a position to expand imports paid for in hard currency on a significant, sustained basis.[28]

That constraint, however, need not be as serious a deterrent as it may appear. The basic external constraint is capacity to import. If regional imports by Zimbabwe from SADCC (or PTA) members can be substituted for those from third parties (including for South African transport services) and/or significantly reduce capital goods import requirements otherwise needed for local production (e.g. electricity from Mozambique, Zambia and perhaps Botswana; ammonia and urea from Tanzania and/or Mozambique) and paid for by net increases in Zimbabwe's exports to them, balanced buildup in intra-regional trade can make a significant contribution to loosening the limits imposed on total import capacity - and thus on production - by the slow growth of traditional exports.

It needs to be recalled that the primary function of additional exports is to reduce the import constraints on GDP and GFCF. While this is easiest if payment is in convertible currency useable on any imports from anywhere, countertrade agreements (whether de facto or de jure) which allow substitution of regional imports paid for by regional exports for extraregional imports in excess of extraregional exports have the same effect. As most of Zimbabwe's regional trading partners are similarly placed and can afford net additional imports only if balanced by net additional exports, regional trade expansion strategy would seem to need to concentrate on import sources as much as export markets and on frame trade/countertrade agreements more than preferential tariffs and convertible currency clearing.

Exports to the Republic of South Africa appear to have distinctly problematic prospects. First, South Africa is undergoing a severe depression. Second, South Africa is protectionist in orientation and can substitute domestic for

Zimbabwean production to a very substantial extent. Further, whereas political relations and strategy made RSA give preference to Rhodesian exports, they are already operating in the opposite direction in respect to Zimbabwean. Finally, South Africa is presumably not Zimbabwe's preferred trading partner for obvious non-economic reasons.

Manufactured exports to destinations beyond Southern Africa face cost of transport and speed of delivery barriers (as well as high production costs in many cases). These partly relate to geography - about which nothing can be done - partly to lack of maintenance of the direct rail routes to the sea via Mozambique - on which rehabilitation efforts are in hand, and partly on South African sabotage/destabilisation against these routes - which has to a degree been contained (not least by use of Zimbabwe military protection) but far from eliminated or even reduced to operationally tolerable levels.

That said, the development of export orientation, backed by export incentives and rendered plausible by the end of sanctions should make possible not insignificant percentage increases in global market manufactured exports. However, the base - beyond steel and ferrochrome - is so small that this would appear to be an area in which priority action needs to be begun now to lay a base for 1990's rewards more than for short term results allowing significant 1980's import increases.

The sustainable trade deficit (visibles and non-factor "invisible" services) depends on the level of net factor payments and remittances and on gross external borrowing plus equity investment minus principal repayments. The factor payments/remittances, external borrowing and equity investment topics can be partially disaggregated for analytical purposes.

Factor payments plus remittances exploded over 1980-83 as noted above (see Table 9). Measures culminating in the April 1984 package and its use to reshape medium term flows discussed above have drastically reduced equity investment payments, interest on blocked balances and remittances. Further significant savings would appear to be achieveable only on pensions. Relatively high net factor payments are inevitable so long as external investment and external debt (see Tables 3, 4) are high and the latter rising relative to GDP. A major decline in real interest rates would clearly ease the problem but is not within Zimbabwe's power to influence significantly.

External borrowing policy shifted sharply at independence and again in 1982. The first shift was very close to a "more the better" stance with relatively little attention either to interest rates or maturity/repayment schedules. The bulk of the borrowing has been at best quasi concessional and at least a third floating rate while the average grace and maturity periods seem to have been at or below 3 and 7 years respectively. In reaction to this Zimabawe has swung to a policy of accepting very few loans with interest rates above 10%, grace of less than 5 years or repayment more rapid than 10 years (for a total average life of 10 years) - with the ironic and major exception until 1984 of Reserve Bank lines of credit at libor plus. As its chances of getting concessional finance are limited and export credits (except for very long gestation projects) rarely meet the repayment standards set, the only evident way of sustaining this policy is rapid reduction of the CAD. Indeed elimination of the CAD has seriously been canvassed apparently without a clear realisation of the fact that the initial result would be a severe GDP fall, a real danger (via reduced GFCF) of negative subsequent capacity growth and also of subsequent output growth permanently below that of population. However, with debt service approaching 30% of export earnings in 1983, reversion to the 1980-82 unselective borrowing policy is also patently untenable.

The question of whether and how net external finance of - say - USA $400 million a year at 8-10% average interest can be raised is a very real one:

a. with a per capita GDP of the order of USA $550 and a severe forex constraint Zimbabwe should be able to secure more concessional or semi-concessional finance than it has to date;

b. the larger projects in the enterprise and government action lists should be able to obtain official export credit finance at about 10% repayable over 8 years following construction;

c. in principle World Bank sectoral funding (at Bank not IDA rates) should be negotiable in respect to production substantially or wholly directed to export and for medium term export finance (to promote capital goods exports).

However, it is far from clear that these sources could be counted on for sums

of the order of USA $400 million net a year. Use of libor plus short term commercial bank finance - whether for enterprise projects, government programmes or Reserve Bank standbys (balance of payments cover) - is inherently risky (because of the need to roll over frequently) and may be prohibitively expensive at trend levels above USA $50 million net a year.

Foreign Equity investment in Zimbabwe since independence has been minimal. Initially the reasons may have related to doubts as to the new government's general political economic policy. At present they appear to relate largely to probable profitability and to remittability of profits if earned. The depressed state of the internal economy, the import restrictions and the overall balance of payments problems and prospects make these concerns quite realistic except in special cases. The latter are likely to turn on specific export opportunities - e.g. in the Renco Gold Mine, Dandy Chewing Gum and Heinz (bean) investments - or to use of blocked or other domestic (Zimbabwean) excess liquidity (e.g. Dalgety, Holiday Inn). The former are not generaliseable nor, it would seem, very common and the latter do little for the external balance. On the whole the prospects for susbstantial external equity investment - despite the fact that dividends on such investment when made after late 1979 have always remained remittable up to 50% of profits - are not such as to make this a priority area for generalised government attention. Underlying economic realities not government policy are the key barriers.[29] Special cases should be pursued (and where possible identified and presented to potentially interseted investors). However, general legislative incentives will not usually meet investors particular concerns in some respects and may already be needlessly generous in others so that case by case negotiation would seem to be appropriate.

The fourth priority is expansion of wage and adequately productive self employment. Given the nature of the foreign exchange constraint and the higher import content of GFCF this priority is directly relevant to the previous three. Given the low rate of growth of agricultural output it is also relevant to removing an impending food availability constraint (or a worsening of the import/GDP ratio if substantial food imports become normal).

However, it is equally a political economic constraint because either secular increases in open unemployment and in "informal" non-agricultural or peasant self-employment which does not meet basic household consumption needs, have

serious distribution and participation implications. Apart from equity considerations, these are unlikely to be consistent with continued mass support for the government or for avoiding measures damaging the economic welfare of the white minority so much as to ensure exodus of its productive members before they can be replaced.

