

MAKING SENSE OF THE CRISIS

Steve Gelb

Symptoms of economic crisis - long run economic decline - are now so widespread in South Africa that the existence of such a crisis is increasingly taken for granted in public discussions of the state of the economy and its possible improvement. Even the Governor of the Reserve Bank, Dr. Gerhard de Kock, now uses the 'structural slowdown' (his label for economic crisis) to fend off the charge that the primary responsibility for economic decline, culminating in the foreign debt debacle of August 1985, lies with the Banks' shift, in the years from 1979, to a fundamentally different policy orientation. He has recently argued that 'the structural slowdown of S.A.'s real rate of growth began around about 1974, and not in 1981.' The drop from an annual average growth rate of real GDP of 4.9 percent (1946-74) to 1.9 percent (1974-85) was, he argued, 'mainly the result of a decline in the ratio of exports to Gross Domestic Product and a weakening of the terms of trade... [These and other] unfavourable exogenous developments since the early 70's made drastic and painful adjustments in the S.A. unavoidable.' (de Kock 1986a, 1986b)

Radical social scientists had, of course already been arguing for several years that there was an 'organic' crisis, one not only in the economy, but more generally through the society. This has become an entrenched part of (radical) conventional wisdom to the point that analyses now frequently begin by simply asserting the fact of the crisis, this then 'framing' the examination of some or other aspects of society. Yet, as Bill Freund (1986) has recently noted, this in fact represents a reversal of the notion which had earlier been generally accepted by radicals: that apartheid was, if not necessarily the best possible shell for capital accumulation, certainly a very useful one. From this view, radicals did not seriously consider the likelihood or even possibility, of economic crisis leading to the rejection of apartheid by capitalists.

That this latter development (ie the rejection of apartheid by capitalists) has occurred with increasing frequency as the economic crisis has deepened in recent years has led, not surprisingly, to the revival and refinement of the old liberal argument that economic growth would (eventually, somehow) lead to the end of apartheid. (Lipton 1986) This, together with their own turnabout in position, poses a challenge to radical analysis: to develop a substantial and consistent analysis of capital accumulation which preserves their view of the earlier relationship between

apartheid and capitalism, explains the transformation from long run apartheid boom to economic crisis, and then analyses the crisis itself.

In this paper, I argue that a response to this challenge can usefully begin with the theories of 'capitalist regulation' and 'challenges to capitalist control' developed by some French and US Marxists respectively to analyse the contemporaneous economic crisis in the advanced capitalist countries. After spelling out the basic concepts of the approach, I use it to develop the broad outlines of an analysis of the post-war boom and crisis in South Africa. The paper should be read very much as a preliminary effort to introduce the ideas to a wider audience. Given the early stage of my empirical research, the argument remains schematic and the statistical data insufficient. In forthcoming work, I develop the conceptual model further to adapt it more closely to South African circumstances, and analyse the course of the crisis in terms of the model.

CONCEPTUALISING BOOM AND CRISIS PHASES

The increased popularity of Marxist economic analysis from the late 60's - in the context of the shift from boom to crisis - produced three alternative theoretical explanations for the development of an economic crisis, which was defined generally as a break in the accumulation process involving a fall in the rate of profit.² (Fine and Harris 1979, Wright 1977)

The first approach saw itself as a return to Marxist orthodoxy. It argued that capitalism has a tendency, as a result of competition, towards increased mechanisation of production. This implied a rising organic composition of capital (ratio of constant to variable capital or dead to living labour). The resulting tendency to fall of the profit rate could be offset for a time by one or more of the various counter acting tendencies, but eventually, it was argued, the profit rate must actually fall - capital will have been overaccumulated relative to the rate of exploitation, producing a crisis. Criticisms of this view included, inter alia, that it focussed too narrowly on both the sphere of production and on the 'logic' of capital accumulation, and that there was inadequate analysis of exactly how and when the tendency would overwhelm the countertendency.

The second perspective, basing itself on Marx's analysis of changes in the size of the reserve army of labour, argued essentially that crisis was the outcome of overaccumulation of capital relative to supply the of labour. As accumulation proceeded and more labour was employed, the shrinking reserve army boosted workers' power in the labour market. The rise in real wages achieved thereby squeezed the profit share of value added, lowering the profit rate. This argument was criticised in turn for concerning itself too narrowly with distributional issues and ignoring pro-

duction.

