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**ZIMBABWE: ADJUSTMENT, MACRO-ECONOMICS AND
SUSTAINABILITY**

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ADJUSTMENT, MACROECONOMICS AND SUSTAINABILITY

CGE Results for Zimbabwe

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ABSTRACT

Within the framework of a small, macroeconomic general equilibrium model of the Zimbabwean economy, comparative statics are used to assess alternative ways of macroeconomic management since independence. The fiscally expansive policies of the 1980s are shown to generate growth which, however, is unsustainable on fiscal, equity and balance of payments criteria. The result of a full implementation of structural adjustment policies is a 10 percent higher GDP level compared to the baseline scenario. The dismal growth performance in the 1990s is attributed to five factors: deteriorating balance of payments position, lack of investment, lack of fiscal reform, recurring negative redistributions and unwillingness or inability to view the reform policies as a coherent package deal. Income distribution differs only marginally across the two diametrically opposed regimes, while the fiscal deficit is substantially higher under policies of the 1980s.

INTRODUCTION

The old legacy of the choice of development strategy still haunts modern economists in Zimbabwe. To date, two diametrically opposed policy regimes {fiscally-driven redistribution, import substitution and government controls in the 1980s and getting prices right, through structural adjustment programs in the 1990s} have been experimented with but have both not yielded the desired outcomes. The intellectual roots of the 1980s strategy can be traced back to the structuralist approach that emphasised the role of government in economic development. Back in the 1950s, Prebisch (1950) and Singer (1950) had already asserted that barter terms of trade ultimately work against developing countries. This may stem from a combination of low prices and income elasticities for the products of developing nations as well as from biased technological improvements in manufacturing, reducing eventually their raw material needs. Proponents of this view went further, arguing that developing nations' international trade should not be shaped by prevailing world relative prices. Instead, developing nations would benefit from adopting active policies encouraging import

substitution of manufacturing in order to avoid impoverishment resulting from secular deterioration of their terms of trade. These views, coupled with the need to avoid disruption of industries which had become used to enjoying the benefits of protection prior to independence provided the intellectual climate for the restrictive policies in the 1980s. Criticism of the 1980s strategy began to intensify towards the end of the decade. The accepted view was that the control strategy at a minimum had outlived its usefulness and that economic liberalization is crucial for economic development. Condemnation of the control period was fairly unanimously shared by the private sector and policy makers by the start of the 1990s culminating in 1991 with the implementation of the Economic Structural Adjustment Program (ESAP). Approaching the end of the 1990s, consensus seems to be building around the idea that despite the dramatic economic policy reforms, economic performance of the 1990s has fallen short of that of the 1980s.

Several previous studies have addressed this apparent paradoxical outcome. Recent debates, albeit hotly contested, have stressed that this outcome is largely explained by exogenous shocks to the economy, especially drought¹ and that the reforms have been incomplete and badly sequenced. However, general conclusions are difficult to draw from the series of specific, and mainly partial equilibrium or single sector, models used in the discussions. The sensitivity of outcomes to model specification and abstraction from general equilibrium effects constitutes a major hurdle in attempts at generalizing the results. This paper quantifies the likely impacts of the 1980s policy regime, and compares them with the potential impacts of the 1990s policy reform. It attempts to answer the question why Zimbabwe's economic performance has been so poor after economic reform and whether the modest improvements that occurred in the 1980s could have been sustainable. A computable general equilibrium model (CGE) of Zimbabwe is used to shed light on these issues. Although CGE models vary a lot with regard to model specification, they all serve two main purposes. First, they allow for ex-ante policy analysis and second, theory can be given numbers. In fact, a CGE is the only model available to perform ex-ante policy analysis. Since theory can give directions but cannot provide quantitative measures, models are an excellent solution. Compared to the

¹Note, however, that even if the severe drought years of the 1990s are left out of the analysis, the 1980s performance still dominates that of the 1990s.

previous literature on Zimbabwe, this paper exhibits three originalities:

- first, the economic feedback on households and producer behaviour is explicitly modeled. Previous works (Chitiga and Mabugu (1998), Davies, Rattso and Torvik(1994, 1998)) have made significant steps towards this direction. Although available analytical tools are still limited, this development has allowed the exploration of the consequences of reform in markets typical of the Zimbabwean economy.
- second, a counterfactual free of exogenous shocks is constructed. This allows the discussion of how policies *would have* impacted on the economy had there been no external shocks. Relatedly, policies pursued in the 1980s are expected to have delayed effects in the 1990s and this constitutes a problem. The model allows the separation of these effects.
- third, the model can be run under different trade regimes, one with foreign exchange rationing and one with free trade, along the lines suggested by Davies et al (1998). This allows for analysis of issues related to trade orientation.

Calibrating the model on Zimbabwean data, it is found that expansive policies of the 1980s yield relatively high growth. However, this strategy is unsustainable on fiscal, equity and balance of payments criteria. The lack of growth in the 1990s is traced back to four issues, namely subdued investment, deteriorating balance of payments position, lack of fiscal adjustment and negative distributional shifts. The result of a *joint* implementation of the reform package is a 10 per cent higher GDP level compared to the baseline scenario, illustrating that the measures are mutually reinforcing and are to be viewed as a coherent whole component.

PAST POLICIES AND ECONOMIC PERFORMANCE

After gaining independence in 1980, Zimbabwe continued for a decade a period of pervasive state control over the economy. Economic policies comprised price controls, a huge public sector, parastatal enterprises with soft budget constraints, high import tariffs to protect domestic industry, deficits in the government budget and foreign exchange rationing. The government intervened extensively in labour markets in a bid to reverse the policies of racial discrimination and inequality pursued before independence. Although falling short of expectation, land resettlement has been an important wealth redistribution measure undertaken during the period.

As Table 1 shows, though erratic, growth in GDP over this period was quite reasonable, averaging 4.1 per cent. Zimbabwe was one of the few African countries whose economy did not decline in the course of the 1980s. This relatively good performance can be rationalized using both structural and neo-Keynesian arguments. It was a period when the government combined deficit financing and foreign exchange allocation to priority sectors with some effort at redistribution to achieve growth-compatible outcomes. The same Table 1 shows that in terms of investment in physical capital, the economy performed poorly. Private investment fell steadily during the 1980s from 12 per cent of GDP in 1985 to only 7.7 per cent of GDP in 1988. Such low levels of investment, which were believed to be the result of a contraction of imports and uncertainty, were barely enough to maintain the existing capital stock. We argue below that this had consequences for the future growth prospects of the economy.

Table 1 Zimbabwe: growth of gdp, inflation, employment, investment and factor shares (%)

	GDP	Inflation	Employment	Investment	Wage/GDP	Profit/GDP
1980-1985	4.1	8.7	2.3	9.8	56.7	41.6
1985-1990	4.6	10.8	1.9	7.7	57.3	40.5
1990-1996	1.8	25.1	1.4	21.0	45.0	54.8

Source: *National Accounts, various issues*, Central Statistics Office, Harare.

Approaching the end of the first decade of independence, although per capita GDP was 7 per cent higher than at the start of the decade, the fiscal deficits had become fiscally unsustainable and the foreign credit constraint on the economy had become binding. It would seem that these constraints, coupled with increasing unemployment, pressure from the Breton Woods institutions to reform and the collapse of controlled economies of Eastern Europe were crucial factors in convincing authorities to dismantle the more or less centrally controlled economy of the 1980s. The World Bank and the IMF supported the government in launching the Economic Structural Adjustment Program (ESAP) in 1991 and the Zimbabwe Program for Economic and Social Transformation (ZIMPREST) in 1998². An important component of

²Government has been successful in implementing fully trade liberalization and price deregulation. Fiscal reform has proved difficult up to the present and privatisation commenced in 1997.

the reforms has been trade liberalization, associated with the abolition of quantitative controls and the reduction and harmonization of tariffs and duties. Another important component of the reforms has been to obtain macroeconomic stabilization, which implied scaling down the state sector to balance the public budget, dissolving or restructuring parastatal enterprises and devaluing the Zimbabwean dollar. A further important component was to get the prices right. This meant removing subsidies and price controls, dissolving and restructuring state enterprises and letting competition and market forces match supply and demand.