Wage Sector employment policy selection appears to suffer from negative degrees of freedom. Reducing real wages - by holding increases below COL rises - may be inevitable but as for many workers they are already below Rhodesian levels, imposes great political strain and human hardship. Further, their capacity for increasing employment (by reversing past labour shedding by reorganisation of labour use or substitution of capital) during a period of slack demand is probably negligible. The slight increase in agricultural employment in 1984 probably relates to slightly better weather or reversal of unsustainably 'ambitious' 1981-83 employment cuts, not to the erosion of real wage rates. Unless and until the economy can be made more labour intensive or real GDP growth restored to 9% there seems no way to prevent a continued erosion of the ratio of wage employment to would be economically active population. Even the stillborn Plan had only a 3% annual wage employment growth target (at 8% real growth of GDP and 3.5% of population).

Non-agricultural "informal" self employment providing minimum socially acceptable incomes can hardly be expected to rise significantly more rapidly than GDP. The removal of petty licensing and other restrictions has allowed a once for all increase in this sector since independence. How much further it can go without rising real wage (especially low and medium wage) and small scale agricultural incomes is more doubtful. Certainly in construction, repairs and some simple forms of processing and manufacturing there is space for increases - especially if an effective teaching/training and initial capital advance programme can be developed. However, with an increase of over 100,000 a year in would be economically active population, to lay all or even the majority of the meaningful job creation burden on this sector would appear to be unrealistic.

Small scale agriculture ("communal area" and resettlement) would seem to afford the best prospects. Certainly the post independence improvement of market access, procurement, extension, input supply productive infrastructure and basic services to this sector has met with a significant response - the

trend output increase seems to be of the order of at least 5-6% a year (much higher for marketed food and industrial/export crop production). However, for this to continue three conditions must be met:

1. greater access to land made possible by both lower cost acquisition of under or unutilised land on large farms and ranches and lower cost (less infrastructure intensive) settlement/settler support schemes;

2. more effective incentives to convince perhaps two thirds of present communal area households (in many cases part households with the man in wage employment at a distance and the woman and children on the plot) to move either into consolidated wage earning (and/or non-agricultural "informal" sector employment) or into resettlement schemes;

3. a greater sense of urgency leading to greater speed in both of the above programmes.

Fifth, GDP and consumption growth at least equal to population growth is a priority. From the point of view of interaction with previous constraints, low GDP growth will thwart productive employment growth and is likely (given the import constraint on expansion of capital intensive farm output) to go hand in hand with dangerously low agricultural output growth. In politial economic terms, it is critical that African real incomes do not erode further and impossible - at least in the short term - to go much further with eroding white professional, artisanal, managerial and farming incomes without causing a speed up of the exodus of skilled personpower seriously detrimental - at least in the ensuing medium term - to output.

Two constraints which are often canvassed are GFCF and domestic savings (with special emphasis on the recurrent budget deficit as a form of dissaving). In the short term it seems doubtful that these constraints are binding though in the medium and longer run they will become so if the first five are relaxed.

Zimbabwe is, and until 1990 is almost certain to remain, foreign exchange (or import capacity) not output capacity constrained. It is true that prolonged adjustment to forex constraints including low capacity growth will create a situation in which both GDP growth and export responses to increased export growth and/or improved terms of trade will be crippled by hitting the low

capacity ceiling resulting from the almost continuous forex constraints since 1973-74 - a cycle repeating 1974/5 and 1981/2 but that is not an immediate nor (unfortunately) a likely pre 1990 constraint at least in terms of overall capacity as opposed to sectoral bottlenecks.

Raising GFCF would increase capacity growth but reduce consumption by rather more and thus diminish GDP growth. The explanation lies not in the standard Keynesian thrift paradox but in the fact that GFCF's direct and indirect import coefficient is at least .56 and probably .6 while that for operation of existing capacity (consumption) is under .21. As a result every Z$ diverted from consumption to savings can - without worsening the CAD - increase GFCF by only $0.375 with the other $0.625 aborted GDP and increase in stocks of non-exportables unless the saving is made effective by CAD increases. Thus while the current price potential future GDP multiplier of domestic savings is about .275 its immediate achieved GDP multiplier is -2.7 before adjusting for external interest saved and perhaps -2.4 after.

However, in the longer term it is quite true that 5 to 6% GDP growth cannot be sustained without 5 to 6% capacity growth. That implies (at 90% capacity utilisation and a 2.5 to 1 constant price incremental capital output ratio) a 22.5 to 25% ratio of GFCF to output versus a present level of between 15 and 17.5% (see Table 7).

Even in the short term reducing the ratio of incremental GFCF to incremental capacity - either by raising productivity of all factors (e.g. utilising the presently un or underutilised five sixth of large farm land more productively) or by increasing labour intensity (e.g. in small and medium scale construction) would reduce import requirements for any given level of GDP or, to put it in a more directly operational way, increase the level of GDP consistent with any level of import capacity.

A worrying element in the incremental GFCF/Output ratio is that in current price terms it has been rising. GFCF prices have been rising about 1.4 times as fast as the implicit GDP deflator or about 1.5 times as fast as those of private and public consumption. This does mean a need - in current price terms - for a rising level of savings to GDP for any given rate of growth of capacity. The causes of this more rapid rise in costs seem to relate to a differentially more rapid rise in import than in domestic prices and, within

domestic prices, above average increases for construction, manufacturing and transport which are prominent suppliers of GFCF domestic content.

Savings in Zimbabwe have indeed fallen steeply from over 20% in 1973 to barely above 10% for the average of 1980-1983. However, if the true domestic content of GFCF is 40 to 45% these rates of saving already imply that earned import capacity (export earnings) is being used to finance a portion of the GFCF import content (indeed on the face of it all its indirect import content). Given that there are clearly inadequate operating inputs already and the higher M/GFCF than M/Other Use ratio, an increase in the savings ratio before either a substantial increase in exports or substantial import substitution in relation to GFCF would, as noted above, reduce the current output possible at any given CAD level.

Reduction of the Zimbabwe government borrowing requirement by eliminating the recurrent deficit has been advocated as a way to increase savings, to reallocate investment from the public to the private sector, to reduce the disincentive effects of taxation and (assuming tax increases rather than basic service or food subsidy cuts) to make after tax income distribution more equitable.

Raising savings by balancing the recurrent budget would have the same impact on output as any other method of raising s. In fact enterprise investment has not been squeezed out by public on the credit front and the latter is less import intensive. In practice recurrent budget balancing will require tax increases, food and enterprise subsidy reductions and limiting the growth of public services including especially secondary education. The case for such action is reduction of inflationary pressure, income distribution gains (assuming income tax and amenity consumer goods are the main sources of additional revenue and that food subsidy reductions are offset by income increases for lower income households) and avoiding an imbalance between significantly rising real public services and significantly falling real disposable income. In practice the likely macro economic impact of such an approach would be low with private savings falling by a large fraction of the decrease in government dis-saving.