The third theory, underconsumptionism or more generally, realization failure, finds some support in Marx's own work but is also clearly influenced by later Marxists (Luxemburg) and Keynes. The essence of this view is that (the mass of) profits grows too quickly relative to other sources of aggregate demand, wages in particular. Thus total output cannot be absorbed by limited markets and the profit rate must eventually fall, in the absence of exogenous sources of additional demand.

Two problems can be raised common to all three theoretical positions, as developed during the 1970's. Firstly, many writers drew no clear distinction between the secular (long-run) tendencies of capital accumulation, and its cyclical fluctuations. Some writers used a theory to analyse the longer term movement, while others applied the same theory to cycles. Related to this, the implication in many long-run analyses was that a crisis indicated insurmountable difficulties for capitalism, a terminal disease. They could not account for capitalism's mutability and continued survival through several crises.

The other point is that the institutional context of accumulation was generally ignored, so that capitalist social relations and accumulation were presented as existing and developing abstractly - in a vacuum, so to speak. It was not fully clear how crises, which ultimately reflected the internal contradictions of capital produced a resolution of these contradictions, thereby enabling the rate of accumulation again to rise, as Marx had argued.

Debates over the various problems with these theories produced the 'regulation' and 'challenges to capitalist control' approaches. My discussion of these theories below is based mainly on the former, but freely uses ideas from the latter where appropriate.

To begin with, this perspective avoids the general problems raised above, by focussing on both the development of crisis and the conditions for the *renewal* of capitalist accumulation. The underlying perspective is that capital social relations ('class struggles') exist not abstractly but within a variety of structures and institutional forms (economic, social and political) which shape the way in which these relations develop over time. Furthermore these relations are 'historically specific and contingent' : an economic crisis expresses contradictions within (and between) these various forms of existence of capitalist relations. Such contradictions can be resolved (and generally have been) by transforming the specific structures and relations, without changing the fundamental capitalist nature of the social relations themselves. An economic crisis is thus seen more appropriately as a *turning point* in the form of capitalism rather than

as a terminal disease. Its resolution is as likely, or more so, to involve a transformation of capitalism as a transformation from capitalism to a different mode of production.

Regulation theory clearly involves 2 distinct conceptual levels of analysis of accumulation: its path, looking at the profit rate and other key Marxist variables, and its institutional context. On the first level, the central concept is the 'regime of accumulation', which represents a reproduction scheme over time. It describes the interaction between transformations in the conditions of production (changing technology and labour process) and transformation in the conditions of realisation of the resulting output changes. The starting point is thus the traditional Marxist view of the engine of capitalist accumulation - the constant efforts of capitalists to cheapen costs and obtain surplus profits, by increasing mechanisation. This is measured by changes in labour productivity. But in summarising the relationships between the rate of exploitation, organic composition and rate of profit, the regime of accumulation also takes into account the potential difficulties for the accumulation process posed by the levels of aggregate demand (conditions of realisation) and of the real wage (and thus the profit share). In other words, the regulation approach is theoretically agnostic on the three positions outlined above - all can be accommodated as tendencies produced by accumulation, both as initial causes of crisis or as developing during the course of a crisis.

At the other level of analysis, the organising concept is the 'mode of regulation', although the American 'challenges to capitalist control' group use the term 'social structure of accumulation' (SSA), perhaps a more congenial term. As already noted, this constitutes the ensemble of social institutions, structures and implicit norms which organises and canalises - 'regulates' - the multi-faceted class, intra-class and other group conflicts which together determine the path of accumulation. The SSA, in other words, shapes the behaviour and expectations of economic agents. Elements of the SSA relate to all aspects of the accumulation process: the wage relation (in the labour process and the labour market), the structure of demand, (including particularly the 'norms' of working class consumption, foreign trade and the public sector), competitive interrelations between capitals, and the financial system. Each of these four aspects is labelled a structural form. The form of insertion into the world capitalist economy can be seen as a specific structural form, though clearly different aspects of this are relevant to the various structural forms mentioned.

