

ON INFLATION

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Abstract

There is currently much more common sense in the South African inflation debate than a few decades ago. In particular, the South African Reserve Bank exhibits a pragmatic, eclectic approach to inflation (as reflected in its bi-annual *Monetary Policy Reports*). This is in stark contrast to the narrow, monetarist-type thinking that tended to dominate during the 1980s.

This paper is an attempt to contribute to the debate by highlighting a few issues, including the widespread substitution of the CPI by the CPIX, the fact that inflation is a process, the need to combat inflation, the causes of the decline in inflation in South Africa and the essential features of an inflation-targeting framework for monetary policy.

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The South African inflation rate has declined significantly during the past ten to fifteen years. In 1990, single-figure annual rates of increase in consumer prices seemed a remote dream. Ten years later, the inflation rate was averaging about five per cent and subsequently it tended even lower (except for the short-lived increase in the wake of the collapse of the rand in 2001). However, despite the achievement of rates which had seemed unattainable not long ago, inflation is still one of the most hotly debated economic issues in South Africa. This can be ascribed at least partly to the adoption of an inflation-targeting framework for monetary policy. Everyone knows what the target rate is and that the South African Reserve Bank (SARB) uses an interest rate as the instrument to reach the target. Add to this the fact that prices and interest rates affect most participants in the economy, and one can understand why the bi-monthly meetings of the SARB's Monetary Policy Committee (MPC) regularly generate so much interest.

This paper touches on some basic aspects of inflation. It is not a technical or empirical paper. Instead it is an attempt to emphasise some key points about inflation and anti-inflation policy in an intuitive, commonsense way.

The first section deals briefly with the definition and measurement of inflation. This is followed by an equally brief discussion of the costs or consequences of inflation. The third section deals with the causes of inflation and includes a discussion of possible reasons for the decline in the South African inflation rate. It also addresses the issue whether or not, or in what sense, inflation can be "imported". The fourth and final section focuses on anti-inflation policy and deals briefly with inflation targeting and an anti-inflationary incomes policy.

1. DEFINITION AND MEASUREMENT

There should be little or no debate about the definition of inflation. It is a continuous (and significant) increase in prices in general. By far the most important aspect of this definition is that inflation is a *process*, during which most prices are increasing from year to year. This cannot be overemphasised. Much of the muddled thinking about inflation can be traced to a failure to realise that inflation is a process, not a once-off increase in prices, nor increases in a limited number of prices only. In this regard it was quite disconcerting to discover that a well-known introductory text distinguishes between "one-shot inflation" (defined as "a one-shot, or one-time increase in the price level") and "continued inflation" (Arnold, 2005: 307-313). Inflation is by definition "continued inflation".

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To measure inflation, a proxy has to be found for the general price level. There are various candidates, none of which is ideal. In practice, however, a consumer price index (CPI), or something similar, is generally used for this purpose. South Africa is no exception, with the CPI for metropolitan areas traditionally being the basis for measuring inflation. In recent years, however, CPIs have also been estimated for other geographical areas, including one for metropolitan and other urban areas and one for rural areas. With the adoption of inflation targeting yet another measure was created, namely the CPI for metropolitan and other urban areas excluding mortgage interests costs (the CPIX). As a basis for calculating (and setting) an inflation target for the SARB, the CPIX makes eminent sense. However, the CPIX is *not* a basis for measuring the level of prices in general, since it excludes one of the most important prices the average consumer is faced with. Put differently, the CPIX does not measure the cost of living and the rate of increase in the CPIX therefore does not measure the rate of increase in the cost of living (ie what a measure of inflation is supposed to do).

In South Africa, however, the CPIX has received so much publicity and attention that it has all but replaced the CPI as the basis for calculating inflation and everything related to it. Portfolio managers benchmark the returns on their portfolios against CPIX inflation, economists use the CPIX to convert nominal (current-price) series to real (constant-price) series, employers and trade unions compare increases in wages and salaries to CPIX inflation, and so on. This is a typical example of how something designed for a specific purpose subsequently becomes used for a variety of other purposes, without considering what it was originally designed to do.