As Table 1 shows, a striking feature is that economic performance has deteriorated since the launch of the reforms. There followed a sharp economic contraction as reforms were implemented. In 1992, due mainly to a devastating drought, the economy declined by over 5 per cent, before stagnating the following years. In 1996 however, the economy registered a short lived recovery. The current account balance has systematically deteriorated, due to a sluggish export response, increased import demand and a reduction in foreign transfers. Inflation has generally risen while unemployment has continued to soar.

There has also been a distributional shift away from low income employed households to profit earners. The share of GDP going to salaries and wages, which averaged just over 57 per cent in the 1980s, fell sharply to 45 per cent between 1990 and 1996. By contrast, profit share has risen from 41 percent in the 1980s to about 55 percent in the 1990s, which explains in part the surge in investment in the 1990s, which has averaged 21 per cent, significantly higher than in the 1980s. That high investment levels are coexisting with poor growth performance may at first appear paradoxical, but the explanation appears to be that the high investment is also reflecting reduced capacity utilization due to the worsening trade deficit and reduction in effective demand³.

³Other plausible explanations could be that the investment has mainly been for replacement of old equipment rather than to expand capacity or that it has been in areas with long gestation lags or imply that it has located in inefficient sectors.

MODEL DEVELOPMENT

The model used in this paper is in the realm of CGE models. It is a real side model, distinguishing between policy instruments by the government and their general equilibrium effects on production, employment, income generation, fiscal and foreign trade balances. The model further distinguishes between five production sectors {agriculture, services, construction, exportables and importables}, two types of labour {skilled and unskilled}, four income groups {small scale agriculture, profit, unskilled and skilled} and the government. The Social Accounting Matrix (SAM) for 1991 (constructed by Mabugu and Chitiga 1997) is used to calibrate the parameters of the model.

In each production sector except agriculture {*exogenous supply, endogenous imports and flex prices*} and services {*demand determined output and cost plus pricing*}, a representative firm maximizes its profit under the hypothesis of perfect competition. The functional form of the production technology is a CES (Constant Elasticity of Substitution). This functional form was chosen to give a particular role to the different production factors used (skilled labour, unskilled labour and capital) in nested fashion in order to produce more or less goods. So, the firm's program is written as profit maximization under the CES. The solution gives the optimal factor demand as well as the factor price frontier under the hypothesis of zero profits. At an inferior level of the production structure, intermediate input consumption is further disaggregated under the hypothesis that it is formed as a CES composite of domestic and foreign inputs, each constituent then being allocated according to the Armington specification. The intermediates aggregate is combined with value added as a Leontief function to form output.

Consumers receive all income from the production factors labour, capital and land. After paying income taxes, a certain share is set aside as private saving and the rest is spent on consumption. A consumer in each category is assumed to have a utility function of the Stone-Geary type, hence

$$U(C) = \sum m_i \text{Log} (C_i - \Theta_i)$$

where m_i (marginal propensity to consume) and Θ_i (floor consumption levels) are parameters and C_i is sectoral consumption while P_i is sectoral output price. The consumer's budget constraint is written as $Y_d = \sum P_i C_i$ where Y_d is disposable income. With this constraint on total consumption expenditure, standard utility optimization yields consumption values for goods of the form

$$C_i = \Theta_i + m_i/P_i (Y_d - \sum P_i \Theta_i)$$

where the first term on the right hand side is the quantities of committed consumption, the term in parenthesis is the supernumerary expenditure, that is, expenditure over and above total committed expenditure. This is the well known Linear Expenditure System (LES), where the consumer always consumes a minimum amount of each good independent of price changes, and the surplus money from the expenditure budget is spent with constant coefficients for each good, although different consumers have different consumption propensities.

The government collects fiscal receipts (taxes, indirect taxes on intermediate inputs, on consumer expenditures, on imports, income taxes and various nontax charges and levies), employs skilled and unskilled labour and consumes both foreign and domestic products. The receipts are written simply according to the structure of the tax system.