It should be recognised that the SSA notion has conceptual limitations: it could 'grow' to incorporate all aspects of society or else 'shrink' until its meaning evaporates. Clearly some judgement is essential to

differentiate the impact on accumulation of a range of social processes; nevertheless the *major* features of the SSA or mode of regulation can be identified reasonably specifically, by starting from Marx's concept of the capital circuit, on which the SSA is clearly based. Furthermore, the analytical use of the SSA does not necessarily depend on an exhaustive spelling out of its every detail: it is a *macroeconomic* concept and more than the sum of its parts - the path of accumulation is crucially related to its degree of internal coherence.

These two central concepts are located within a historical time framework which integrates the long-run and cyclical fluctuations of accumulation. During a long-run boom, a 'match' - dynamic or metastable equilibrium - is achieved within the regime of accumulation, the convergence of changes in production conditions and realization conditions being institutionalised by the SSA. Changes in the rate of exploitation and the organic composition are such as to keep the rate of profit from falling over the *long-run*. Cyclical fluctuations do occur - this is not a neo-classical growth model. When a cyclical upswing leads to too wide a divergence within the regime of accumulation, a downswing will ensue.

Because the SSA is coherent, economic agents (including policy makers) respond in a fairly predictable manner to the downswing so that conditions for the resumption of social accumulation are fairly quickly brought about. Thus the cyclical downswing during the boom can be seen as a *stabiliser*, maintaining the high rate of accumulation, rather than as an interruption or break reflecting serious contradictions. For this reason, the business cycle during this accumulation phase is labelled *reproductive*.

The crisis phase (the long-run decline in accumulation) is then distinguished from the boom by a shift in the nature of the business cycle from reproductive to *non-reproductive*. (see Gordon, Weiskopf and Bowles 1983). This allows crises to be identified with some precision. They represent a lack of harmony - disequilibrium - within the regime of accumulation, linked to a breakdown of the coherence of the SSA, and a 'malfunctioning' of some or all of its constituent elements. Their consequence is slower accumulation.

The actual shift from boom to crisis is a complex process. Tendencies (a range of different possibilities exist) develop within the accumulation process itself, putting pressure on some SSA institutions. Inevitably one or more prove unequal to the changing situation perhaps because they have not adapted sufficiently to the effects of accumulation on the relative size and strength of the social forces whose interaction they are intended to regulate. The process then becomes cumulative as economic agents try to counteract the ensuing difficulties, in the process increasing pressure on

other elements of the SSA. The latter increasingly disintegrates, reinforcing the move to a lower rate of accumulation.

A question which frequently arises is whether the crisis is 'caused' by factors internal or external to the national economy (see for example, the quote from de Kock above). In the regulation approach there is a tension between the national and international dimensions of accumulation. The SSA institutions stamp a clearly national character on the accumulation process, but the latter is clearly also an element of accumulation in the capitalist world economy. Yet the complexity of the process by which the crisis actually develops is such that the issue of the 'national origins' of the 'causes' appears to be meaningless.

The non-reproductive nature of the cyclical downswing during the crisis implies that conditions for rapid accumulation are no longer 'automatically' restored. This is reflected in the fact that variables which moved in a given direction during the reproductive downswing, thereby helping to restore accumulation, now move in the reverse direction. This does not mean that there will be no upswings, but these are likely to be hesitant and short lived. A return to a sustained high rate of accumulation - the resolution of the crisis - requires the successful structuring of a new SSA.

Regulation theorists have used this framework to analyse the rise and decline of the post-war pattern of accumulation in the advanced capitalist economies which they characterise as 'Fordism'. By this they mean, firstly, that transformations in the labour process took the form of the creation of production line methods, yielding substantial improvements in productivity and increases in output. This process had already begun during the 1920's, but had not then been matched by real wage improvements, leading to the underconsumptionist-induced Depression of the 1930's. After the war, although starting in the late 1930's in some countries, a new SSA was 'constructed', institutionalising mass consumption. Elements of this were the spread of collective bargaining, state provision of social security and a range of social services, and easier access to various types of credit. Thus, mass production and mass consumption were linked in a virtuous circle: productivity improvements offset rises in both capital intensity and real wages, so that the rate of profit was stabilised (in the long run) at a high level. From the late 1960's this situation began to disintegrate, as the rate of growth of labour productivity began to falter. The substantial and continuing debate over the precise causes of this, and its process, lies beyond the scope of this paper. (See references in footnote 3 as well as Armstrong, Glyn and Harrison 1984; Glyn 1982).