What is probably not well known, however, is that many countries (including inflation targeters such as Australia, Brazil, Poland and Sweden) do not include mortgage interest costs in their headline CPI baskets (Weideman, 2006). As a result their headline CPIs are similar to our CPIX. While this helps to explain why some inflation-targeting countries use headline CPI inflation as target, rather than a modified inflation rate, it is doubtful whether those in South Africa who have latched on to CPIX were aware of this.

While on the topic of the measurement of inflation, the pervasive confusion between levels and rates of change also has to be mentioned. The media continue to report that “the latest CPI is 5%” or that “the CPIX has fallen to 5,5%”. This not only reflects a degree of ignorance on the part of the reporters, it also serves to confuse the general public. For example, if it is reported that the CPI or CPIX has fallen to a certain percentage, Joe Soap interprets it to mean that prices have declined (rather than that prices are still increasing but at a lower rate than before). This confusion between levels (CPI) and rates of change (inflation) is, of course, not confined to financial reporters and laypersons. Even economists often fall into the trap when dealing with the dynamic inflation process, partly because much of economic analysis occurs in comparative static frameworks. In fact, even if one is aware of the pitfalls, one constantly has to guard against confusing levels and rates of change when dealing with a topic like inflation.

2. COSTS

Much has been written about the costs or consequences of inflation and the priority to be accorded to the fight against inflation. Despite all this, Gregory Mankiw, in the fifth edition of his popular text on macroeconomics, identifies the following as one of the four most important unresolved questions of macroeconomics: “How costly is inflation, and how costly is reducing inflation?” (Mankiw, 2003: 524-525). In discussing the question he emphasises that the cost of inflation is a topic on which economists and laymen often disagree and that the latter frequently confuse inflation with other problems that coincide with inflation. Economists are generally less worried about the costs of inflation, especially moderate inflation, than non-economists, but they often disagree among themselves about the cost of reducing inflation (ie the cost of disinflation).

The broad consensus nowadays is that inflation is costly but that a low positive rate of inflation is preferable to a zero rate, *inter alia* because it creates scope for the monetary authorities to use negative real interest rates to stimulate economic activity, if necessary. As to what the rate should be, the authorities should be guided by Alan Greenspan’s view that inflation ceases to be a problem when expected changes in the average level of prices are so small and gradual that they do not affect the financial decisions of businesses and households.

In South Africa it is often argued that inflation should be combated because it hurts the poor more than other income groups. However, as pointed out by the SARB (2002: 4), it cannot be assumed *a priori* that the poor will be hardest hit by inflation. The answer will depend, *inter alia*, on the weights in the consumption baskets of the different income groups and the changes in relative prices. The relative movements in food prices, in particular, will have a major bearing on which group is affected most in a certain period. Sometimes the poor are hit hardest, at other times more affluent homeowners possibly experience the highest rate of inflation. The poor, however, do not save and cannot hedge against inflation. One therefore has to agree with the SARB’s sensible conclusion that although the poor

are not necessarily affected most by inflation, there are good reasons why they are more vulnerable to inflation than other income groups, and therefore good socio-economic reasons for combating inflation.

Apart from the possible impact on the poor and the other costs associated with inflation, there are two further reasons why policymakers cannot ignore inflation nowadays. The first is the fact that the voting public regard it as a problem, often termed Public Enemy Number One. Irrespective of what economic analysis might indicate, policymakers in a democratic society cannot ignore public opinion, even in a country like South Africa, where macroeconomic issues are still relatively unimportant politically. Second, and more important, are the requirements of the international economic community, especially the financial markets. In the current globalised environment economic policymakers have less scope than previously to pursue policy objectives independently. In a world in which finance, factors of production, goods and services are becoming increasingly mobile, great emphasis is placed by investors on macroeconomic stability, with low and steady inflation as probably the most important indicator of such stability. The fact that the South African inflation rate fell significantly and remained in single digits has contributed in no small measure to the financial account surpluses and improved overall economic performance during the past decade or more.