The recurrent deficit, wage and employment and savings problems are interlinked. The Rhodesian rundown of output, savings and African consumption

over 1975-1978 was reversed as to consumption by the massive Muzorewa wage-salary increases. These were followed by another round of increases by the Zimbabwe government. Taken together with rapid advance of high level cadres Africans in the civil service, private employment and business, the rapid expansion of basic services and continued high war costs, these had five effects:

a. reducing both the ratio of surplus to capital stock and that of saving to income;

b. sharply increasing inequality of income distribution among Africans;

c. generating increases in output (over 1980-81), CAD and government recurrent deficit adding demand pull to cost push inflation;

d. causing a once for all reduction (over 1980-84) in the wage employment base on top of its existing labour shedding (at constant output levels) trend;

e. contributing to forcing a reversal of budgetary and forex policy toward stringency beginning in 1982 because no margin to accommodate negative external economic and weather shocks remained.

In the short run the case for recurrent budget deficit elimination is basically one of reducing pressure on domestic prices (and therefore the exchange rate and/or exports) and secondarily - potentially - one of improved income distribution. Assuming it was achieved primarily by revenue increases, the effect would probably be to reduce enterprise and household savings by a comparable amount. Again the long term implications are somewhat different. If real GDP were to rise at 5 to 6% a year, real revenue would rise at least as fast and, in combination with even moderate recurrent expenditure constraint, wipe out the recurrent deficit in three to five years.

Short Term Strategic and Policy Priorities

The implications of the external balance constraint on GFCF, the perverse short and medium term GFCF/Output tradeoff and the employment and growth constraints for strategy and policy appear to be:

a. priority to GDP growth higher than population growth (i.e. at least 4%);

b. subject to the constraint that GFCF be adequate to sustain positive capacity growth;

c. that GFCF be concentrated on bottleneck breaking sectors, e.g. export production (forex), land reform/resettlement (employment), regional transport and energy links (forex and GFCF);

d. while restructuring toward less capital intensive approaches, e.g. in agriculture and in energy (e.g. high tension lines/joint generator finance for Mozambican-Zambian hydropower not further stages of coal fired thermal power production at Hwange);

e. reduction of import content of GFCF both by selecting technology and construction patterns with lower forex content (e.g. small scale labour intensive construction) and avoiding where possible very import intensive high Fixed Capital/Output ratio ones (e.g. highly mechanised/diesel pump irrigated agriculture) and by altering production mix to import substitute in plant and equipment (e.g. altering Zisco output to create an interface with an expansion of structural steel and engineering sectors);

f. agricultural reform designed to increase small farmer access to presently un or underutilised land thereby raising the growth rate for productive employment, averting a food crisis, strengthening export earnings, and reducing the incremental GFCF/Output ratio;

g. regional economic coordination expanded as a source of imports otherwise obtainable only for hard currency, a means to reduce import intensive capital expenditure (e.g. in electricity, ammonia and fertiliser), to reduce transport costs for exports (which are on average at least 50% higher on South African than Mozambican routes) and to increase capacity

utilisation (especially in manufacturing) thereby reducing unit costs and making possible incremental economies of scale and of product specialisation through increased exports to the SADCC/PTA region comparable to increased inputs of goods and services from it;

h. maintaining very tight restrictions on non-production directed imports of goods and services, on remittances and on external factor payments other than for post 1979 loans and equity investment;

i. securing adequate external finance (grant or loan) to sustain the Current Account Deficit (or more accurately the import levels it allows) near its 1983 nominal USA $ level on terms (including both interest and repayment schedules) which do not cause either an insupportable interest/export ratio (e.g. one of over 15-20%) nor lead to implausible future gross borrowing requirements because of short duration and/or bunching of maturities. (This target implies phasing down net external finance relative to GFCF and, indeed, in real terms so is consistent with growth and GFCF objectives only if export raising/import substituting targets are met.)

The broad implications of these priorities for areas in which policy action is needed have been sketched in the previous section. Those for agriculture/land reform are reviewed in somewhat more detail below. Detailed articulation - and rejection of apparent degrees of freedom which are, in fact, not practicable to achieve in the short run - would require a sustained series of official, enterprise and (hopefully) academic exercises.

Assuming a 6% average 1984-1990 annual rate of growth of world trade and of Zimbabwe exports, the above priorities are mutually consistent. The scenario would yield:[30]

1. 4 to 5% average annual GDP growth (5 to 6% from 1985 on);

2. about 2.5% Production Capacity growth and a capacity utilisation ratio of 85 to 87.5% in 1990;[31]

3. GFCF averaging 18% of GDP and savings averaging 12%;

4. wage employment growth averaging about 2% a year.

Current Account Deficit Elimination: High Cost, High Risk, Low Potential

Elimination of the 1983 CAD of $ USA 440 million by 1986 - an alternative strategy under serious consideration - would have substantial costs and high risks and no net gains. It would probably reduce 1990 actual output by about 4% and 1984-1990 cumulative output by the order of 10-12%.

However, more critically it would entail very sharp real consumption reductions over 1984-85, over a third before allowing for cyclical trade and/or weather offsets and draconic reduction of GFCF in 1985-88 with 1990 levels still likely to be up to 35% below those of the basic strategic scenario. As a result its projected capacity growth rate is negative until 1988 and averages under 0.5% a year over 1988-90. Therefore the projected capacity utilisation rate passes 90% in 1989 and approaches 97% in 1990. This would mean that any attempt to restore GDP growth would run into immediate capacity side constraints and that 'overheating' would emerge faster and more severely than in 1974-75 or 1981-82.

In fact the outturn would probably be worse than the scenario suggests:

a. sharp real per capita consumption falls in 1985-86 would be socially and politically unsustainable and attempts to enforce them would lead to results (including skilled and managerial personnel exodus and strikes) highly damaging to production;

b. the falls in GFCF implied for 1985-86 are virtually technically impossible and if attained would imply substantial shortfalls in maintenance and asset renewal;

c. subsequent GFCF level levels would be too low to allow both maintenance and selective bottleneck breaking; they would, therefore, probably prevent 6% export growth;

d. at capacity utilisation of over 90% - especially given such low GFCF as to prevent debottlenecking and structural change - overheating would

emerge (and at 97% it would be explosive);

e. given the nature of the state revenue base, the Recurrent Budget deficit would become totally unmanageable because of falling levels of real sales, income and company tax.

A modified scenario with 10% a year nominal USA $ CAD reduction offers a less horrific prospect. In particular it would hold the needed for falls in consumption to under 10% per capita in any year and would allow somewhat higher GFCF levels - and therefore capacity buildup giving some room to debottleneck and restructure - so that the 90% capacity utilisation rate would not be reached during the 1984-90 period.

However, in no respect would results of trend nominal CAD reduction appear to be superior to those of the initial scenario. Output in each year, including 1990, would be significantly lower as would investment. The capacity growth rate trend would be marginally worse. Therefore, the only case under which it could logically be adopted is that of failure to devise and implement a strategic approach to financing a deficit of the order of $ USA 400 million on bearable terms. In that case a strategy to finance a gradually falling CAD becomes essential, because the gradual reduction while costly and offering no gains over the basic strategic scenario is markedly superior to the 'dash for current account balance' approach.

The basic scenario of course does posit a fall in CAD/GDP ratios because the CAD is held constant in nominal USA $ (thus eroding with inflation in real terms) while real output is growing 4 to 5% a year. The ratio would therefore fall about 10% a year on average to about 5% of GDP by 1990.