We need now to apply this theoretical framework to South Africa, looking

first at the post war 'apartheid boom' and then at the shift into the crisis.

'RACIAL FORDISM'?

From the perspective of regulation theory, the post-war combination of apartheid and import substitution industrialisation can be seen as the defining characteristics of the SSA in a limited Fordist scheme, which I call 'racial Fordism', for want of a less clumsy label. As with Fordism in the advanced countries, accumulation in South Africa during this period involved the linking of the extension of mass production with the extension of mass consumption, but in a manner that was restricted on both sides of the equation, as is very familiar.

Mass productivity was extended on the basis of tariff-protected import substitution, so that the proportion of output taken up by consumer durables and intermediate goods increased. The absence in general of local production of capital equipment and reliance on imports meant that capital-deepening (increased capital intensity) occurred primarily as part of capital-widening (extending production capacity). More advanced technologies were incorporated only into additions to capacity, with existing equipment and technologies remaining in use. Thus the increase in the capital-labour ratio was limited compared to the advanced capitalist countries (ACC's) where implementation of new technologies generally involved scrapping of existing equipment.

Capital equipment imports were 'paid for' by the domestic production of raw material and precious metal exports linked to Fordist growth in the advanced economies. Changing conditions of production thus depended crucially on the terms of trade, the balance of payments and the exchange rate, so that the regime of accumulation must be understood to incorporate these variables. During the 1950's, mineral output and productivity expanded far more rapidly than that of manufacturing, which in turn made possible a reversal of this situation during the 1960's.

The pattern of changing conditions of production fitted well with the development of the wage relation on the basis of rigid apartheid differentiation though this too represented a limitation of racial Fordism as compared with the fully developed scheme. The situation of the white working class was institutionalised along very similar lines to those of the working classes of the Western economies: an increased proportion of this group moving into skilled and supervisory positions in the labour process, with steady rises in real wages making possible the spread of mass consumption of housing and locally produced consumer durables. Structures of collective bargaining, a social welfare system and very favourable

subsidiy and credit arrangements all underpinned this process. In this fashion, underconsumption was made impossible while whites captured the lion's share of overall production gains.

The African working class did obtain some portion of the latter, however. As Doug Hindson (1987, also Curtis 1984) has argued, this group became increasingly differentiated as industrialisation produced a stratum of semi-skilled permanently urbanised workers. Firms seeking surplus profits tended to lower their unit labour costs by 'floating the colour bar' - substituting low wage black labour for high wage whites - when they adopted new technologies.

Some share of the resulting productivity gain did accrue to black workers whose real income did grow during the post-war period (McGrath 1977), though at a far slower rate than that of whites. The 'conditions of reproduction' of urban black labour were transformed in the post war period, even though they were of course not incorporated into mass consumption.

A full explication of the structure of 'racial Fordism' would have to spell out also the role of the extension of state productive activity (providing jobs for whites as well as financial support and cheap inputs for secondary industry) as well as the development of a structure of capitalist competition and a financial system which facilitated mining surpluses being channelled into industrial investment. Here I turn instead to the time paths of the 'inner variables'⁶ of the regime of accumulation. A rough preliminary estimate of these can be derived by examining growth rates of real wages, labour productivity and the capital-output ratio.

What is striking here is the fact that during the post war boom, accumulation in South Africa exhibited a similar interaction of the long term growth trends of these variables as is found in the advanced countries. The rise of the capital/labour ratio (as a crude proxy for the organic composition of capital) was, as noted above, limited: less than 3 percent per annum over the whole period, and slightly more than 3 percent during the 1960's (Table I). This produced a more or less equivalent rate of productivity growth. Equally important, as we shall see below, was that the price level for imported capital equipment and intermediate goods also rose slowly during the 1960's (Table II). This was linked to productivity improvement in the advanced countries. Changes in the capital-output ratio in South Africa are determined by the combination of these two effects, rather than simply being the product of the relationship between rising capital intensity and productivity growth. The nature of these trends meant that the capital-output ratio was stable over the long run: there was sufficient offset to the effect of a rising technical composition on the

tendency of the profit rate to fall.