Stiglitz *et al* (2006: 17) also make the point that high inflation has come to be regarded as “an easy-to-see *indicator* of economic malperformance” (italics in the original), that is, a signal that the monetary and fiscal authorities are not functioning properly. However, they question the validity of this view, partly because the links between inflation and real variables are probably quite weak. They also make the interesting observation that the position that monetary policy cannot affect real variables (ie the classical dichotomy) is inconsistent with a major concern about inflation (Stiglitz *et al*, 2006: 78-79). If real output is unaffected by monetary policy, then why worry about inflation, since it will not have any adverse effects on the economy. In other words, if the long-run Phillips curve is vertical in any case, a concern about inflation appears to be unwarranted.

3. CAUSES

There is no lack of possible causes of inflation. Ask any group of people and a host of culprits will be identified, including the government, the central bank, the farmers, big business, trade unions and the oil-producing countries. Invariably the blame will be laid at someone else’s door. In fact, however, inflation is a complex, dynamic process which cannot be ascribed to a single cause and which sooner or later directly or indirectly involves most participants in the economic process.

To emphasise that inflation is a process that has its roots in the domestic economy it is useful to consider (and dispel with) the notion of “imported inflation”. When price increases are triggered by an increase in the prices of imported goods, it is often claimed that the country is suffering from “imported inflation”. Some authors even go so far as to distinguish between domestic inflation and foreign inflation, where foreign inflation refers to increases in import prices, not to inflation elsewhere in the world. However, although import prices can rise, inflation (a process) cannot be imported (except under special circumstances, such as in West Germany in the 1950s and 1960s¹). This should actually be self-evident because if inflation can be imported, surely it can be exported as well!

To illustrate the point, we consider Japan’s experience during and immediately after the first oil crisis. Japan imports virtually all its oil requirements. When the price of oil more than quadrupled during the first oil crisis in 1973/74 there was thus a significant immediate impact on costs and prices in the Japanese economy. The annual rate of increase in consumer prices in Japan doubled from 11,6% in 1973 to 23,2% in 1974. The various interest groups in Japan realised, however, that the terms of trade had deteriorated as a result of the sharp increase in the price of oil. In other words, the country had become poorer, since more goods and services had to be produced and exported to afford the same volume of oil and other imports than before. It was therefore decided to absorb the increases in the oil price and to refrain from using the higher rate of increase in prices as a basis for claiming higher wages and other incomes, that is, it was decided not to pass on the cost increases due to the higher oil prices. By 1975 the measured inflation rate was down to 11,8% and it declined further in subsequent years. The increase in the oil price thus did not result in a *process* of higher inflation. Japanese society absorbed the price increases by accepting lower living standards

1. In the 1950s and 1960s West Germany was often an island of price stability in a sea of inflation in an era of fixed exchange rates. As a result, the country experienced surpluses on the current account of the balance of payments, which raised domestic liquidity. The monetary authorities would then raise interest rates, which would attract capital inflows. Given the fixed exchange rates and the inflation differentials, West Germany thus “imported” inflationary pressure through the current account and/or the financial account of the balance of payments. See Boarman (1964).

and thus avoided the transformation of the price shock into a process of higher inflation (the alternative mechanism for lowering real incomes).

But what typically happens when import prices rise sharply? Individuals and groups refuse to accept that they have, in effect, become poorer. Everyone tries to pass the increased costs on to someone else (e.g. in the form of higher prices or wages) and as a result the initial price increases are transformed into inflation, that is, into a process of increasing prices (which reduces real incomes). The intensity of this process will depend, *inter alia*, on the prevailing degree of competition in the various markets in the economy.

Import prices increase (as a result of price increases elsewhere in the world and/or a depreciation of the domestic currency against foreign currencies) but this does not mean that inflation is being imported. An increase in import prices does not automatically generate an inflation process. What will happen will depend on how participants in the economy react to the increase in import prices. This implies that inflation in South Africa is made in South Africa, by South Africans, for South Africans. Proudly South African!

The SARB and others try to capture the process by distinguishing between the “first-round effects” and “second-round effects” of “exogenous shocks such as petrol price increases”, where the second-round effects could result in “more generalised inflation” (SARB, 2007: 21). Although it is pleasing to note that the SARB realises that inflation is a dynamic process, and although a distinction between first-round and second-round effects may convey the essence of the nature of the process, there are other ways of getting the message across.