Medium and Long Term Constraint Relaxation

In a real sense most of the short term strategic priorities remain valid over the medium to long term, e.g. to 2000. However, over that time perspective substantially more progress can be made toward loosening the import capacity/import content constraint. Further the capacity (GFCF) and savings constraints will become more important.

The specific areas in which more substantial progress would seem to be needed/achievable over 1990-2000 are:

a. reducing the capital goods imports/GFCF ratio from about 50% to - perhaps - 30%. This would involve both broadening and deepening the engineering, transport equipment and spares/machinery sectors and broadening their interface with basic metal production. Approaching this challenge on a combined import substitution/export promotion (especially but not exclusively to SADCC/PTA area markets) basis might help significantly in achieving economies of scale and of sustainable high capacity utilisation rates;

b. increasing export diversification with particular reference to regional markets, selected world market manufactures, coal (and/or coal based chemicals) and - if agricultural growth can be raised to over 4% - food;

c. raising agricultural output growth to a trend level of 5% a year with that for its small and medium scale sub-sectors significantly higher. This would allow a growth of employment/self employment opportunities at or above poverty line productivity/remuneration of at least 5 to 6% (depending on how much of the increase came from the small scale sub-sector), avert the danger of food and agro industrial input (or agricultural export) constraints and create a basis for substantial, sustained increases in food exports;

d. raising GFCF to 25% of GDP (allowing a 6 to 7.5% rate of Productive Capacity growth and therefore a comparable sustainable growth rate of GDP);

e. a parallel increase in domestic savings to 20 to 22.5% of GDP reducing the current account deficit to 2.5% to 5.0% of GDP;

f. turning the 1979-85 recurrent budget deficit (probably eliminated by 1990 on the previous section's basic scenario) into a 2.0 to 2.5% (of GDP) government gross saving toward financing the Capital Budget both as a contribution to raising the overall savings rate and a means to achieving relative price stability and having some leeway for countercyclical (including "food for work" rural employment schemes in drought years)

measures;

g. expanding reasonably productive employment/self employment (wage employment will still rise only 2 to 3% a year unless the medium and large scale enterprise sectors can be rendered more labour intensive) at least 4% a year in terms of new opportunities and an additional 1 to 2% in existing self employment whose productivity/remuneration has been raised above the poverty threshold;

h. increasing and stabilising construction capacity - including building up its small and medium scale sub-sectors especially in rural areas which should contribute to greater employment/self employment lower incremental GFCF/Productive Capacity ratios and halting the esculation of construction costs relative to the general levels of prices.

Evidently, these are guidelines requiring significantly more exploration, analysis and technical studies to articulate a viable policy - programme - project package than in the case of the short term (degrees of freedom capturing and marginal structural adjustment) priorities. However, they do go some considerable way toward identifying where strategy components should be sought.

Agricultural Production Gainful Employment, Food Security And Land Reform

Agriculture has usually been seen as Zimbabwe's most promising sector in the short and medium term. This view has prevailed despite a 1970-1980 (or 1970-1984) agricultural output growth trend of about 2%. Unless the output growth trend can be raised to at least 4 to 4.5%, industrial input and export oriented production will be squeezed by the growing food demand associated with a 3.5% rate of population increase. Constant price 1983 agricultural and forestry output (1969 Z$) was $177 million or 13% below the 1980 level of $203 million. Thus despite the $260 million of 1981 the decade and a half trend growth rate remained under 2%.

Further agriculture is the only sector with the medium term potential to solve - or at least substantially alleviate - the employment/productive self employment conundrum. But it is not doing it: wage employment in the large

scale farming sector fell from a 1975 peak of 365,000 to about 260,000 in 1983 and 266,000 in June 1984, while of the 350,000 odd African peasant households not more than a tenth had incomes (including production for own use) comparable to lower wage earners as of 1982-84. Output growth in the 1970's was based on increased capital and energy intensity - notably in irrigation and mechanisation - which raised both capital and operating import content and reduced labour intensity. Independent Zimbabwe has on a sustained priority basis moved to extend services, markets and credits to small farmers with very substantial 1980-85 gains. In parallel it has embarked on a strategic programme to resettle half the peasant households but progress to date - while real and perhaps surprising given the short time span and absence of experience - is limited.

The key to sectoral progress appears to be the five sixths of large scale farm arable (and some portion of large scale farm ranching) land which almost all studies report as un or underutilised. In general this represents a portion of virtually all large farms not one sixth of all units wholly efficient and five sixth inefficient or deserted. Therefore, buying whole farms is not only cost inefficient (forcing immediate buyout of the well utilised, capital intensive acreage and of assets quite unsuitable for small scale sector use in order to get the un or underutilised acreage) but also maximises output risk (other large farmers leaving, lower output in transitional period).

What is needed is a means to encourage large scale farmers to sell their extra land at low prices. Combined with a low initial capital input, labour intensive resettlement strategy this could achieve the aims of creating viable incomes for most peasant households and of meeting the Plan's 5% overall and 8% small farmer annual output growth targets.

One incentive to such sales would be a tax on gross rated potential output assessed by grade of land and offsettable against income tax. If net output on reasonably well used acreage is 40% of gross and the average effective income tax rate on large farm sub-sector net output 25% (both of which appear to be plausible orders of magnitude from aggregated sectoral data but would require further investigation when actually framing a tax), then a 10% gross output tax would be fully offsettable against income tax on the fully used portion of landholdings.

However, on under or unutilised land such a tax would cause a substantial - indeed unsustainable - increase in tax liability. This could be avoided in one of two ways:

a. developing the land - probably not an option for most farmers given capital and managerial constraints (and certainly not practicable nationally given the implicit construction and import requirements);

b. getting rid of the un and most of the underutilised land - by sale at any price or even by giving it away.

This approach would appear preferable to purchasing whole farms. On fully utilised land there would be no tax loss and no pressure to sell. The more efficient a farmer, the less he would be affected even before cutting down on underutilised and disposing of unutilised land. Therefore the danger of panic departure by efficient farmers should be lower. Their remaining in place would also limit the downside production risk. By definition the un and underutilised land has low output per hectare so that even in its early years the settlers/settlement schemes on such land could exceed previous production levels. Settlement costs would be rendered substantially more manageable (or manageable for substantially larger numbers of resettled households) both by pushing down the per hectare cost of land and by avoiding purchase of productive assets appropriate only for large scale farming units as well as assets such as manor houses with swimming pools quite unsuited to settlement scheme use.

As the 32% fall from 1981's peak (good weather) output by 1983 (second drought year) and the probable recovery to a new peak in 1985 (good weathr) show, Zimbabwe's agriculture has very high weather risks which normally bear down most heavily on small peasants (without reserves to ride out bad years) and on food crops (tobacco and cotton are less vulnerable). A strategic approach may need to follow three lines:

a. fuller and more effective water use (total irrigation is not possible, indeed present irrigation in many areas has to be curtailed in drought years);

b. larger national grain reserves to allow domestic food and regional export

security (1982 and 1983 were covered from the 1981 crop but storage costs were high and the reserves ran out early in 1984);

c. shifting cropping patterns in the most vulnerable areas which are largely in the small scale sub-sector (e.g. perhaps to millet and sorghum to replace maize as cattlefood and as emergency human food supply?).