Looking now at the wage (or profit) share as a proxy for the rate of exploitation, it appears that, in manufacturing, the share of wages remained stable over the long run (at around 46 percent), while in mining and commercial agriculture, the wage share actually fell during the 1960's. (Natrass 1981, table 8.1; Knight 1979.) This suggests that the rate of exploitation in the economy as a whole rose somewhat, pushing up also the rate of profit, given the stable capital/output ratio.

Cyclical fluctuations persisted, however, though the downswings were of rather short duration. Their reproductive character is suggested by examining a (stylised) cycle. (de Kock 1975, Smit and van der Walt 1970, 1973, 1982). As the pace of investment increased during the upswing, the growth rate of the capital/labour ratio increased, so that eventually the capital-output ratio also began to rise. In other words, the cyclical upswing itself, starting with a high or even rising profit rate, would induce downward pressure on profitability. Reinforcement of such pressure stemmed from a rise in unit labour costs, as the increase in capital utilisation and investment also tightened the labour market for white, coloured and Indian workers leading to rising real wages for these workers ('registered' unemployment - covering these groups - was a sensitive index of the business cycle.) The nature of the SSA was such, however, that the same processes which led to downward pressure on profitability also produced 'bottlenecks' which determined the upper turning point of the business cycle.

Firstly, the acceleration of final investment tightened the foreign exchange constraint, notwithstanding the net capital inflow which often occurred. This in turn led to tighter liquidity conditions in the monetary system, pushing up interest rates. During the 1960's most fixed capital investment was financed by bank credit (Dickman 1973), so that the rise in the cost of capital slowed the rate of investment.

Similarly, 'skilled labour shortages' would develop near the top of the cycle, the upward floating of the colour bar making productivity improvements possible only with a lag. The consequence here would be (similarly) to create a disincentive to invest.

The business cycle, then, had built-in stabilisers which moved it into the downswing. The 'bottlenecks' would now be relaxed, leading to an improvement in expected profitability. Foreign exchange reserves rose as imports declined and the balance of payments deficit dropped. Easier money conditions were restored. As production levels dropped, registered unemployment began to rise, so that real unit labour costs slowed. Eventually, a revival of accumulation developed. The downswing, in other words, had a

reproductive character. The product, labour, financial and foreign trade markets were structured in such a way that movements in these markets interacted to restore the conditions of accumulation. The effect of policy action was essentially to 'endorse' the changes already occurring in accumulation, and to affect their precise timing.

It is important to note here that the foreign exchange and skilled labour bottlenecks served to *maintain* the long term growth trend. By pushing the economy into a *cyclical* decline, they limited the long term rise of the capital-labour and capital-output ratios, so preventing a trend drop in profitability. This view is the converse of the usually accepted one: that these 'bottlenecks' reflected structural contradictions in the accumulation process, and limited economic growth over the long run.

THE ACCUMULATION CRISIS

As already noted, the crisis is distinguished from the long wave boom by the shift from a reproductive to a non-reproductive cyclical downswing. Such a shift can be seen in an examination of the cyclical downswing beginning in South Africa in mid-1974. The key variables to focus on are those which indicated the reproductive nature of the downswing during the earlier phase: the fall in real unit labour costs and the rise in foreign exchange reserves. For the cycle to be regarded as non-reproductive, these should move in the *opposite* direction during the downswing. This proved to be indeed the case, during both the recession which lasted from September 1974 until the end of 1977, and again during the recession of the 1980's which lasted from the end of 1981 until early 1986.

Evidence of the developing crisis was already present in the recession lasting through 1971 and most of 1972. During these years, the real unit labour cost showed only a very small decline, while a devaluation in late 1971 was necessary to protect the foreign reserves, suggesting that this mechanism was becoming increasingly unreliable.

