Second Carnegie Inquiry into Poverty and Development in Southern Africa

Monetary Policy, Small Firms and Welfare in South Africa

By
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PREFACE

At the end of August 1986, a two-day workshop entitled Macroeconomic Policy and Poverty in South Africa: The Crucial Issues was held at the University of Cape Town. The impetus for this Workshop arose out of a perceived void in South African economic thinking. Researchers on poverty deal with microlevel issues in great detail, but often lose sight of the broader context within which ground-level issues are placed. Macroeconomists, by contrast, tend to theorise about financial and monetary matters and overlook the implications of macro-economic policy for the poorer sections of the population.

Accordingly, in December 1985, Terence Moll began working on the topic and travelled round the country. He spoke to various academics from Economics Departments in the Transvaal, Natal, Orange Free State and the Cape, trying to draw on existing research and encouraging people to think about this area. These were eventually drawn together in a Workshop designed to encourage economists to think at the macroeconomic level about poverty and welfare issues in South Africa.

The Workshop was hosted by the School of Economics and the Southern African Labour and Development Research Unit. Thirteen papers were presented and about 25 economists from a number of different South African universities attended. Arising out of the vigorous discussion and debate, it was suggested that some of the papers be published in revised form in the post-Carnegie Working Paper series. A review and critique of the Workshop papers by Terence Moll will be appearing in due course.

We are grateful not only for this support but also for the continued interest in research work of this nature.

Francis Wilson
1. INTRODUCTION

Monetary policy is normally defined in terms of activities carried out by the monetary authorities - largely the Central Bank - to help achieve the principal goals of macroeconomic policy: rapid growth in income, output and consumption, high employment, price stability or low inflation, and external balance (Williamson, 1982; also the De Kock Commission, 1984:173). The specific role of monetary policy is then seen as maintaining the long-run integrity of the currency and providing a stable environment within which growth and development can take place.

But nothing is that simple. It will be suggested here that any particular monetary policy has associated with it a series of distributional and welfare implications which deserve to be taken into account by policymakers.

At the heart of the matter is the monetary-real dichotomy. Monetary policy is often seen as acting on the monetary side of the economy in circumstances of reasonably efficient resource-allocation: apart from fairly small adjustment costs, the real economy should not be greatly affected by changes in monetary policy. The great Keynesian lesson, however, is that economies with money are qualitatively different from economies without: regarding modern economies as analytically equivalent to barter economies with a uni-
versally accepted means of exchange added is fundamentally incorrect. To Keynes, real-monetary interactions were central to the capitalist system; these can be important in the short run and have cumulative effects over time, even where the vertical long-run Phillips Curve is broadly accepted.

South Africa has experienced significant financial liberalisation and freeing of interest rates, moves towards more open current and capital accounts of the balance of payments (BoP), a managed float of the exchange rate and some government withdrawal from the economy over the past decade, the idea being that,

in South Africa's sophisticated financial system a market-oriented monetary strategy will serve the national interest better than any set of non-market-oriented or 'direct' monetary controls (De Kock Commission, 1984:A19).

This is designed to set the basis for a renewed growth-spurt by the local economy. On the whole, however, it has taken place with little consideration of processes on the real side of the economy, and short-run shifts in monetary policy have had particularly unfortunate effects on output, employment and the distribution of income.

This paper will examine some of these issues, focussing on the changed use since 1981 by the South African Reserve Bank (SARB) of its principal instrument, the bank rate, and the effects this has had on the health of small firms and hence economic welfare. Short-term interactions here are seen as having important theoretical and practical implications for the long-run conduct of monetary policy in South Africa.
2. MONETARY CONTROL IN SOUTH AFRICA BEFORE AND AFTER 1980

2.1 Introduction

Until about 1980, the South African Reserve Bank can be seen as having a simple system of monetary control. The financial system was somewhat limited, interest rates were held nominally roughly constant over lengthy periods and often at exceedingly low levels, in part via direct controls on the money base (liquid asset and cash reserve requirements) and bank credit. In such a scheme, as Lombard puts it, the central banker

basically decides upon the level of interest rates which is believed to be optimal, and adjusts the money supply, as a dependent variable, to 'make the bank rate effective' (n.d.:52, emphasis in the original);

to an extent the money supply was demand-determined.

This approach gradually fell into disrepute in the later 1970s, partly for ideological reasons (as market-directed propaganda began doing the rounds in South Africa) and partly because it seemed unable to control the money supply and inflation rate, the latter rising unacceptably rapidly and the former escaping direct controls via disintermediation and other tactics in an increasingly sophisticated credit system (De Kock Commission, 1984:A4-A6).

As of around 1981, a new control system came into being.

On the monetary side, it is seen as a means of market-

oriented intervention into financial markets: the Central Bank determines the 'desired' rate of growth of one or more monetary aggregates which in its opinion will control inflation, and achieves this by operating on the demand for money and hence domestic expenditure via adjusting levels of interest rates\(^2\) through public debt management, open-market operations and Reserve Bank discount policies, and interventions in foreign exchange markets (Meijer, 1984/85:10), with banks' aggregate liquid asset holdings as a 'derived' end-result of policy.