Concluding Note

The nature of the constraints on Zimbabwe's economic growth and development are such as to indicate that neither 1980-1981 rates of change over the targets of the Transitional Plan are attainable or sustainable. In the absence of a general worsening of the external economic context after 1980, the readjustment from 1980-1981's dash for recovery could have been more gradual and if the recovery had been less frenetic it is theoretically possible that a steady 5% growth rate might have been achieved over 1980-1985. Such a strategy would have averted combining an approach to capacity utilisation and consequential overheating with the basic external constraint and also the roller-coaster course of 1980-85 as it has actually occurred. It would not, however, have altered radically the set of parametric problems now confronting Zimbabwe.

While these do appear daunting they do not rule out - even within existing constraints so long as these are not aggravated by attempting to overcome them by overlooking them - fairly significant and - in the absence of major exogenous shocks - sustained economic progress. Nor are they by any means unique or even unusual in the SSA context. In some respects Zimbabwe has greater degrees of freedom and more readily identificable avenues for constraint relaxation than many other SSA economies:

a. its capital stock - as a result of 1980-83 replacement and reduction of maintenance backlog - is relatively undebilitated and not in such urgent need of general radical rehabilitation as the SSA average;

b. the Zimbabwe export base - especially in manufacturing - is both more diversified and subject to more evident future lines of diversification than the economies with narrow, primary product export bases;

c. the same holds true of production for domestic use especially in respect to construction materials and capital goods (plant and machinery);

d. Zimbabwe's overall and especially non-GFCF ratios are much lower than the SSA average, albeit this means that declines in import capacity have a much larger negative GDP multiplier than in economies with higher ratios (especially where these contain a significant consumer amenity good component whose cutting entails service sector GDP losses but little direct physical output cost);

e. Southern (and Eastern Africa) appear to have more promising regional economic coordination groupings than other SSA sub-regions and Zimbabwe already has substantial trade bases with 6 of its sub-regional neighbours on the export and with 4 on the import side.

It is worth noting that the policy implications (and probable results therefrom) flowing from the foregoing analysis while hardly totally different from other sets of progposals arrived at on different bases are not self evident nor do they correspond entirely either to standard Bank (much less Fund) nor standard radical conventional wisdom:

1. short run CAD closing is likely to reduce not simply current consumption but also current and medium term investment and future potential for moderate growth (i.e. to lock the economy into an extended stagnation/transitory boom cycle);

2. raising GFCF - unless the incremental 'propensity to export' is sharply increased thereby - is unlikely to be particularly useful and would be expensive in terms of GDP (not just consumption) foregone, unless coupled with a substantial increase in external finance on at least sem-concessional terms;

3. for the same reasons raising the domestic rate of savings (s) is logically a consequence of CAD narrowing or concessional finance inflow broadening rather than a plausible means to achieving either;

4. with the implication that the case for reducing the government recurrent

budget deficit is basically one of domestic allocation and of inflation control rather than of increasing s;

5. but that foreign exchange pricing (exchange rate policy) and export finance are likely to be significant in respect to sustaining traditional mineral and manufactured exports and - perhaps - in stimulating growth of non-traditional manufactured exports;

6. Zimbabwe's economy - with the sole exception of GFCF - has a low import to output ratio so that neither standard import substitution approaches nor altered income distribution's impact on the makeup of demand are likely to offer more than marginal reductions in respect to the external balance parametric constraint;[32]

7. with the clear implication that efforts to increase freedom of manoeuvre must concentrate on raising the export/GDP ratio (in the GFCF sector potentially as a necessary complement to raising the domestic component of GFCF consistent with economic scale and capacity utilisation ratios);

8. while employment/productive self employment growth comparable to that of population can only be achieved if incremental employment/output ratios are significantly altered and that the most promising sector for such alteration is agriculture;

9. to be more exact small scale agriculture given access to more land via some type of fairly thoroughgoing land reform;

10. an approach which would also relax the potential food (and/or propensity to export) constraint arising from the very low historic agricultural output trend.

One political economic implication may be of particular interest - radical reform in respect to land is not simply not ruled out by actual external balance and employment and potential food supply constraints; it is, in fact, a precondition for relaxing and averting them. Similarly the implications in respect to the external sector are by no means totally conservative. While indicating the probable high cost of severe overvaluation of the Z$ (and giving no particular support to the contention that devaluation would in and

of itself affect the poor particularly severely[33]) they also indicate that free remittance of factor payments and import "liberalisation" (if that means allowing more final consumer goods import via the "market mechanism"[34]) would be expensive policies in respect to both GDP and GFCF. Similarly while it cautions against high, import intensive GFCF based import substitution (by no means necessarily a socialist or even populist cause in any event, vide Hwange) it also is at least moderately supportive of the case for balanced two way (countertrade) regional trade promotion rather than of a free trade area/convertible currency surplus approach, unless one assumes Zimbabwe's fellow SSA economies are not external balance constrained.

As noted in the opening sections, the analytical approach used neither claims to nor can answer a number of basic political economic questions. It cannot legitimately be used to argue for or against a larger public enterprise sector (centralised or decentralised) as such. It does of course indicate that higher costs - or insistence on high, short term profit rates - in respect to export or joint domestic/export units would tighten the external balance constraint but that is more a guidline for public enterprise goal setting or a criteria for ranking sectors in terms of suitability for public sector acquisition/expansion than an argument for or against public enterprise.

At a political economic ideological level the implications are highly negative both for general delinking (at least when the actual import makeup is taken into account) and for unselective 'integration' into global trade based on domestic consumption cuts and TNC investment with high initial GFCF and continuing external factor payment, import costs. It is broadly supportive of planned, regional integration/co-ordination (collective self reliance) on constraint relaxation grounds.[35]

One implication of the preliminary and once off work done to date is that a more in-depth and ongoing exercise based in Zimbabwean institutions (e.g. Finance, Reserve Bank, University) would be valuable. Medium term parametric constraint relaxation and ratio altering requires ongoing monitoring of constraints and of results as well as more systematic and rigorous application of macro relationship frame data to sectors, sub-sectors and products/enterprises.

Notes

1. This study is based on a 1983-84 research project carried out jointly by X. M. Kadhani, then Under Secretary for Policy, Ministry of Finance, Economic Planning and Development and R. H. Green, IDS (Sussex). However, the policy analysis and conclusions of the present study are solely by R. H. Green and are not necessarily those of X. M. Kadhani.

2. Admittedly the constraints imposed by necessity may be very restrictive and the degrees of freedom very limited.

3. c.f. R. H. Green, "IMF Stabilisation And Structural Adjustment In Sub-Saharan Africa: Are They Technically Compatible?", Sub-Saharan Africa: Getting The Facts Straight (C. Allison and R. H. Green, editors), IDS (Sussex) Bulletin, July 1985.