The next recession, triggered by the 'oil shock' of late 1973, indicated that the crisis proper had begun. Real unit labour costs rose, as indicated in Table II, by an average of 2,68% per annum between 1973 and 1977, even though 'registered' unemployment more than tripled during the period. This was obviously the consequence of rising African real wage levels, reflecting the breakdown of the SSA.

Foreign exchange reserves also followed a 'perverse' pattern, continuing to decline (in US dollar terms) despite two devaluations of the rand during 1975. Even in terms of the domestic currency, their rise in late 1975 was both limited and temporary.

Similar developments can be traced in these variables during the period

after 1981, as is reflected in Table II. During both periods, it should be noted, there were temporary and limited revivals of economic activity, limited in each instance to some recovery in the international gold price and thus, some improvement in the foreign exchange reserves. The fact that neither revival could be consolidated into a more developed upswing through an improvement in investment, is highly suggestive of the *non-reproductive* nature of the preceding cyclical decline. In both cases these temporary revivals only compounded the depth of the subsequent continued decline. A further indication of the non-reproductive nature of the downswings is the very slow pace with which the upswing (when it finally occurred) developed any endogenous momentum. Like the past year from mid-1986 to mid-1987, 1978 was 'officially' a period of cyclical upswing, but the improvement in the latest year from mid-1986 to mid-1987, 1978 was 'officially' a period of cyclical upswing, but the improvement in the levels of business cycle indicators was minimal, and expectations of the overall rate of growth were repeatedly revised downwards. The poor state of business confidence, then as now, can be taken as an accurate index of the disintegration of the SSA: one of the central implications of a stable and inherent SSA is its invigorating effect on capitalists' 'animal spirits'.

The crisis phase of capital accumulation can thus be defined fairly precisely by the nature of the cyclical fluctuations which occur. These fluctuations also provide a useful periodisation of the crisis. This seems especially convenient in the South African case, where the period around the lower turning point of the first non-reproductive cycle (i.e. 1977) also marked the beginning of efforts to restructure the SSA. The second cyclical downswing both indicated the failure of these initial efforts, and also helped to ensure their failure. The period around the lower turning point of the second cycle has in turn seen the beginnings of efforts to develop a new approach to restructuring the SSA. I will not develop here an analysis of the course of the crisis on the basis of such a periodisation, though this forms part of the larger project for which this paper presents the initial ideas. I turn instead to look at the actual development of crisis tendencies in the economy.

Crisis tendencies emerged in the South African economy from about 1970, when the long-run trend variables - the change in labour productivity, the capital/labour ratio and the capital/output ratio - began to diverge from their previous time-paths. The growth of the capital-labour ratio accelerated, while productivity growth began to level off. The growing gap between these two rates of change was reflected in an increasingly rapid rise in the capital-output ratio.

As was the case with the interaction of these variables during the boom,

the new pattern in South Africa was similar to that found in the advanced economies, with the significant difference that the shift there dated from approximately 1966, according to most analysts. Whatever the precise reasons for the shift in the advanced economies, the productivity slowdown there raised the unit value of output in those economies, and slowly began to undermine the stability of their SSAs.

The consequences of the former impact was that the price level of machinery imported into South Africa began to rise, from a low point in 1968. (See Table III) Until 1970, the rise was limited, but from then it accelerated, the compound growth rate of the price index being 10.8% per annum between 1970 and 1974 (after which it accelerated even further, to 19.7% per annum up to 1980.) I would argue that this was the primary initiating factor in the South African crisis, transmitting the effects of the developing international crisis to the domestic economy.

The rising cost of capital equipment did not lead to a fall-off in demand - the price elasticity of machinery imports is very low in South Africa. But it did have two significant effects. The first was financial - more funds had to be committed for the same investment project. This had an immediate impact on the growth of depreciation figures (see Table IV). The rise in the rate of inflation, from an average of 2.5% per annum during the 1960s to 8.1% during the first half of the 1970s (most of this before the oil 'shock') partially reflected this. This then had the further effect of forcing down the real interest rate - the 'real cost' of capital - which is seen as the cause of rising capital intensity during the 1970s by conventional theorists.