This system has been described by Rogers as follows. In the usual money demand diagram, with a reasonably stable negatively-sloping demand for money, \(M_d\), the Reserve Bank will vary \(i_o\) continually so as to maintain the money stock at \(M_o\), or, more accurately, to limit the rate of growth of \(M_o\) to within a particular range (Rogers, 1985: 242-244; also Botha, 1986:45-46). Hence, it is the 'cost' of cash reserves supplied by the Central Bank against the surrender of short-term money market instruments - i.e. interest rates - that now constitutes the prime element of control (Meijer, 1984/85:11; emphasis in the original);

this may require occasional high (and fluctuating) nominal interest rates (ibid, 9; De Kock Commission, 1984:A14) as a response to changes in market conditions, e.g. a deterior-

\[ \text{Interest rate} \]

\[ i_o \]

\[ M_d \]

\[ M_o \]

Demand for Money

---

\(^2\) See Whittaker and Theunissen (1986) for a rigorous version of this argument. They note that where the Reserve Bank cannot deny accommodation to banking institutions, it must set 'the' interest rate via setting the cost of borrowing call funds.
rating balance of payments (BoP) situation (De Kock Commission, 1984:148).

2.2 Hypotheses of this Paper

The change in South African monetary policy from fairly direct, supply-side controls and stable nominal interest rates pre-1982 to an indirect and allegedly market-oriented system operating via sharp manipulation of interest rates has had the effects of:

1. Inducing widespread uncertainty about the future path and level of interest rates and hence undermining investment and efficient resource-allocation (Barclays Business Brief, January 1986);

2. Severely disadvantaging small businesses vis-a-vis large by raising costs of more highly-geared small firms and the informal sector, and inducing bankruptcies and collapse among them; this has led to large welfare losses in the economy due to specific economic characteristics of small firms. ³

2.3 Unstable Interest Rates and the Real Economy

Regarding the first of the above hypotheses, it can be suggested that recent interest rate policy is all very well in attempting to maintain "the appropriate degree of moderation and stability in the rates of increase in bank credit, money supply and aggregate monetary demand (MV)" (ibid, 154) (although based on shaky assumptions about markets and sta-

³ This is a very selective catalogue of welfare losses induced by high/unstable interest rates (in the South African context, cf. Black & Dollery, 1985:52-54; Botha, 1986). Further, even between large firms, effects are likely to vary.
bility issues), but has had violently destabilising effects on the real\(^4\) economy.

In recent years, South African monetary authorities have induced large fluctuations in both nominal and real interest rates (in theory, of course, nominal interest rates should rise with inflation, and real interest rates vary less), as depicted in Table 1 below. (See also graphs 1 and 2.)

Table 1. The Stability of Interest Rates

<table>
<thead>
<tr>
<th></th>
<th>Average Standard Deviation ((s^*))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime overdraft</td>
<td>Real prime overdraft</td>
</tr>
<tr>
<td>1966 - 70</td>
<td>0.281</td>
</tr>
<tr>
<td>1970 - 75</td>
<td>0.796</td>
</tr>
<tr>
<td>1975 - 80</td>
<td>0.534</td>
</tr>
<tr>
<td>1980 - 85</td>
<td>2.802</td>
</tr>
</tbody>
</table>

Note: Where \(s_i\) is the standard deviation of the average monthly rate of interest over years \(i-1\) and \(i\), and the years run from 1 to \(n\),

\[
    s^* = \sqrt{\frac{\sum_{i=2}^{n} s_i^2}{n-1}}
\]

The inflation indice used is described in Table 2 below; the real interest rate is approximated as the difference between average quarterly overdraft rates and average quarterly inflation rates.

Note the relative stability (and hence predictability) of nominal prime interest rates before 1980 and the extreme

4. Large interest rate fluctuations can also destabilise financial markets as they engender large inverse changes in the market value of long-term financial instruments (Moore & Smit, 1986:90).
variability since, while real interest rates show a similar but weaker pattern.5

This interest-rate instability is likely to have three effects:

1. Forced economic contraction as interest rates rise is not matched by expansion as they fall (see later);

2. Fluctuations and unpredictability induce uncertainty and risk-averse behaviour - eg. less use of working capital financed by bank credit, very short-term investments, export of capital, and so on;

3. Such fluctuations harm small firms - with fewer financial resources and lesser access to share capital - more than large. They are also likely to suffer more from shifts by lenders towards short-term flexible-rate lending.

3. SMALL FIRMS VERSUS LARGE

As in most countries, the data on small firms in South Africa is poor. (See Moll (1985:198-201, 298f) for a discussion of official data on small firms.) It appears, however, that the following are likely:

5. The table shows ex post variation in nominal and real interest rates. Ideally, ex ante rates should be examined; this has been attempted for the USA, for example (Antoncic, 1986), to test whether interest rate changes were anticipated by market participants. The accompanying assumptions about market efficiency, expectations about future inflation and government policy are so strong, however, that it seems doubtful what such econometrics is in fact measuring, and this procedure has thus not been attempted here.
3.1 Small firms operate in a more competitive environment

The South African economy is highly monopolised and the dichotomy between a few large firms and a large number of small firms is particularly evident. A handful of huge firms dominate the economy, controlling particular branches of production and with interests across various sectors (Mercabank, 1984; Innes, 1984, ch. 8). For example, 10% of enterprises in the South African economy account for around 76% of total turnover in industry, construction and trading (President's Council, 1984:43).