There are various approaches to diagnosing inflation, including the monetarist approach (which focuses on the growth in a monetary aggregate), the Keynesian distinction between demand-pull and cost-push inflation and the conflict approach (which emphasises the gap between the growth in the effective claims on the national income and the growth of the contributions to that income) (see Mohr and Fourie, 2003: ch 21). However, for the purposes of this paper it is more useful to go back to a framework first proposed more than 25 years ago (Mohr, 1981). Loosely based on the structuralist approach developed in Latin America by Prebisch (1961) and others, it is still particularly useful, from both a diagnostic and a policy point of view. Probably the most important aspect of this approach is that it focuses squarely on the fact that inflation is a process.

Three interrelated sets of factors are distinguished: the underlying (or structural) factors, which provide the background against which the inflation process occurs and determine the economy’s vulnerability to inflation (ie the inflation bias); the initiating factors, which trigger or aggravate a particular inflation process; and the propagating factors, which transmit the initiating impulses through the economy and over time, thereby generating or sustaining a particular inflation process. The underlying factors do not form part of the inflation process – they constitute the background against which the process occurs. Many of the initiating and propagating factors are in fact rooted in the underlying factors. The initiating factors (or what the SARB refers to as the “first-round” effects) are a necessary condition for triggering an inflation process, but are not sufficient to generate it. Without the propagating factors (ie “second-round effects” or “pass-through”), which constitute the heart of the inflation process, the initiating factors will cause price increases, but not a process of continually increasing prices, as was explained in the example of Japan in the 1970s.

Table 1 provides an indication of what constitutes underlying, initiating and propagating factors in the inflation process. Some of the underlying factors in South Africa will be discussed shortly. The initiating factors include anything that can raise the *rate of increase* in costs or prices in the economy, thereby possibly triggering higher inflation.

TABLE 1 *Underlying, initiating and propagating factors in the inflation process*

Underlying factors

Traditions, values and norms of society
Degree of conflict (or cohesion) between different groups in society
Political strength and bargaining power of trade unions
Degree of competition in the goods market
Degree of protection from international competition
Extent of administered pricing
Extent of formal and informal indexation
Size of the public sector

Degree of fiscal discipline
 Degree of independence of the monetary authorities
 Openness of the economy
 International inflation environment
 Exchange rate regime

Initiating factors

Demand-pull factors (eg exogenous increases in consumption, investment, government spending or exports)
 Cost-push factors (eg exogenous increases in wages, profits or import prices)
 Other price increases (eg as a result of natural disasters or increases in indirect taxes)

Propagating factors

Endogenous increases in the money supply
 The various wage-price, price-price, price-wage and wage-wage interrelationships in the economy
 Inflationary expectations
 Interaction between domestic prices, the balance of payments and the exchange rate

Four broad propagating factors, or elements of the transmission mechanism, can be distinguished. First, there has to be an accommodating increase in the quantity or supply of money. Inflation is after all a monetary phenomenon, although not necessarily in Friedman's sense. If one accepts, as even the SARB does nowadays, that money is largely credit money and that the quantity of money is demand-determined (and therefore endogenous), the accommodation will occur automatically. This does not imply that there is a strong correlation between (changes in) the price level and (changes in) the quantity of money. In recent times, for example, much of the credit creation has been aimed at financing asset transactions and in the process the prices of assets such as property and equity have been bid up. This could help to explain why rapid increases in some monetary aggregates were recorded during periods of low or declining inflation. As far as the monetarist view on the correlation and causation between money and prices is concerned, Moll (1999) analysed South African data from 1960 to 1996 and could find no stable links between monetary aggregates and nominal or real variables. The SARB also abandoned its monetary guidelines in the 1990s, admitting that there were no empirical regularities on which such a policy could be based. Nonetheless, increases in the quantity or supply of money are always part and parcel of the inflation process. Without such increases the process will come to a stop at some stage or another.

The second element of the transmission mechanism has its roots in the various interrelationships between wages and prices (and profits) in the economy. For example, if wages increase (in response to an initiating factor) while productivity remains unchanged, this will raise costs and, assuming that prices are set as a mark-up over costs, prices will increase as well. Wage increases in certain sectors may be transmitted to other sectors. Likewise, price increases in input sectors become cost increases in other sectors, and so on. If the initial impulses do not translate into increases in wages and prices elsewhere and over time, there will not be an inflation process. The intensity of this process will, of course, depend *inter alia* on the degree of competition in the goods and labour markets.