The second important result of the higher cost of capital equipment imports was a rise in the cost. In terms of capital invested per rand) of productivity improvements, a decline in other words of the 'marginal efficiency of investment', in value terms. This implies the undermining of the underlying profitability of investment projects, as reflected in the new pattern of relations between the trend variables. The argument here, therefore, is that there was no autonomous decline in labour productivity, but that it was induced by a fall in the productivity 'yield' of capital investment.

The effect of this process on the capital-labour and capital output ratios would have been reinforced by the substantial increase in state infrastructural investment from the early 1970s - public corporations fixed capital stock rose at an annual rate of about 14% between 1970 and 1977 (compared with 9% during the previous decade). For the private sector as a whole, the corresponding figure was constant at 4.5% per annum in the two periods, but for private manufacturing industry, the growth rate of the

capital stock halved, from 9% to 4.5%, as investment fell off during the downswing after 1974. (Swanepoel and van Dyk 1978).

A second factor helping to produce the crisis by interacting with the first was introduced into the South African economy by the further disintegration of the Fordist regime in the advanced economies. Growing problems in the international financial system, linked in part to the productivity slowdown, finally destroyed the Bretton Woods system of fixed exchange rates, which had been a crucial element of the SSA. The immediate consequence of this for South Africa was that the prices of its exports, most particularly gold but also other minerals began to fluctuate more widely than before. The balance of payments, and the foreign exchange constraint thus no longer exercised a stabilising long-run effect through their role in cyclical fluctuations, and instead became a destabilising (and unpredictable) factor. Under such circumstances, underlying long-run decline was more likely to be reinforced than counteracted.

This destabilising impact seems to apply as much to improvements in export prices as to deteriorations. The capture of much larger 'rents' by South Africa following the rise in the gold price from 1979 resulted in a discrete jump in the growth rate during the next two years, but also may have had effects which deepened the subsequent recession, triggered of course by the fall in the gold price and deflationary policies in the US. The acceleration of the capital/labour ratio during this upswing reflected a significantly higher rate of capital-deepening investment, lowering the age profile of the capital stock. This may have produced a much larger decline in investment levels consequent on the falling aggregate demand and capacity utilisation from late 1981. A related indicator was the weaker financial position of manufacturing and commercial companies in 1979-80, compared with 1972-73, despite the improved nominal profitability during the 'gold boom'. Increased financial demands imposed on companies by the boom, after the earlier decline in underlying profitability, made them more vulnerable to the subsequent recession, as indicated by the massive rise in overall debt levels which occurred after 1981. (Dickman 1982)

To return to the originating causes of the crisis, a third process can be identified internal to South Africa, which was at least in part a consequence of the first two, suggesting the cumulative nature of the disintegration of the SSA. I refer here to the rise in black wages beginning in 1973. There were two immediate causes. In manufacturing, the wage strikes in Durban and elsewhere, explicitly in response to rising inflation, reflected the growing inability of the structures through which 'racial Fordism' incorporated African workers into the wage relation, to continue to perform their regulating function. In the mining industry,

African workers were granted wage increases in the wake of the rise in the gold price from late 1971, though it seems that this was not unconnected to labour unrest in other sectors also. (Yudelman 1984) The growth of black real wages continued through the second non-reproductive downswing (see Table II) pushed up real unit labour costs and imparted a non-reproductive character to the downswing.

CONCLUSION

It is obviously far too early in this research to come to any firm conclusions. Nevertheless, the regulation approach seems to offer a plausible account of growth and the transition to crisis in South Africa, and substantial promise as a method of analysing the crisis itself. Three specific implications of the analysis should be underlined at this stage. First, the analysis emphasises that the crisis in South Africa is part of the international crisis, and in that specific sense *is* caused by 'unfavourable exogenous developments'. But the *form* of the crisis - the precise process of its development, its differential impact, depth and length - are a consequence of local patterns of accumulation and policy processes. Secondly, the crisis is not simply a failure of demand (or of capital) to originate from the world economy; the effects of changing world conditions on the supply side of the South African economy also need careful examination. Finally, the resolution of the crisis - a return to sustained improvement on accumulation rates - will depend on the emergence of a coherent new SSA, which involves more than simply a rise in export revenues or new inflows of foreign capital, or even an increase in demand for basic consumer goods.