It can thus be expected that price-taking small firms will lack market power, will often pay more for purchases than large companies, and may be less profitable than large (cf. Buzzell et al, 1975). Further, being more specialised and reliant on particular areas or markets, they will be more vulnerable to slumps and other changes in market conditions.

3.2 Small firms are more labour-intensive and decentralised than large

It is generally accepted that small firms have lower capital:labour ratios than large firms (World Bank, 1978:18; Steel & Takagi, 1983:425), and tend to be concentrated in more labour intensive industrial sectors (Anderson, 1982:938). South African studies support this observation (Natarras, 1984:29-32); it is also clear - predictably enough - that, on the average, the smaller the enterprise, the lower are worker earnings (eg. Page, 1979:16-19; also Dunn, 1986).

In most economies, the contribution of small firms to total employment is quite large. The National Manpower Commission observes that on the basis of turnover in nine sectors of the South African economy (including mining, manufacturing
and trade), 94% of establishments regarded as 'small' (usually with an annual turnover of less than R1m) employed 37% of workers (1984:16). In some cases these figures are much higher, with the 99% of small private transport firms employing 71% of workers.

There is also evidence - though this is more doubtful - that in some countries, small firms have provided a more than proportional increase in employment over time; for example, in Japan, small firms contributing 38% to total employment provided 58% of the growth in employment 1970-1977. In South Africa this tendency is weaker, with small firms apparently providing increases in employment roughly in proportion to their number of employees (NMC, 1984:18-20). It should be stressed, however, that a) the relevant labour, employment, capital stock and output data for firms in South Africa are poor and out-of-date, especially for small firms (Moll, 1984, ch. 5), and b) these data exclude the informal sector which is of increasing importance and size in South Africa.

The second point is likely to be valid almost by definition: in many environments in which small-scale firms and informal activities operate, there is no space for large firms, and small firms are often found in rural or peri-urban areas, in agriculture, small towns, etc., where the infrastructure and markets necessary for large firms to operate are lacking. Small firms may also use resources (eg. unskilled workers) not touched by large firms (cf. McCarthy, 1982), and fill needs (eg. where markets are small) not catered to by large firms. Likewise, they can be an important decentralised generator of savings (ILO, 1971:21).
3.3 Small firms are more financially vulnerable than large

In all capitalist countries, small firms have a hard time, many or most collapsing in their first couple of years. In South Africa, for example, it is estimated that half of small firms do not make it past two years (Cape Business News, 1985b). While there are many reasons for this, related to both 'internal' factors (lack of entrepreneurship and managerial skills) and 'external' factors (difficulties of access to product markets, technology and credit, and government regulation) (Schmitz, 1982:431-441), the financial aspects of this process are particularly interesting.

Small firms are financially vulnerable for three reasons:

1. Small firms are more highly geared than large, and pay higher interest rates (Schmitz, 1982:440-1; Steel & Takagi, 1983:426-7); a summary of research on small firms undertaken in the Western Transvaal indicated that 94% of respondents made use of bank credit, paying average interest rates of between 23.5% (amounts under R50 000) and 16.5% (then equal to prime, on amounts over R500 000) (Archer, 1986). Lacking access to share capital and perhaps trade credit, and with limited owner's capital, it seems a priori likely that small firms will be fairly highly geared, especially in their infancy (Whyte, 1984-85). The empirical evidence on this point in South Africa seems poor, but it is in accordance with the work of Nattrass (1970).

2. There is reason to believe that small firms use bank loans and other loan capital to cover working capital in the day-to-day running of businesses. This general pattern is widespread in the developing world -

   It is an institutional fact in most LDC's that commercial bank credit is
used almost exclusively for business loans to finance working (and, quite often, fixed capital) capital requirements of firms (Van Wijnbergen, 1983:63; also Taylor, 1983, ch. 5; Morley, 1971: 196-202), and particularly prevalent in small firms due to their lack of access to nonbank sources of funds (Anderson, 1982:938-9). The implication is that abrupt rises in interest rates significantly raise firm costs, leading to direct falls in output and firm cash-flow crises, and possible eventual collapse. Such contraction is unlikely to be matched by expansion when/if interest rates fall suddenly, in part because some of the necessary resources will no longer exist.

3. Small firms lack financial resources and flexibility and are less diversified than large (President's Council, 1984:72-73); in times of crisis (declining demand or rapidly rising costs) they are more likely to collapse than large. Furthermore, in general their investment function seems more interest-sensitive and risk-averse in circumstances of high and unstable interest rates.

3.4 Conclusion

Policies which adversely affect small firms as against large are likely to have a more-than-proportional adverse effect on the welfare of the poor, since a) poor people tend to work in small, poorly-paying labour-intensive firms, and b) small firms tend to be situated in rural and other areas in which there is a preponderance of poor inhabitants. 6 Fore-

6. This view stresses the employment-welfare role of small firms and the informal sector, but is not incompatible with a belief that in the long-run, growth and development are crucially reliant on industrialisation,
most amongst these are restrictive demand-management poli-
cies (President's Council, 1985:35-36) which can have severe
effects on costs and working capital availability of small
firms.

It appears small firms can adjust to reasonably stable
levels of real interest rates, even if these are non-opti-
mal; they are likely to benefit the least from unstable and
occasionally high nominal and real interest rates. These
have adverse short-term effects on conditions under which
small firms operate, and in the long run may have cumulative
negative effects on aggregate investment, output and employ-
ment.