The modelling of investment {while there are no adjustment costs on the capital} is of a general scope, typically used in general equilibrium sectorial models. It is supposed that total aggregated investment is a composite good produced according to a tier structure close to that describing the productive sector. In this model, total investment, obtained as the sum of investment in construction and importables, is a construction-importables CES composite. This specification allows the allocation of total investment in demands for construction and importables respectively, with the shares depending on relative prices. As with final consumption and intermediate consumption, investment may come from the national territory or may be imported. Once again, the allocation is done according to the Armington specification.

In modelling foreign trade, distinction is made between tradables and nontradables. In one

version of the model, a foreign exchange rationing mechanism is introduced to capture the situation in the 1980s (for details see Mabugu (1996)). In the second, the foreign exchange rationing mechanism is removed, to represent the more market-oriented conditions of the 1990s (for details see Davies et al (1998)). The current account is now endogenous, with the nominal exchange rate fixed. All foreign currency needs for inputs, food and consumer goods are satisfied by drawing on the current account balance.

The data base underlying the model is a Social Accounting Matrix (SAM) for the year 1991, stemming from the Zimbabwean national accounts. Hypothesis concerning production, consumption, investment etc have been introduced to complete the initial matrix. The choices of elasticities have been realized following two principles, (a) a review of the economic literature, especially on Zimbabwe, provided an "elasticity basket" whose validity is, a priori, guaranteed and (b) where an exact match could not be made, guestimates based on experience and consultations with experts were used. The remaining parameters such as distribution or scale parameters were calculated so as to precisely reproduce the benchmark SAM for 1991.

POLICY ANALYSIS AND SIMULATIONS

Given the non-linear/non autonomous nature of the system of the equations defining the model, there is little which can be done in the form of *analytical* investigations. Therefore, to find the effect of various policies directed toward economic development since 1980, recourse is made to numerical simulations. Various scenarios are run and compared to the benchmark (no change) scenario.

Scenario A: Were the policies of the 1980s sustainable?

A question that comes to mind about the performance of the Zimbabwean economy in the 1980s is that despite the variability, why was growth relatively high in this period and can these reasons be expected to bring about sustained development? To study the impact of the 1980s policy regime, a policy that raises simultaneously government expenditure and minimum wages by 5 percent in a foreign exchange rationed model is simulated. The results of these policy experiments on selected variables are shown in Table 2.

Table 2 Effect of a 5% increase in minimum wage and government expenditures in a model with foreign exchange rationing (percent changes from base values)

<i>Variable</i>	<i>Scenario A</i>
GDP	3.2
Fiscal deficit	-2.8
Current Account	---
Unskilled Income	3.4
Skilled Income	2.5
Profit Income	2.1
<i>Sectoral Performance</i>	
Importables	5.8
Exportables	-1.6

The policy increases GDP by 3.2 per cent. However, although government revenue goes up, government saving falls, implying that the positive effect of the larger tax income base does not fully offset the drastic increase in government expenditure. The minimum wage policy

is effective in raising the real income of unskilled workers, whose increased demand in turn benefits the domestic oriented sectors. However, on a wider scale, the expansive policy with foreign exchange rationing also favours a relatively small affluent class, which typically leads to a deterioration of the current account balance⁴. This is reinforced by the observation that some of the highest production growth was led by consumer durables.

This raises interesting sustainability questions. If expansionary policy was the major factor explaining the relatively high growth, that growth is unlikely to be sustainable for at least three reasons. First, a stagnant economy in which capacities are underutilized can increase its output for a short time as demand rises even without additional investment, so long as the balance of payments position permits such an expansion of output. However, for growth to be sustained, the process of capital formation must be renewed. This was not the case because net capital stock had almost ceased to grow as investment had fallen off rapidly⁵. Second, the rise in current government expenditure is not matched by a corresponding rise in current receipts. With the ratio of current receipts to current expenditure declining, an increasing portion of revenue expenditure had to be financed through borrowing and other means. Consequently, interest payments as a percentage of total current expenditure rose as expansionary government policies were made possible by a rapid expansion of government internal and foreign debt. Theoretically, a fast growing country can sustain persistent fiscal account deficits without increasing their external indebtedness. This was not the case in Zimbabwe. The increase in public debt was unsustainable especially in view of the fact that the economy could not grow itself out of the problem because of foreign exchange constraints on expansion. Third, the increase in unskilled wages and the ensuing fragile growth had a contamination effect on other aspects of the labour market. During this period, Zimbabwe suffered a severe lack of skilled labour and this potentially put a brake on growth. With increased growth, the market for skilled wages became increasingly tight and wages began to rise. To the extent that this process continued, a wage-spiral could have been set in motion. Recession inducing policies would have been required to obviate the explosion. In view of