4. See Toward Sustained Development In Subsaharan Africa: A Joint Programme, World Bank, Washington, 1984 whose 'optimistic' case projection is for no recovery of GDP per capita over 1985-1995.

5. In theory no conflict arises if one assumes no state intervention, perfect competition, perfect knowledge and equality of power and knowledge among all economic actors. That, however, is to assume away the real world and many of its problems- an approach which has certain pedagogical uses but is highly dangerous as a basis for applied policy analysis or selection.

6. For example in Zimbabwe the ratio of consumption imports to GDP has been low and stable (not high or highly variable) while that of direct capital goods imports to GFCF has been highly unstable; neither of which results corresponds to popular or even academic intuition.

7. This section is based on late 1982 mimeographed draft texts of these studies used by R. H. Green and S. Griffith-Jones in the preparation of African External Debt and Development: A Review and Analysis a consultancy study for UNCTAD for the African Center for Monetary Studies in 1983-84. The interpretation and analysis are the responsibility of Drs. Green and Griffith-Jones and are not necessarily those of UNCTAD or ACMS.

8. The Kenya study by K. Savosnik in fact stresses that the high post 1973 incremental capital output ratio indicates a high degree of capacity underutilisation. It suggests combining use of this surplus capacity with systematic effects to lower the capital output ratio to allow higher consumption growth than that of either output or capacity until a more satifactory external balance position can be restored.

9. The overall review of the study and most of the twelve country studies (including Zimbabwe) are being published in a forthcoming (Winter 1985/86) special issue of World Development.

10. Zimbabwe study by X. M. Kadhani and R. H. Green in World Development, op cit.

11. See also Sub-Saharan Africa: Towards oblivion or reconstruction (R. H. Green, guest editor), Special Issue Journal of Development Planning, No.15, United Nations, New York, 1985 (including another version of the Kadhani and Green study).

12. The current Central Statistics estimate of 2.9% growth rate appears to be likely to prove to be an underestimate. In particular the 1982-1984 fall in birth rate estimate from 54 to 39.5 per thousand seems unlikely as is the decline from an actual 1960-1980 trend population growth rate of well over 3%.

13. In effect all household members aged 15 or more are counted as economically active.

14. Derived from analysis of recorded employment, small scale agricultural sector output and population data.

15. c.f. World Bank, op cit; JDP, op cit; "Famine In Africa", House of Commons, Second Report from The Foreign Affairs Committee, Session 1984-85, pp 133 ff - especially 149-154, Government Printer, London, 1985.

16. A shift from industrial/export crops to domestic food crops (or halting exports of crops such as maize and sugar) would of course ease the food supply constraint but at the price of tightening the earned import capacity constraint.

17. Because of highly restrictionist policies in respect to wages and salaries combined with a limited government borrowing requirement and falling profit plus import restriction limits on enterprise investment, Rhodesia had a rate of inflation below the global average. Therefore low nominal interest rate, relatively constant nominal exchange rate policies were not destabilising.

18. Several independent African countries were unable to impose full sanctions against Rhodesia while South Africa and (until after independence) Mozambique did not do so.

19. Tobacco production was quota limited and both holding costs and export losses were partially met by the Treasury.

20. For many products - especially fuel - South Africa was a high cost source.

21. Remittances to South Africa were largely free because Rhodesia had direct access to the South African capital market.

22. 1976 capacity levels result from 1975 GFCF.

23. As a result basic consumer goods production - especially food - was less effected than other subsectors of manufacturing.

24. Harare, 1982.

25. No truly satisfactory base period exists. 1971-73 might be least bad but is too far in the past. 1976-78 is clearly unsuitable. 1978-80 on average can be viewed as normal involving as it does one slump, one bottoming out and one recovery year.

26. The dangers of this pattern were luridly - if accidentally - underlined when the loss of foremen, fitters, engineers and artisans at Air Zimbabwe was described as necessitating a "crash training programme".

27. As demonstrated in ongoing work of G. K. Helleiner of the University of Toronto.

28. In respect to Botswana, Swaziland, Lesotho, Malawi, Zambia and Mozambique an alternative, at least in principle, would be to take markets away from South Africa. To do so, however, Zimbabwe would need to meet substantial export subsidies and extended payment facilities (given partly to "beat the competition" and partly for political reasons) and to develop a network of contacts and external branches of producers and wholesalers comparable to South Africa's. These would appear to be very serious obstacles - in most cases more severe than matching South African (pre subsidy) export costs.

29. This section draws heavily on discussions with Roger Riddell of the Overseas Development Institute (and formerly of the Zimbabwe Confederation of Industries) who has conducted extensive research in this field. The conclusions, however, are those of the present author and are not necessarily the same as his.

30. These projections are derived from computer runs done in the course of the UNCTAD project cited at note 9. They do not allow for any fall in incremental GFCF/Productive Capacity ratios or any reduction of overall or GFCF import content and to that extent may be seen as conservative or as having a built in safety margin. On the other hand their constant terms of trade assumption may prove optimistic unless external transport costs to the sea can be reduced in real terms.

31. On the 1973-83 record it would appear that general overheating does not occur at capacity utilisation levels of 90% or below but does at 95% or above. There appears to be an endemic imbalance sectorally in respect to construction which has had consistently above average implicit price deflators except in years of extreme depression (during which capacity declines lead to a new constraint on its ability to re-expand and to rapid price escalation on any recovery of GFCF).

32. This is not to advise that no import substitution is both possible and economically attractive - e.g. phosphorous free coal production for ferralloy production - au contraire.

33. It would do so if parallel (or consequential) domestic price increases were used to reduce real wages and/or real basic service expenditure.

34. This is not intended as a blanket endorsement of the present foreign exchange allocation mechanisms and processes. Micro and institutional observation (quite separate from the present parametric exercise) suggests the folloiwng weaknesses:

a. a bias toward import houses and against user enterprises in respect to intermediate goods;

b. an apparent overriding priority to keeping all enterprises going and only then applying strict product priority criteria to allocating the balance, e.g. imports of tennis balls and inputs into chocolate manufacturing in 1984-85 in parallel with acute imported input related shortages of tyres, tubes and gunny bags;

c. an inadequate - or at the least overly opaque - procedure for articulating cuts balancing demand claims with supply projections;

d. separation of visible import and insurance/freight licensing in a way hardly likely to minimise overall cif unit costs and (inadvertently) highly biased in favour of South African suppliers;

e. relative slowness and procedural cumbersomeness not counterbalanced by any flexible, speedy 'emergency allocation' account and procedure to handle small, urgent, genuinely unforeseeable breakdowns and/or spares and operating inputs/packing materials for additional exports made possible by unforeseen improvements in domestic input or external market conditions.

35. That is the technical economic considerations addressed by the model complement the political, security, stability and 'insurance' case (external to the model) usually made for regional solidarity, self reliance and economic co-ordination.

Tables

These tables are based primarily on Zimbabwe National Accounts and Balance of Payments data, as well as supplementary data and estimates provided by the Central Statistical Office and the Economic Development and Policy Division of the Zimbabawe Ministry of Finance Economic Development and Planning. The authors wish to acknowledge their debt to Godfrey Mandivheyi for his collection of the material for this section.