4. SMALL FIRMS AND MONETARY POLICY IN SOUTH AFRICA

4.1 Introduction

We now examine the empirical relation between monetary
policy and the survival and performance of small firms in
South Africa. As noted earlier, however, data on the latter
are very poor. In this section, then, data on bankruptcies
will be taken as proxy for the economic difficulties faced
by small firms, and data on liquidations for those of
(smaller) companies; the interest rate looked at will be
the prime overdraft rate, as the minimum rate paid by small
firms for bank credit.

technological advance and the expansion of large-scale
manufacturing activities.
4.2 Interest Rates and Insolvencies

The period 1967-1986 was examined, to include the pre-1974 period of halcyonic growth, the later-1970s era of supply-side shocks and slower growth, and the newer phase of slow growth and 'activist' interest rates policy of the 1980s.

Insolvency figures have risen from around 250 per quarter in the late 1960s to almost 1000 per quarter in the mid-1980s, while forced company liquidations have risen from less than 100 per quarter in the 1960s to over 500 per quarter in 1985. (See graph 1.) Until 1974, no significant cyclical pattern is discernable, but there is important cyclical behaviour after 1974, with figures peaking in about 1978 and in the current period. The insolvencies figure was used in

Graph 1. Insolvencies and Liquidations in South Africa

(Quarterly)
the discussion below as the company liquidations figure seemed more strongly autocorrelated, but the simple correlation coefficient between the two was quite high (0.69; 0.78 post-1975).

The effects of changes in interest rates on insolvencies/liquidations was expected to be at a maximum between four and six quarters later, firstly due to sluggish data-collection, secondly, because sustained interest-rate changes would more severely affect firms with longer-term debts, and thirdly, because even after the realisation of crisis has entered the small firm, other strategies (use of savings, attempts to gain additional loans or share capital, cutting costs etc.) will be attempted before bankruptcy. The best fit was a four-quarter lag. This relation is depicted in graph 2.

Graph 2. Insolvencies and Nominal Overdraft Rates
The correspondence between the two is remarkably close, though doubtful pre-1974 due to the lack of significant fluctuation in nominal prime rates.

The link between insolvencies and real interest rates is also important and is shown in graph 3. It is intriguing to note that the link appears to be loose until 1975 (consistently rising inflation rates), and close since. Most significantly, in both cases, changes in the direction of change in interest rates are associated with changes in the direction of change of insolvencies.

Graph 3. Insolvencies and Real Overdraft Rates

INSOLVENCIES (quarterly) REAL OVERDRAFT RATES (%)

Three explanations can be advanced for these patterns:

1. The period 1967-74 was one of rapid growth (real GDE grew at around 6.7% pa.), while growth rates since have deteriorated, with real GDE growing at less than 0.5% pa. In times of generally long-run buoyant demand,
rising inflation and declining real interest rates, small firms are likely to prosper; only after serious anti-inflationary measures were applied after 1974 did firms begin to feel interest rate pressures.

2. The massive rise in insolvency and liquidations figures since 1981 seems very closely associated with rises in interest rates; the ultimate test of this hypothesis, of course, is whether insolvency and liquidation figures fall significantly in 1986 (despite general economic depression).

3. The importance of the nominal interest rate is probably due in part to businesses going under as result of rising interest costs inducing cash-flow crises, rather than economic activities becoming less profitable due to rising real interest rates.

4.3 Other factors affecting bankruptcies

The above correlations could of course be spurious - due to possible correlation between bankruptcies, interest rates (rising at the end of a boom, falling during a slump) and general business cycle variables (cf. Zarnowitz, 1985:526-530). To test this, two factors were examined:

i) Current levels of economic activity, approximated by changes in GDE;

ii) The supply of private sector credit provided by commercial banks, to act as proxy for the supply of credit to small firms. 7

7. The assumptions being: i) credit markets may be poor; and ii) in times of direct SARB interventions, credit restrictions will not be fully reflected in changes in interest rates.
A regression equation was set up in the form:

$$\text{Insolvencies} = f (\text{GDE, } i, \text{ credit, inflation})$$

with the expected sign of the first derivative as indicated.

Examination of the 1967-1985 period indicated a 'structural break' at around 1974.4\(^9\), and accordingly, separate equations were tested for each sub-period. The first interesting result is that no measure of private credit was significant independent of GDE and it was omitted from the equations. (The indicator used could have been too aggregated to act as instrument for small firm credit.)

The overall results are as follows (standard errors given below coefficients, in parentheses):

**Period 1967.2 - 1974.4**

$$\text{INSOLV} = -71.2 - 28.4.\text{GDE}(+1)^* + 35.7.\text{NOMINT}(-4)^*$$

$$\begin{align*}
(72.2) & \quad (6.2) \\
(9.1) & \quad (1.4)
\end{align*}$$

$$+ 6.8.\text{INFL}^*$$

$$\begin{align*}
(1.4)
\end{align*}$$

$$\text{D.W.} = 2.52 \quad \text{n} = 31$$

$$\hat{R}^2 = 0.54$$

* significant at the 5% level.

---

8. Changes in nominal variables were used to reduce covariance between the independent variables; use of various measures of real variables merely raised multicollinearity and did not alter results significantly.