⁴This does not happen here because of foreign exchange rationing.

⁵To complicate matters, foreign savings were negative while domestic savings were higher than 17% of GDP.

this, it appears that the growth of the 1980s would most likely have been unsustainable.

Scenario B: Are policies of the 1990s sustainable?

Following the lacklustre performance of the 1980s, Zimbabwe made a fundamental shift in its economic strategy in 1991. Like many other countries in Sub-Saharan Africa, it embarked on a far reaching adjustment program. The policy framework which is currently being followed is embodied in the Economic Structural Adjustment Program (ESAP) and its predecessor, the Zimbabwean Program for Economic and Social Transformation (ZIMPREST). Are these changes likely to result in sustainable development?

To answer this question, four scenarios described below are run in a liberalized model. The results are displayed in Table 3.

Table 3 Stepwise impact of reform policies in a liberalized regime model (percent changes from base values)

<i>Variable</i>	<i>Scenario B1</i>	<i>Scenario B2</i>	<i>Scenario B3</i>	<i>Scenario B4</i>
GDP	-0.2	5.0	-3.8	10.0
Fiscal deficit	-2.3	0.1	0.4	2.5
CurrentAccount	-12.1	---	4.5	-3.7
Unskiled incom	-0.4	-4.2	-1.3	2.4
Skilled Income	-0.0	-1.2	-0.4	3.2
Profit Income	1.1	8.0	1.4	4.0
<i>Sectoral Performance</i>				
Importables	-10.0	-1.1	-0.3	17.2
Exportables	-1.2	12.0	4.1	5.5

Scenario B1: Trade Liberalization (removal of forex rationing and tariff cut), no fiscal adjustment

Trade liberalization is represented as a regime-shift (i.e., a shift from foreign exchange rationing to market allocation) and a reduction in tariffs on imports. Although economic efficiency and capacity utilization may be enhanced by trade liberalization, this does not improve distribution in the medium term. There is a distributional shift towards the well off classes, and a consequent fall in private consumption. As noted above, this tends to reduce aggregate demand, with a depressing effect on output in standard Keynesian fashion. The recession has the effect of reducing the tax income base. However, there is only a mild worsening of the fiscal deficit as tariff revenue increases from increased imports.

A distinct feature of the results is the deindustrialization that is brought about. The importables sector drops by 10 per cent compared to the base scenario. This is mainly due to loss of market share as consumer imports pour in with consequent slowdown in technological change. A closer look at the recent manufacturing performance at a disaggregated level indicates that the purely manufacturing sector (excludes ferrochrome, iron and steel, cotton lint and sugar) has become the most dynamic sector (has grown by about 15% between 1991-1995). Interestingly, the activities that led growth in the past are displaced by imports and continue to struggle. These include textiles and nonferrous metals. Consistent with predictions of liberalization, there is a dismantling of the industrial structure that existed before the reform *in tandem*.

The impact on the current account is detrimental. The measures increase imports (and import demand) while exports are hurt by a relative real appreciation, so that the trade balance worsens. It deteriorates until it is almost 8 per cent of GDP, which is unsustainable. The lesson here is that trade liberalization on its own is not enough. The ensuing balance of payments crises, deindustrialization from reduced demand and loss of market share and stagnant investment need to be addressed.