The third element is the interaction between domestic prices and the exchange rate. If prices increase at a faster rate in the domestic economy than in the economies of our major trading partners, the rand will tend to depreciate against their currencies and this will feed back into the inflation process in the form of higher import prices. Given that most of our imports are capital and intermediate goods, the potential impact will be widespread.

The fourth and final element is inflationary expectations. As long as economic agents expect inflation to continue at the current rate, they will tend to incorporate this expectation in their income claims and to the extent that these income claims are successful, the process will continue. The same applies, *mutatis mutandis*, if they expect inflation to accelerate or decrease.

The usefulness of the distinction between underlying, initiating and propagating factors can be illustrated by trying to explain why South African consumer price inflation has been in single digits since 1993, after being in double digits for close on 20 years.

The decline in inflation in the mid-1990s and the subsequent further decline is clearly not a monetarist story. There was no noticeable decline in the rate of increase in the monetary aggregates.

Apart from all its other shortcomings (Mohr, 1981: 118; Mohr and Fourie, 2003: 549), the distinction between demand pull and cost push also does not yield an answer. In fact, there have been periods of strong domestic demand pressure, but they have been reflected in deficits on the current account of the balance of payments, rather than in higher prices. This point will be raised again later. On the cost side, the country experienced its fair share of adverse supply shocks, including increases in international oil prices, drought-induced increases in food prices and the massive depreciation of the rand towards the end of 2001. There were, however, also some benign shocks, such as the sharp appreciation of the rand from 2002 onwards and the low rates of increase, and even declines, in the prices of certain categories of imports (eg clothing, footwear and electronic goods). These benign shocks have certainly been part of the story, but definitely do not account fully for the decline in inflation.

To obtain a more satisfactory answer, one has to focus on the underlying factors. The purpose is to identify some of the important structural changes in the economy, which reduced the country's vulnerability to inflation (or inflation bias) and laid the foundation for what happened to the initiating factors and, especially, the propagating factors in the inflation process. Table 2 summarises some of the major changes between the period 1974 to 1993 and the period from 1994 onwards, that is, the period of double-digit inflation and the subsequent period of single-digit inflation.

The first significant difference was the political settlement and the peaceful transition to a new government and a new constitutional dispensation. Social and political conflict did not evaporate, but the levels declined significantly. The conflict also had less of an influence on wage and price determination. For example, the main trade union movement, which previously had an overt political agenda that significantly complicated labour relations and wage determination, now become part of the ruling coalition and as such had to abide by the rules to a greater extent than before. Social and political conflict can be a major factor in inflation, and especially hyperinflation, as illustrated again forcefully by the recent Zimbabwean experience. As Hirschman (1981: 177) reminded us: "... the roots of inflation lie deep in the social and political structure in general, and in social and political conflict and conflict management in particular".

TABLE 2 *Underlying factors during periods of double-digit and single-digit inflation*

1974-1993	1994 onwards
High and increasing degree of domestic social and political conflict (impacts on the economy)	Political settlement; reduced degree of conflict
Country increasingly isolated from the world economy, culminating in trade and financial sanctions	South Africa rejoins a world economy in the throes of globalisation and disinflation
Balance of payments often a constraint on economic activity and policy, especially in the wake of the debt crisis of 1985	Renewed capital inflows create scope for more expansionary policies and greater economic growth without fuelling inflation; capital inflows also mean that current account deficits do not trigger currency depreciations
High degree of protection from international competition	Trade liberalisation; firms increasingly subject to international competition
Political and bargaining power of militant black trade unions; political agendas and efforts to close racial wage gap	Political settlement, unemployment, greater competition in goods markets and international competition (also from migrants) undermine power of trade unions, despite new labour legislation
Wide range of administered prices that did not necessarily	Greater reliance on market forces in pricing, even as far

reflect market forces (eg agricultural prices, price controls)	as administered prices are concerned
Expanding public sector; high and increasing fiscal deficits and government debt; lack of fiscal discipline	Growth in public sector arrested; reduced fiscal deficits (even surplus); greater fiscal discipline
Monetary policy aimed at range of objectives; sometimes used for party-political purposes	Monetary policy more focused on combating inflation; SARB much more independent in pursuit of price stability
Inflation in the industrial countries initially high but declined from about 1982; world inflation still quite high	Significant disinflation in the industrial countries (even deflation in Japan); inflation rates very low and stable; world inflation declined sharply from 1996 onwards; benign international inflation environment