9. Chow statistic: \(F_{5,64} = 2.48\), significant at 5%. 
Period 1975.1 - 1985.3

\[
\text{INSOLV} = 380.2 - 22.4 \cdot \text{GDE}(+1)^* + 19. \cdot \text{NOMINT}(-4)^* \\
(1874) \quad (9.4) \\
+ 10.9 \cdot \text{INFL}^* + 0.97 \cdot \text{AR}(1)^* \\
(7.4) \quad (0.1)
\]

D.W. = 1.74  \quad n = 43  
\hat{R}^2 = 0.87

* significant at the 5% level.

\text{AR}(1): \text{ first-order autoregression coefficient.}

Not much should be read into these equations as the classical OLS assumptions are clearly not met\textsuperscript{10}. Accordingly, it should simply be observed:

1. The coefficients have the expected signs, with insolvency levels significantly positively related to inflation rates, probably due to: i) small firms suffering most from the longer-run effects of inflation; ii) levels of inflation often being a useful inverse proxy for the overall state of the economy, which may econometrically 'drown out' its positive effects via lower real interest rates; in any event, inflation rates change slowly compared to interest rates, especially in the 1980s.

2. Nominal interest rates have a large contribution to make to helping understand insolvency levels, independently of GDE etc. Rising GDE levels (as per the smoothed indicator used) may explain some of the divergence between nominal overdraft rates and insolvencies

\textsuperscript{10} Including significant autocorrelation after 1975, multicollinearity between explanatory variables, problems of small sample sizes and administrative data-collection procedures, and perhaps correlation between explanatory variables and residuals.
in 1983. It seems, as in other countries (Whyte, 1984-85:58), that even marginal firms can survive periods of high interest rates where the economy is booming, but are brought down very quickly if the economy sags.

3. A significant autocorrelation coefficient appears in the second equation. This is a perennial problem in business cycle-type research and probably indicates: i) the omission of relevant explanatory variables (examination of residuals showed no obvious patterns when compared to data on the BoP, levels of private consumption expenditure, measures of the money supply, etc.); ii) inertia in the processes whereby data is acquired from month to month, especially where figures are changing sharply.

4. Regression results for company insolvencies were similar to the above, the major difference being that they were (predictably enough) far less sensitive to changes in GDE.

Finally, however, it should be stressed that the above discussion adopts a very limited approach to interest rates. It fails to examine the Reserve Bank's criteria and limitations in setting interest rates, among which the most important are the current account of the BoP, the exchange rate, and foreign interest rates (especially in the UK and the USA) (see Nurick, 1982:142f). Space does not allow consideration of these crucial external limitations and hence a closed-economy model has implicitly been assumed here.
Table 2. Variables used in Regressions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSOLV</td>
<td>Quarterly insolvencies figures for small firms.</td>
</tr>
<tr>
<td>GDE(+1)</td>
<td>Quarterly changes in nominal GDE, exponentially smoothed over 8 quarters, one quarter ahead. (Current and past levels of domestic spending are probably used as predictions of future spending.)</td>
</tr>
<tr>
<td>NOMINT(-4)</td>
<td>Nominal prime overdraft rates, lagged four quarters.</td>
</tr>
<tr>
<td>INFL</td>
<td>An indice for inflation as affecting small firms, being the mean of the CPI and PPI (before 1974, the wholesale price index).</td>
</tr>
</tbody>
</table>

According to Statistical News Release P13.2.1, "The figures for insolvencies are based on information extracted from the Masters' Notices published currently in the Government Gazette and refer to insolvencies under the Insolvency Act, No. 24 of 1935. Insolvencies relate to private persons and partnerships which are placed under final sequestration..." Likewise, data for companies refer to compulsory liquidations.

Data was tested for the 1967.2 - 1985.3 period, due to the absence of more recent end-data and to provide reasonable interest-rate continuity since the currently-used structure of rates was only established after the 1965 Banks Act (Franzsen, 1983:113).

Data taken from SARB and CSS Quarterly Bulletins.

4.4 Monetary Policy, Small Firms and Economic Welfare

This section has examined the relation between the collapse of small firms and real and nominal interest rates, and argued there is a strong positive correlation between them, with a lag of around one year. This is likely to cause direct welfare losses in the form of:

1. Harming firms or sectors of the economy in which poor people are concentrated, thus exacerbating the duality between relatively prosperous financial, large manufac-
turing and mining firms, and smaller firms, agricultural activities\textsuperscript{11} and services, and the informal sector\textsuperscript{12} and intensifying income, regional and urban-rural inequalities;

2. Harming the employment-absorption capacity of the economy and - by default- encouraging capital-intensive and financial enterprise\textsuperscript{13}; the micro-level process of resource allocation is likely to be severely impeded.

While 'small business hero worship' should be avoided, it seems this analysis has broader welfare implications. Firstly, a high interest rate policy is likely to prevent the formation of new small firms; this is unlikely to be compensated for when interest rates fall if there is the expectation that they might rise or fluctuate again. Secondly, new investments by smaller firms are likely to be hampered more than those by large. These hypotheses, how-

\textsuperscript{11} The formal agricultural sector is a particular victim of higher interest rates in recent years (linked to changes in Land Bank operations and a shift by farmers towards commercial bank financing). A recent study claims that nominal interest costs in agriculture rose from 12.4\% of net farming income in 1980 to 83.5\% in 1985 (AHI, 1986:37).