Scenario B2: Scenario B1 plus a currency devaluation

It is common for countries liberalizing trade policies to devalue their currency to compensate for the liberalization impact on the balance of payments. To capture this, a scenario in which there is a 25 per cent nominal devaluation⁶ in addition to the policy changes carried in the preceding scenario B1 is simulated.

The GDP growth rate now reaches a respectable 5 per cent. The main partial effect is an increase in total exports due to a direct positive effect in production prices for exported goods. There is a scale effect as well as a substitution effect, since the relative prices between the export and domestic markets increases. In assessing the devaluation response to a balance of payments pressure, we should note that it leads to some deindustrialization as importables decline. But this reduction is offset by the increase in export volume and increase in domestic demand. The required economywide elasticity of exports for this to happen would be 0.3. Based on econometric evidence reported in Chhibber et al (1989) on export elasticity in Zimbabwe, it would appear that traditional exports would be so responsive. However, devaluation results in severe income redistributions and inflationary pressures. The share of profit in total income rises at the expense of wage workers, especially unskilled workers. The potential inflationary and negative redistribution effects of devaluation are likely to constrain the use of nominal exchange rate policy, with the result that sustained reforms are likely to involve deterioration in the external balance until there is an export response.

Under the assumptions of the model, a devaluation would have favourable effects on both the macroeconomic balance and output. It would, however, exert inflationary impact and lead to worsening income distributional shifts. The crucial question here is what would happen to wage costs when devaluation is undertaken. This brings us to the structure of the labour market, the role of trade unions and their readiness to cooperate with policy makers in some form of a social accord. Allowing wages to increase would fuel inflation and hurt growth. The benefit for the external balance would almost completely vanish. Provided an accord is

⁶This amount of devaluation constrains the current account balance to stay unchanged at the base level.

reached, devaluation appears to be a good idea.

This is fine as far it goes, but Zimbabwe must develop a comparative advantage in some manufacturing branches. This is very difficult in an economy where the price system has been badly distorted in the past. Partly because of this difficulty, more attention should be given to the extent of 'natural' as opposed to policy barriers to exports in particular. Natural barriers include higher transport costs associated with distance, or with inefficiencies associated with smallness and lack of competitiveness in the transport sector. It also covers delays and costs associated with customs procedures, and the costs and procedures associated with trade financing. These supply-side measures need to be focused to a particular group of firms for maximum effect. Basically this boils down to an exercise in finding areas where Zimbabwe may have a comparative advantage. But picking winners *ex ante* is very difficult, so that euphoric expectations about supply side policies effects should be discouraged. The point is that the Zimbabwean reform package has not given as much attention to such infrastructural deficiencies as it has to reform of direct policies⁷.

Scenario B3: Scenario B2 plus cut in government expenditure

In this scenario both government consumption of goods and use of labour is reduced by 5 per cent, on top of the policy changes in scenario B2. This is one aspect of the overall reform package not successfully carried out by authorities as the budget deficit is still far from being in line with that stipulated in the reform program. The first order effect of a reduction in government employees is a reduction in GDP, which falls by almost 9 per cent. This entails a negative demand effect on the economy. The negative output effects of this demand reduction are enhanced by the multiplier mechanism. Reducing government expenditure partially increases government revenues, but other tax income sources are adversely affected by the economic contraction, so that there is a reduction in government revenue. However, government savings increase because of the reduction in expenditure. Imports fall in line with the decline in output, while the real exchange rate depreciates, and hence exports increase.

⁷In a recent paper, Milner (1998) evaluates to what extent the effectiveness of the trade reforms have been constrained by avoidable infrastructure deficiencies or by the design of trade policy reform itself in the context of African reforms.

This explains the relatively large improvement in the trade balance.

Thus, if care is not taken, government stabilization policies could easily come into conflict with the growth objective. Avoiding fiscal adjustment is not the solution either as experience has shown. The way stabilization policy has been carried out in Zimbabwe points to a trade off between growth and price stability. Monetary policy has been very tight during the 1990s yet fiscal adjustment has been difficult to achieve. This has led to a situation where nominal interest rates are so high that it can be argued that they tend to choke growth.