An important consequence of the political change was South Africa's readmission into the international economic arena. This has had far-reaching effects, not only because it opened new possibilities for the South African economy (for example as far as unfettered access to international finance, and trade was concerned) but also because the international economy itself was in the throes of globalisation. South Africa thus joined the "global village" at a time when international trade was more important and international competition more intense than ever. Moreover, the South African government embarked on a programme of trade liberalisation, thereby intensifying the degree of competition that domestic firms were subjected to. This was in sharp contrast to the high degree of protection from international competition that domestic firms had enjoyed previously.

At the same time the international inflation environment was much more benign than it had been. There is consensus that an international structural disinflation occurred in the 1990s, but there are differences of opinion about the causes of the drop in inflation. Among the candidates are: greater competition in the market for tradeable goods as a result of globalisation; the downward pressure exerted on wages and prices as a result of millions of previously underemployed or unproductive Chinese, Indian and other workers entering the global labour force (along with those countries' exchange rate policies); productivity gains as a result of improved technology; strong political support for stable prices; increased central bank independence; more assertive and credible monetary policy; reduced or better anchored inflation expectations (in the wake of lower inflation); and more prudent fiscal policies. Irrespective of what the real causes were, the low inflation rates internationally resulted in low rates of increase in import prices, sometimes even absolute declines, and pressure to reduce the South African inflation rate as well.

In the new environment many South African firms had less scope to pass on increased costs in the form of higher prices and therefore also had a greater incentive to resist wage demands and to bargain with their suppliers. In other words, there was an increased degree of discipline in the economy, which impacted on the bargaining power of trade unions, and therefore on the labour market in general, where the threat of unemployment also served to moderate wage demands.

Another significant change on the international front was the resumption of net capital inflows. Whereas South Africa had been forced to run surpluses on the current account of the balance of payments to repay foreign debt, in terms of the foreign debt standstill, and to compensate for capital flight, it could now again afford to run deficits on the current account of the balance of payments. The fact that there no longer was a binding balance of payments constraint meant that excess domestic demand could be channelled towards imports without putting upward pressure on prices. A capacity to import can act as a safety valve for excess demand, a fact that has important implications for the notion of demand-pull inflation (even in an initiating sense). Moreover, some of the increased imports actually had a disinflationary impact (eg cheaper imports from China and other Asian countries). From time to time the capital inflows also had a more direct disinflationary impact, in so far as they contributed to appreciations of the currency.

Another important change was in public finance. During the early 1990s budget deficits were large and increasing and there were fears that South Africa would fall into a debt trap. However, after the adoption of the Gear strategy in 1996, the growth in government's claims on the national income was arrested and a significant degree of fiscal discipline was established.

On the monetary front a significant change was a greater degree of independence of the SARB. Prior to the 1990s, monetary policy was sometimes utilised (along with fiscal policy) for party-political purposes, especially when the National Party was faced with a threat from the Conservative Party. However, Dr Stals and his successor, Mr

Mboweni, had much more freedom to pursue independent monetary policies. The independence of the central bank was written into the constitution and with the adoption of an inflation-targeting framework for monetary policy in 2000 the combating of inflation became an even greater priority than before.

Some further changes between the two periods are summarised in Table 2. The list does not pretend to be complete. The fact, however, is that the South African economy post-1994 has generally been characterised by greater wage and price discipline, mainly in the form of greater competition (particularly international competition) than during the preceding twenty years.