\textsuperscript{12} It is likely that financial factors harming small firms will have corresponding effects on the informal sector (while simultaneously providing its lower realms with new recruits). Only negligible research has been done on this in South Africa; research in other countries, suggests that where there is even a small interaction between formal and informal finance markets, interest rate conditions in the former are closely reflected in the latter (eg. Roemer, 1986:433-6).

\textsuperscript{13} It seems real interest rates and real exchange rates need to be held high for lengthy periods until a significant resource reallocation in the 'modern' sector of the economy towards more 'appropriate' or labour-intensive production methods takes place. See, for example, Morawetz (1977:139-148) on the slowness of resource movement between sectors.
ever, could only be tested using rigorous time-series data and thorough research on small firms.

It does not seem exaggerated to suggest that much of the employment problem experienced in South Africa over the past few years - falling formal sector employment, a burgeoning low-income informal sector, rising real wages in many segments of the economy and in many occupations - may be due in part to the widespread decline of small firms\(^{14}\) (cf. Botha, 1986:51). This hypothesis, of course, is radically counter to stated government policy which favours the deregulation and encouragement of small businesses and the informal sector (RSA, 1984:9-10; NMC, 1984; President's Council, 1985), and to the efforts of organisations like the Small Business Development Corporation and the Council for the Promotion of Small Business. It is not unreasonable to suggest, however, that government macroeconomic policy can more than outweigh all such developmental efforts.

5. MONETARY POLICY, RESOURCE ALLOCATION AND INTEREST RATES

5.1 Inflation and Stagflation

A central theoretical conclusion of the above is that the efficacy of using interest rates to control domestic expenditure and inflation is far from certain. Raising the nominal interest rate for example is intended to induce a shift along the demand for money curve, and via a somewhat vague transmission process, lead to a shift from real to

\(^{14}\) It is impossible to test this hypothesis as the necessary time-series data on small firms and employment and details of insolvent firms do not exist. An Afrikaans Handels-Instituut study indicated however that the mean number of workers in a sample of firms going insolvent in 1985 was 12.74 (1986:34), implying a nationwide figure for jobs lost due to small firms going insolvent in the vicinity of 41 036; more jobs would have been lost with 2 014 companies going into liquidation.
financial assets, a fall in expenditure and hence slow down the rate of price increase (Mayer, 1978:7-8).

In practice this process seems to assume fixed supply over time, with the forces affecting the 'real' side of the economy seen (somehow) as relatively unaffected by interest rate changes. This is a decidedly shaky approach. Rather than firms and households adjusting their purchases and assets until equilibrium, it appears resources are exceedingly slow to move and firms find it very difficult to adjust to changed economic conditions. Higher interest rates appear in large part to reduce money demand - and inflation - via reducing investment and income, with firms chopping expansion plans, laying off workers, going bankrupt, etc.:

> It is an influence on the demand for money exerted through changes in the level of production and incomes, and not a direct effect on the desire to hold money (Kaldor, 1982:24-25).

This, as Rogers notes, is in accordance with post-Keynesian theory of the money supply process, which suggests the money supply is largely endogenous and determined by the demand for credit (1985:244), with tight monetary policy and high interest rates affecting economic activity fairly directly via bankruptcies and recession. This, in turn, appears to be an extension of the Keynesian argument that the savings-investment identity is maintained by changes in income, not in nominal interest rates (Bharadwaj, 1983:11); income need not, of course, tend towards the full employment level.

There is an abundance of evidence, furthermore, that monetarist-type policies fail to grasp many structural factors which are of importance to the economies of LDCs; hence IMF stabilisation attempts consistently overpredict growth and
underpredict inflation. A major reason is that in most LDCs, the financial structure is quite rudimentary, thus bank credit used to finance working capital acts as a direct link to the supply side of the economy (Van Wijnbergen, 1983:46).

This can have several effects. Firstly, a rise in interest rates can raise business costs and prices and reduce output in the short run and thus be perversely temporarily inflationary (Taylor, 1981). Secondly, over time such a program will be deflationary but will be accompanied by declining real output due to bankruptcies etc., with decidedly stagnationary effects (Morley, 1971). Thirdly, one of the major fatalities in this process of declining GDE and adjustment of the balance of payments is investment. External balance and lower inflation thus appear at the cost of long-run growth prospects.

5.2 Exchange Rates and Interest Rates

Keynes identified volatile expectations of future returns as the principal cause of fluctuations in investment (Meltzer, 1981:61), arguing that an aim of state policy should be to reduce uncertainty to a minimum. One major channel by which uncertainty is transmitted through the economic system is via exchange rates and interest rates. These are two of the most important prices operating in any economy. Both have important roles to play, both in nominal (equating financial flows) and in real (allocating resources) terms.

The nominal exchange rate is the relative price of domestic and foreign moneys. It is basically set in relatively efficient financial markets, and given reasonable capital mobility, the response of financial flows (or the exchange rate) to interest rate differentials is rapid. The real exchange rate, however, is a major allocative device on the produc-
tion and investment sides of the economy, operating in commodity and labour markets which adjust very slowly. Hence, for example, short-term capital flows equilibrating financial markets can be disastrous for the real allocation of resources between sectors (eg. tradables versus non-tradables), as in the case of the Southern Cone countries in Latin America (Bruno, 1985).