Table 1.

Gross Domestic Product, Capital Stock, Potential Output, Capacity Utilisation (000,000 Current Zi $)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983[3]
Gross Domestic Product	1450	1790	1900	2060	2070	2170	2535	3205	3995	4465	4900
Capital Stock	3720	4335	5175	6175	7020	8160	9580	10705	13050	15000	18815
Potential Output[1,2]	1510	1835	2070	2400	2675	2885	3370	3835	4215	4810	5740
Capacity Utilisation[2]	97%	98%	92%	86%	77%	75%	76%	83%	95%	91%	85%

1. Capital/Output Ratio rises in current $ because GFCF deflator has risen 1.4 times as rapidly as GDP deflator and incremental C/O ratio has been held constant at 2.5 in 1975 $.

2. Based on 1974 direct estimate, for other years 1973 potential output adjusted for change in fixed capital stock. Overheating present in 1973, 1974, 1981.

3. Estimate.

Table 2. Factor Shares In GDP (000,000 Current Zimbabwe $)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1. Labour										
Wages and Salaries	781	904	1050	1154	1248	1333	1502	1881	2395	2916
+ Communal Areas Agricultural Output	63	111	95	108½	106	74	102	146	265	271
+ 20% Salary Element In Other Unincorported Business Surplus	19	25	26	27½	27	10	15	24	17	16
Total	863	1040	1171	1290	1381	1417	1619	2051	2677	3203
%	59.5	58.6	61.6	62.5	66.7	65.4	63.6	64.0	67.5	71.7
2. Land										
Rent	56	60	61	65	68	62	62	61	70	71
- Improvement Element	-38	-40	-40	-43	-45	-41	-40	-40	-47	-47
+ 20% Value Added Mining	21	27	26	30	30	31	45	57	50	49
+ 10% Gross Output Commercial Agriculture	25	36	37	40	39	42	44	59	78	84
Total	64	83	84	92	92	94	101	137	151	157
%	4.4	4.1	4.4	4.5	4.6	4.3	4.3	4.2	3.3	3.5
3. Capital										
Gross Surpluses	613	827	791	845	753	773	983	1264	1530	1478
- Adjustments	-90	-159	-143	-165	-157	-116	-166	-246	-363	-373
Total	523	668	647	680	596	657	817	1018	1167	1105
%	36.1	37.3	34.0	33.0	28.7	30.3	32.1	31.8	29.2	24.8
Gross Surplus / K Stock %	14.1	15.4	12.5	11.0	8.5	8.1	8.5	9.5	8.9	7.4

Notes

1. Labour includes implicit working proprietor wage/salary income; rent is defined in Ricardian terms excluding "rent" on buildings and improvements.
2. Adjustments based on National Accounts data.
3. Gross Surplus/Capital Stock ratio computed on basis of K Stock in Table 1.

Table 3.

External Debt 1979/83 (000,000 Current Z$)

	31-XII 1979	Net Additions	Devaluation Uplift	31-XII 1983
Blocked Balances	450	50	-	500
Zimbabwe Govt.	350	550	200	1100
Reserve Bank	-	350	50	400
IMF	-	160	15	175
Enterprise	50	455	155	660
of which:				
(Parastatal	25	395	130	550)
(Private	25	60	25	110)
Total	850	1565	420	2835

	1980-83	
Current Account Deficit		1665
Plus Blocked Balances Growth		50
Less Net Errors and Ommissions (Inflow)		- 250
To be Financed Externally		1465
Finance Identified		1565
Unexplained		- 100

Table 4.

1983 Capital Stock: Sectoral and Ownership Breakdown (000,000 1983 Z$)

Sectoral Breakdown				Ownership Breakdown	
Total		Government	Individual/ Enterprise	Domestic	Foreign or Foreign Controlled
2600	Agriculture/Forestry	350	2250	1750	500
1250	Mining	-	1250	125	1125
2600	Industry	100	2500	1000	1500
1600	Power/Water[1]	100	1500	1500	-
300	Construction	50	250	50	200
2500	Transport/Communications	150	2350	2100	250
2500	Other Services	200	2300	1500	800
2500	Housing	200	2300	2000	300
3350	Public Administration/Infrastructure	3350	-	-	-
19200[2]		4500	14700	10025	4675 (3000)[3]

1 Basic water control works other than commercial power or water projects under infrastructure; roads/bridges are also included in infrastructure.

2 Fixed Assets Only (excludes inventories/net financial assets). 1983 Z$ value at 31-XII-83.

3 Foreign owned equity and proprietorial capital adjusted for domestic and external borrowing ($350), domestic minority interests ($1000), enterprises foreign managed but domestically owned ($325).

Table 5.

Gross Domestic Product Implicit Price Deflator, Z$/USA$ Exchange Rate (Base 1975 = 100)[1]

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[2]
GDP Price Deflator	.81	.94	1.00	1.10	1.19	1.26	1.46	1.65	1.79	1.99	2.31	2.45
USA $/Z $	1.02	1.01	1.00	1.09	1.10	1.18	1.19	1.12	1.21	1.34	1.77	2.20

Notes:

1. This does not measure comparative purchasing power changes as to do that one would need to adjust the first line for US GDP deflator increases which total on the order of 75% since 1973. This suggests that the stable comparative purchasing power parity rate index for mid 1984 would have been of the order of 1.40 to 1.50 not 2.20.

2. Mid 1984 estimate.

Table 6.

GDP, Capital Stock, Potential Output, Fixed Investment, 1973-84 (000,000 1975 Zi $)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983[3]	1984[3]
Gross Domestic Product	1796	1912	1901	1876	1733	1718	1743	1936	2231	2189	2112	2133
Index (1973 = 100)	100	106.5	105.8	104.5	96.5	95.7	97.0	107.8	124.2	121.8	117.6	118.0
Index Population[1]	100	103.6	107.3	111.2	115.2	119.3	123.7	128.2	132.8	137.6	142.5	147.5
Index Per Capita	100	102.8	98.6	94.0	83.8	80.2	78.4	84.1	94.3	88.5	82.5	80.0
Capital Stock	4360	4875	5175	5460	5625	5725	5770	5810	5890	6040	6210	6340
Potential Output	1850	1950	2070	2185	2250	2290	2310	2325	2355	2415	2485	2540
Index (1973 = 100)	100	105.3	111.8	117.7	121.5	123.7	124.7	125.5	127.3	130.5	134.4	137.5
Capacity Utilisation	97%	98%	92%	86%	77%	75%	76%	83%	95%	91%	85%	84%
Gross Fixed Capital Formation	410	471	467	353	300	245	239	285	355	383	347	330
Depreciation[2]	162	171	181	191	197	200	202	203	206	211	217	222
Net Fixed Capital Formation	248	300	286	162	103	45	37	82	149	172	130	108
Index (1973 = 100)	100	121.0	115.3	65.3	41.5	18.5	14.9	33.1	60.1	69.3	52.4	39.5

Notes:
1. Estimated on basis of 3.6% annual population growth.
2. Estimated at 3.5% opening fixed capital stock for year.
3. Estimate.

Table 7.