FOOTNOTES

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1. Providing statistical support for their arguments has always been a problem for Marxist economists. This results in part from the fact that the data which exists is most often presented in a form which does not facilitate translation into Marxian categories. However, Marxist economists have not always been very conscientious in empirically supporting their arguments. This situation is now beginning to change: see the special issue of the Review of Radical Political Economics, 1986.

2. The rate of profit, r , is represented as follows:

$$r = \frac{s}{c + v} = \frac{s/v}{c/v + v/v} = \frac{e}{k + 1}$$

where c = constant capital

v = variable capital

s = surplus value

$e = s/v$ = the rate of exploitation

and $k = c/v$ = the organic composition of capital.

' e ' and ' k ' can also be represented as proportions of net output, $v + s$. In this case, we have

$$r = \frac{e'}{k' + (1 - e')}$$

3. The "regulation" approach was initially formulated in M. Aglietta (1979). It has been further developed primarily by M. de Vroey (1984) and A. Lipietz (1985a, 1985b, 1986). The "challenges to capitalist control" approach has been developed by a group of economists around David Gordon. See for example: D. Gordon, R. Edwards and M. Reich, 1982); S. Bowles, D. Gordon and T. Weisskopf, 1983); and S. Bowles, D. Gordon and T. Weisskopf, 1986. There are two major differences between these approaches. The first is that the French school continues to adhere to the concepts of Marxian value theory, reformulating these in response to the "Sraffian" critique mounted in recent years, whereas the Americans simply use price categories. The other difference lies in somewhat different views on the issue of causation, the French emphasising "structure" and the Americans "agency".

4. This is not intended to suggest that the SSA is *fully* determining: it provides the macro context for accumulation, imposing (positive and negative) constraints. Neither should the SSA be seen as being purposively constructed - the theory *is* functionalist, but only in an a posteriori sense. (See Lipietz, 1984, on this point.) Furthermore, it is not being suggested that the SSA springs into existence fully formed and then remains static - clearly there is constant "tinkering" with the institutions. But the theory abstracts from such processes which are essentially political, focussing on the economic effects of a SSA seen to be *fundamentally* stable, for a period, in its main features.

5. Metastable = resembling stability.

6. On the relation between 'inner' and 'outer' variables, see Lipietz.

7. Data in Lipietz (1986) and Glyn (1982) suggest that the corresponding figure for the advanced economies was about 80%.

TABLES

1. %Change per annum	Labour Productivity	Capital:Labour Ratio	Output:Capital Ratio
1961 - 70	2,70	3,15	0
1970 - 73	0,30	4,95	-4,35
1973 - 77	-2,37	3,48	-5,74

(Source: Report of Study Group on Industrial Development Strategy, Tables 6.5 and 6.6. Col.1 - Col.2 Col 3.)

2.% Change per annum	Labour Productivity	Real Wages	Real Unit Labour Cost
1966 - 70	2,97	2,18	- 0,65
1970 - 73	2,65		
1973 - 77	- 0,14	2,54	2,68
1977 - 82	4,11	2,67	- 1,44
1981 - 84	- 0,06	2,04	2,10

(Source: National Productivity Institute, Productivity Focus 1986, Table 14. Col.2 - Col.1 Col.3.)

3. Import Price Index (1984 == 100)								
	1966	1967	1968	1969	1970	1971	1972	1973
All imports	109	107	103	106	109	114	130	142
Machinery imports	118	114	111	117	122	132	156	170
	1974	1975	1976	1977	1978	1979	1980	
All imports	168	-	280	316	362	434	520	
Machinery imports	184	-	304	359	445	487	541	

(Source: S A Statistics, Various issues, SITC classifications.)

4. Provision for Depreciation (Current prices, replacement value)				
Percentage Change	1946-60	1960-70	1970-75	1975-80
Total	10,90	9,27	19,93	18,31
Private Sector	10,83	9,16	19,54	17,50

(Source: SA Reserve Bank, Quarterly Bulletin, Supplement, Sep. 1951)

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