Holden & Holden have shown that the uncertainty induced by the violent fluctuations in the exchange rate of the rand in recent years is likely to have imposed substantial costs on the South African economy (uncertainty, lower long-term investment, high adjustment costs), without it reaping possible benefits of a depreciation. They argue that the goal of external policy should thus be to stabilise the real exchange rate to allow forward planning and facilitate the efficient allocation of real resources in production over time (ibid, 361-363).

Much the same can be said of the interest rate, the key relative price between present and future consumption. The short-run nominal interest rate\(^{15}\) is effectively being used to equate the demand and supply of money and reduce domestic expenditure, and is ultimately set by the SARB in accordance with money supply and BoP targets; it functions in rapidly-adjusting financial markets. The real interest rate, however, is one of the important factors affecting the investment decision of firms, ie. the evaluation and direction of committing resources into production. Since it operates over considerable periods of time in slow-adjusting labour

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\(^{15}\) This paper has concentrated on the prime overdraft rate and its fluctuations, while a whole array of interest rates over different periods confront would-be investors. In practice, however, long-term interest rates reflect much of the instability of short-term rates, though fluctuating less violently over short periods.
and commodity markets, it seems resources can only be allocated effectively if it is reasonably stable and predictable over time. Unstable interest rates - nominal or real - are likely to destabilise the real allocation of resources in the economy. Monetary policy focusing largely on movements in nominal variables can thus be extremely destructive (cf. Kaufman, 1982).

Clearly, the interest rate should bear some relation to the real rate of return on capital: if too low, it can at best be neutral towards the quantity of investment, while if too high, investment falls and may be directed into speculative or high-risk activities (Roe, 1982). The strongest - flow of funds - argument adopts an intermediate line and suggests merely that macroeconomic policy should ensure the availability of domestic liquid financial assets yielding a low positive interest rate (Diaz-Alejandro, 1985:19; Coats & Khatkhate, 1980:24).

5.3 Monetary Policy Alternatives for Small Firms

The question arises as to what macroeconomic policies would benefit small firms. The ideal policy may well be one in which the real interest rate is positive but constant over time; it seems even more important (in terms of expectations formation, investment and cash-flow problems facing firms) that the nominal interest rate be stable and reasonably predictable.

Some specific suggestions are possible. Firstly, there appears to be a strong case for gradualism - accepting temporary BoP or inflation costs in some circumstances, and only gradually reducing the money supply and domestic credit. Such policies could be introduced in tandem with
efforts to stimulate output and encourage the supply side of the economy.\textsuperscript{16}

Further, direct controls on credit creation and less of an emphasis on free financial markets may be desirable in some circumstances. If implemented, they would probably need to be combined with curbs on the money supply and some controls over incomes, capital flows and prices - certainly as a transitional strategy to reduce inflationary expectations at minimal cost.\textsuperscript{17}

The above approach depends on the theoretical assertion that financial markets are not efficient allocators of resources. Given that financial institutions tend to channel their funds in directions which maximise their profits, two problems appear. The first is that a central deficiency in financial markets is informational: lenders do not know how the money they lend is being invested (Stiglitz & Weiss, 1981). Hence interest rates alone do not necessarily 'clear' financial markets; banks maximise profits at an

\textsuperscript{16} For example, De Kock (1985) argues that the high interest rate policy of 1984-85 eliminated excess demand in the South African economy and would serve as basis for lower inflation and economic recovery. He did not mention the social costs of this policy (stagnation in real GDP, declining employment levels and poor growth prospects for the immediate future), and appears not to have considered whether a more gradual approach could not have achieved his goals over a longer time-period, at lower social costs.

\textsuperscript{17} It has been shown that in times of rapid inflation, strict attempts to reduce money supply growth may induce 'excessive' but rational price-raising behaviour by firms, given considerable general uncertainty and an unstable structure of relative prices (Ramos, 1980:478f); this follows from Arrow's observation that in disequilibrium circumstances, every firm is to an extent an oligopoly (1977:384-5). Acting directly on expectations via state propaganda and (temporary) controls can then minimise adjustment costs towards a less inflationary equilibrium.
interest rate where there is an excess demand for loanable funds (Greenwald et al., 1984:195). Credit constraints, then, are intrinsic to financial markets; for many firms, it is the availability of credit, not the price which they have to pay, which restricts their investment, or when it is working capital which is curtailed, which limits their production (ibid, 194).

This problem is compounded by scale economies in bank transactions - costs to banks of processing loans, monitoring clients etc. rise less than proportionately with account size, especially in LDC's (Tybout, 1984:480).

Secondly, stock markets strongly favour larger, more secure firms. As a result of these processes, strong biases appear even in 'liberalised' financial markets which work against new and small firms and agricultural enterprises and favour those with high asset ownership (Coats & Khatkhate, 1980:25; cf. Cape Business News, 1985a, for the South African case), also forcing small firms to gear higher at higher interest rates, and bear the cost of interest rate increases.