Savings, Consumption and Gross Capital Formation Shares in GDP (%)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983*
Consumption	75.3	78.0	78.2	75.7	78.7	78.7	82.6	84.9	87.3	84.2	80.7
Domestic Savings	21.6	18.7	18.4	20.7	17.7	17.2	12.7	11.5	9.0	9.6	10.5
Net External Factor Payments/Remittances	3.1	3.3	3.4	3.6	3.6	4.1	4.7	3.6	3.7	6.2	8.8
GFCF	22.8	24.6	24.6	18.8	17.3	14.3	13.7	14.8	15.5	17.5	16.4

* Estimate.

Table 8.

Imports, Import Ratios, Exports (000,000 Zi $)

	1977	1978	1979	1980	1981	1982	1983[3]
Imports Goods and Non Factor Services							
Total Current Zi $	559	594	776	1106	1419	1434	1475
1975 Zi $	448	419	420	521	679	663	610
% GDP	26.5	25.1	30.5	34.5	35.5	33.1	30.2
Capital Goods Current Zi $[1]	112	100	116	205	347	482	442
1975 Zi $	90	70	81	98	168	223	177
% Gross Fixed Capital Formation	30.0	28.7	33.8	32.5	47.2	59.3	51.0
Exports Goods and Non Factor Services							
Current Zi $	624	687	816	1062	1126	1169	1300
1975 Zi $	575	595	615	604	581	619	648
Price Indices (1975 = 100)[2]							
Imports	124.6	141.9	194.3	208.2	207.1	216.4	238.3
Exports	108.6	115.5	132.7	175.9	193.9	188.8	200.7

Notes:
1. Non Factor services allocated to capital goods and other imports in same proportion as visible imports.
2. Price data available visible imports/exports only. Deflation based on assumption parallel price movement of services.
3. Estimate.

Table 9.

Balance of Payments (000,000 Current Zimbabwe $)

	1977	1978	1979	1980	1981	1982	1983[2]
Exports	+624.1	+687.1	+816.3	+1062.1	+1125.5	+1169.3	+1300
Visible	520.3	579.2	667.5	813.7	925.6	857.7	1025
Gold	45.7	46.1	66.6	115.2	76.3	140.5	100
Invisible	58.1	61.8	82.2	133.2	133.6	171.1	175
Mports	-558.6	-594.0	-775.8	-1106.0	-1419.1	-1434.2	-1475
Visible	421.7	443.1	594.9	860.5	1059.4	1114.3	1130
Invisible	136.9	150.9	180.9	245.5	359.7	319.9	345
Factor Payments (Net)	-64.7	-76.1	-76.3	-72.4	-122.7	-206.4	-285
Transfers/ Remittances (Net)	-9.6	-12.0	-38.0	-40.4	-23.0	-62.3	-75
Deficit (A)[1]	8.8	(25.2)	73.9	156.7	439.2	532.8	535
Gold Stock Change[3]	-8.5	+5.8	+14.3	+29.7	+41.7	-17.7	-88.7
Deficit (B)[4]	17.3	(31)	59.6	127.0	397.5	550.5	446.3

Notes:

1. ( ) = Current Account Surplus
2. Estimate.
3. Change in Reserve Bank holdings of domestic production to be exported. Changes largely represent short term external asset/liability preferences and therefore arguably distort underlying Current Account Deficit.
4. Adjusted for Reserve Bank gold stock change.

Table 10.

Ratio of Current Account Deficit to Potential Ouptut (000,000 Current Z$)

	1973	1974	1975	1976[3]	1977	1978[3]	1979	1980	1981	1982	1983[4]
CAD	2.6	95.5	131.3	(13.2)	17.3	(31)	59.6	127.0	397.5	550.5	446.3
PO	1509	1833	2070	2402	2676	2885	3370	3833	4217	4808	5738
CAD/PO	0.2	5.2	6.3	(0.5)	0.7	(1.1)	1.8	3.3	9.4	11.4	7.8
Capacity Utilisation (%)	97	98	92	86	77	75	76	83	95	91	85

Notes:

1. 1976-78 Average 1.3%
2. Deterioration: 1981 - 8.1%; 1982 - 10.1%; 1983 - 6.5%.
3. ( ) = Current Account Surplus.
4. Estimate.

Table 11.

Causation 1981-83 Increase Current Account Deficit/Potential Output Ratio

Decomposition of Increase In Current Account Deficit as % Potential Output: 1981-1982-1983 Compared with 1978-80 Base

CAD/PO 1978-80 = 1.3%

	1981	1982	1983
1. Increase CAD/PO	8.1%	10.1%	6.5%
2. Expected Terms of Trade Gain From Reversal of Sanctions[1]	4.0%	4.0%	4.0%
3. Total Deterioration To Be Explained	12.1%	14.1%	10.5%
I. External Shock	3.39%	5.40%	6.20%
Terms of Trade[1]	.82	2.45	2.55
Interest Rate	.58	1.28	1.30
Recession	1.40	1.88	2.36
Weather[2]	-	(-.41)	(-.09)
Transport[3]	.58	.21	.09
II. Debt Burden	0.02%	0.19%	0.80%
III. Domestic Policy	6.93%	4.16%	1.92%
Output	3.61	2.73	1.48
Investment	.11	.29	.20
Tradeability[4]	.58	.62	(-.36)
Import Relaxation[5]	1.75	(-.41)	(-.18)
Profit Remittance Relaxation[6]	.88	.92	.77
IV. Capital Rehabilitation Shock (Increase M/GFCF Ratio[7]	2.22%	3.74%	1.68%
V. Total Calculated	12.6%	13.5%	10.6%
VI. Total 'Observed'[8]	12.1%	14.1%	10.5%
Interaction Effects/Errors/ Ommissions[9]	(-0.5)%	0.6%	(-0.1)%

Notes Table 11.

1. Removal of sanctions allowed ending intermediation which had raised import prices perhaps 15% and reduced export prices 20% on average. In 1980 about 60% of this gain was achieved but in 1981-1983 it was rapidly offset by terms of trade deterioration. These calculations compute the counterfactual 1981-83 terms of trade adjusted for sanctions reversal and take terms of trade loss from these levels.

2. The 1981 weather boosted harvest had a positive (deficit decreasing) impact in 1982-1983. The 1982-84 weather stricken harvests will have severe negative impact in 1984 and 1985.

3. In 1981 and to a lesser extent 1982 and 1983 some potential exports (particularly steel) could not be exported because no transport to ports was available. Rough estimates of amount from Treasury sources.

4. Estimated sector by sector effect of real exchange rate appreciation (depreciation) from base period level.

5. Change in ratio of non-capital imports to GDP from base period.

6. Change in ratio of profit remittances allowed to GDP.

7. Change resulting from increased ratio of capital imports to GFCF. This was caused by making good deferred maintenance and restoring a more normal makeup of GFCF after 1976-1979 import constraints which had altered its composition as well as reducing its overall magnitude.

8. 'Observed' including adjustment for 'lost' terms of trade improvement explained at note 1.

9. The sectoral computations in respect to loss of exports due to tradeability and impact of recession in certain cases probably posit exports beyond sub-sectoral capacity limits.