Reducing just the *level* of expenditure has favourable effects on the macroeconomic balance but generates adverse effects on growth. This policy reform needs very careful assessment before implementation. Attention must be devoted to other types of intervention. For example, there may be a need to change the composition of the budget and realign it towards investment to compensate for the demand contraction from the policy. If the economic outlook is gloomy, it may be advisable to postpone to a latter period this part of the reform as it may compromise the chances of any social pact formation between government and the people, which is crucial for reform success. A number of voices have recently suggested that the success of reforms will have more to do with the willingness of government to undertake the appropriate macroeconomic policy adjustment. In the same regard, economic reforms have to be matched by reforms of political institutions and social safety nets⁸.

Scenario B4: Scenario B3 plus an increase in investment

This scenario investigates the implications of increased investment by letting investment rise plus the full ESAP scenario B3. The total effect of all the economic reform policy changes in this scenario is positive compared to the benchmark. GDP is higher and its composition is turned more towards manufacturing production which is 17.2 per cent higher than in the baseline scenario. The increased growth leads to a worsening of the current account balance.

⁸For example, Rodrik (1998) views the industrial/enterprise policies (e.g., lifetime employment) and provision of social services to avoid extremes of income inequality as a reason why the East Asian countries have been able to become more outward oriented despite external shocks.

When GDP grows in the Zimbabwean case it results in increased imports. To the extent that the latter consists of producer goods used by the export industry the deficit on the current account will only be temporary. But since increased incomes tend to boost imports of consumer goods and cause a real appreciation, this tends to blunt the domestic output response and result in pressures on the current account. Should this become serious, a further devaluation (as opposed to a tight monetary policy) may be required to avoid growth becoming stunted before it becomes sustained.

Over and above these issues there hangs a much more important question mark. The growth-generating force advocated in this scenario is investment, which by definition, is exogenous and hence not under the direct control of the policy maker. As is well known, the determinants of investment are difficult to model. In the model, positive signals are coherent macroeconomic policymaking, not least of which are policies contained in scenario B3. On top of this, a solidly based revival of the capital formation process depends on three principal variables that policy should further address: (1) the real return to investment for the economy as a whole and for the individual producer and (2) the real cost of investment finance on the capital market and (3) relative stability (lack of uncertainty).

Relatedly, we have argued elsewhere that investment in the 1990s neither went into the more productive sectors nor was it driven by productivity trends, especially in the formal sector. This implies that reforms on their own may be insufficient to create signals necessary to channel investment efficiently. If most of the investment is distributed to sectors with low marginal productivity of real capital, the increase in the stock of real capital will contribute little extra production to the GDP, a chilling observation synonymous with recent experience.

SUMMARY AND CONCLUSIONS

An applied general equilibrium model is used to quantify the likely impacts of the 1980s policy regime, and compares them with the potential impacts of the 1990s policy reform. The model is calibrated around 1991 data and its specification and estimation yield reasonably accurate replication of Zimbabwe reality. The model is used to address two alternative scenarios.

In the first scenario it is found that expansive policies of the 1980s yield relatively high growth. However, this strategy is unsustainable on fiscal, equity and balance of payments criteria. Further, the country was slipping into a domestic debt-trap, employment was inadequate and investment had stagnated at very low levels. It is hard to see how the economy could have continued for much longer at this rate. The second set of simulations show that lack of growth in the 1990s can be traced back to four issues, namely subdued investment, deteriorating balance of payments position, lack of fiscal adjustment and negative distributional shifts. The result of a *joint* implementation of the reform package is a 10 per cent higher GDP level compared to the baseline scenario, which, despite the worsening trade balance appears sustainable.

The strategy implicitly puts growth ahead of employment and redistribution, acknowledging that unless the economy grows no employment will be created and there will be nothing to redistribute to the poor. However, the growth generating forces are investment and exports, both of which are not under the direct control of the government. Investment is difficult to model while export forecasts are just as tricky for the simple reason that Zimbabwe, being a small open economy, by definition has no control over international markets. We thus conclude that even if reforms are implemented in full, policy makers are still going to have to rely on luck, given that they lack complete control over some of the most critical growth components.

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