In such circumstances, the state has at least two interventionistic options: either generalised 'artificially low' interest rates, or selective credit controls/provision. The former has been criticised as leading to 'financial repression', undermining savings and the efficiency of capital allocation (between sectors and technological choices); to an extent this probably happened in South Africa in the 1970s. The simple 'liberalisation' response, however, may not necessarily be the whole solution as liberalised financial markets can be highly unstable and subject to severe fluctuations (Bruno, 1985; Diaz-Alejandro, 1985); it also relies on the presence of efficient equity markets (Cho,
and can have important distributional by-effects (Roemer, 1986:435-6; also my other paper at this Workshop).

One particular problem with financial repression situations is that the lower the cost of credit, the greater the demand; in such cases credit is rationed to firms even more than usual, and the rationing criteria used - ranking firms as per collateral, organised bookkeeping systems, past record etc. - effectively favour large and established firms and expose small firms to takeovers (Tybout, 1984:485). 'Artificially' low interest rates may thus exacerbate anti-small firm biases in the financial system.

The alternative is active state intervention in financial markets, to direct financial resources in desired directions. These may take the form of selective credit controls, or providing cheap loans to small firms via state agencies, and are essentially an attempt to cater for market imperfections. A combination of the two prevailed in South Korea for many years and appears to have encouraged investment by small firms, with relatively minor effects on large firms and small overall efficiency losses (Leite & Vaez-Zadeh, 1986). They can, however, introduce new and large inefficiencies into financial markets where careful research and administration is lacking (cf. Silber, 1973:346-7). For example, the state needs to determine which sectors and firms need to be favoured, and in the case of credit controls, to ensure the conditions necessary for them to function (Khatkhate & Villanueva, 1980:598-600) are met. Many of the efforts of

18. Further, to the extent that changes in interest rates are designed expressly to affect the availability of consumer credit and hence domestic spending, direct controls could be more useful, eg. on hire purchase agreements, credit cards, housing subsidies, etc. (Black & Dollery, 1985:57; Silber, 1973, 332f).
organisations like the SBDC are aimed at this, but there is probably considerable scope to extend them.

It should also be noted that provision of cheap loans to small firms via the state is usually regarded as undesirable, leading to the cushioning of small firms from market forces, reducing their labour-intensity, and entailing severe administrative problems (Nattrass, 1984:39-41). A reasonably stable and accessible financial market is normally regarded as preferable, but may need to be encouraged and subsidised by the state in its early stages until it achieves a comparative advantage in assessing the creditworthiness of small firms and others excluded from financial markets, and in administering and servicing loans to them (see Johnson, 1980:557).

6. CONCLUSION

Economies lack Walras' auctioneer; they are structured such that a variety of short- and long-term price- and quantity-adjustment processes occur in response to real or monetary stimuli, and are subject to particular constraints. These include slow resource movement between sectors, variable price-adjustment processes, persistent disequilibria, fixed factor proportions in production over the medium-term, complex sectoral and market interactions, high levels of investment-goods imports, and the possibility of surplus capacity over lengthy periods (cf. Taylor, 1983, ch. 1; Crockett, 1981:58-62). One factor stressed above is the direct link between credit and the supply side of the economy.

Such processes are alien to the utility-maximising firms and individuals, certainty and market-clearing of neoclassical economics. There is a growing body of thought, however, which suggests real-world economies are not (strictly) neo-
classical and should be modelled on that basis; for less-developed countries, the efforts of Taylor (1981, 1983), Schydlowsky (1971), Porter & Ranney (1982), Crockett (1981), Buffie (1984) and Foxley (1983, chs. 6-7) are a first step along these lines. This approach seems very relevant to South Africa and could be far more fruitful that the crude application of second-hand monetarist-type beliefs; the ideas on selective economic expansion and planning and monetary-real interactions are particularly interesting.

Welfare issues are particularly important in this respect. The distribution of income in an economy is a complex and highly structured animal, and appears to be conditioned as much by macroeconomic interactions (technological developments, state policies and spending, propensities to save, trade and tradability of output, etc.) as by the microeconomics of marginal productivity and human capital. (See my other paper at this Workshop.) As a result, the welfare of the majority of the population should severely constrain the scope of fiscal and monetary policy, especially in an economy as unequal and heterogenous as that of South Africa.

This paper has suggested for example that a major determinant of income in South Africa is the large versus small firm divide, and that monetary policies harming the latter are likely to be detrimental to general economic welfare. A similar argument can be presented - depending on structures of ownership, control and income distribution in the economy - for exchange rate and financial policies, and government spending (Johnson & Salop, 1980). Clearly, different political forces will evaluate these outcomes in very different ways; the interests of financial capital, for example, tend to favour redistribution of income towards large firms and the financial sector via financial liberalisation, as has been taking place in South Africa.
Finally, a problem with the above is of course its political naivete. Gavin Relly has stressed "the interdependence of economics and politics in South Africa" (1986:15); perceived political factors play a major role in determining the effects of monetary and international policy, eg. the level of the exchange rate, and in setting investment responses to changes in interest rates.

In the latter arena, the Financial Mail has continually stressed that "Business confidence is at an all-time low" (23-5-1986:39; also 6-6-1986:43; Ball, 1985), with the implication that Keynesian uncertainty and 'animal spirits' are major factors behind current low levels of consumer and especially investment spending, with little sign of improvement despite large negative real interest rates. Clearly, markets expect radical political change in the foreseeable future, and are adjusting current plans accordingly. Until this crucial political variable is sorted out, it is likely that expansionary monetary and fiscal policies in South Africa will steadily become increasingly ineffective.
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