The fact that the underlying factors have changed in such a way as to reduce the inflation bias of the economy, does not imply that initiating factors were not or will no longer be experienced. During the past decade or so there have, for example, been sharp increases in the international oil price as well as spurts in food prices (as a result of domestic agricultural conditions or changes in the pricing and marketing of agricultural commodities, which have made domestic prices more sensitive to international market trends). However, the structural changes in the economy have reduced the incidence of cost push in the form of domestic wage and price shocks. The greater discipline in the labour market has prevented widespread increases in nominal wages and salaries much higher than the inflation rate, while greater competition in the goods market has reduced the incidence of price shocks that could trigger new bouts of higher inflation. Some administered prices also appear to have been raised more moderately than in the past.

Finally, the more favourable underlying factors are also reflected in a more benign propagating or transmission mechanism. In other words, the “second-round effects” or “pass-through” are also more favourable than before. Cost increases are not always automatically passed on in the form of higher prices and workers are not always compensated for increases in the cost of living, after allowing for productivity increases. As far as the exchange rate is concerned, inflation differentials do not necessarily result in currency depreciation, since current account deficits are financed by net capital inflows. At the same time, increases in aggregate demand generated by increases in money and credit (or vice versa) find an outlet in increased imports and current account deficits, thus reducing pressure on domestic prices. Finally, inflation expectations, which are probably more adaptive rather than anything else, have also become more benign, especially in the context of inflation targeting, which is discussed in the next section.

4. ANTI-INFLATION POLICY

In principle, anti-inflationary policy can have one or more of three objectives. The first is to reduce the inflation bias of the economy. This can be achieved, for example, by increasing the degree of competition in the goods markets, increasing the flexibility of the labour market and establishing fiscal discipline. Policies aimed at achieving this objective can be regarded as fundamental anti-inflation policies. As indicated earlier, changes in the determinants of the country’s inflation bias probably contributed significantly to the reduction of inflation in South Africa in the 1990s. A second possible objective is to avoid or limit possible triggers of inflation, that is, to aim policy at the initiating factors. Certain triggers, however, such as the impact of drought on food prices or an increase in the oil price, cannot be avoided.² The focus of anti-inflation policy should therefore be on trying to influence the propagating factors in a way that prevents the initiating factors giving rise to accelerated inflation, or limits the extent to which it occurs. This is the third possible objective of anti-inflation policy, and also the most important in the short run.

Assuming a floating exchange rate, the three important aspects of the propagating or transmission mechanism (or pass-through or second-round effects) that have to be addressed are the creation of money and credit, the various linkages between wages, profits and prices, and expectations about inflation.

Against this broad conceptual background, two possible elements of anti-inflation policy are discussed briefly: monetary policy in an inflation-targeting framework and an anti-inflationary incomes policy.

2 Once an initiating factor has had its impact, the focus has to shift to the mechanisms whereby it can be transmitted through the economy and through time, thus creating an inflation process. As mentioned earlier, the SARB distinguishes in this regard between “first-round effects” and “second-round effects”. Writing on inflation targeting, Van den Heever (2001: 174) states that “... trying to neutralise the *first-round* effects on inflation of a large economic shock through monetary policy would require such a huge adjustment to interest rates that it would certainly be counterproductive” (italics in the original). Although this may appear sensible at first glance, it is not clear what neutralising the first-round effects refers to. Once those effects have occurred, they are a *fait accompli* and one can then only try to prevent or limit the second-round effects. The distinction between first-round effects and second-round effects therefore does not appear to be particularly helpful.

4.1 Inflation targeting

Inflation targeting is a framework for monetary policy, rather than an anti-inflation policy as such. It is generally accepted that monetary policy should be aimed primarily (if not exclusively) at keeping inflation as low as possible. But monetary policy can be conducted in various frameworks, ranging from complete discretion to adherence to a predetermined monetary rule. One of the intermediate options is inflation targeting, which is often regarded as an example of “constrained discretion” (Bernanke *et al*, 1999: 6). In an inflation-targeting framework the central bank adjusts the interest rate at which it provides accommodation to the banking sector in pursuit of an explicit inflation target. Van den Heever (2001: 171-172) puts it as follows: “If it is felt that with unchanged short-term interest rates the inflation outcome in the target period will exceed the target, interest rates will be raised, and *vice versa* if undershooting of the target is expected”.

Implicit in this argument is a notion that a change in interest rates will in some way affect the rate at which prices increase in the economy. This raises three questions. First, are there mechanisms that link changes in interest rates to changes in prices (in general)? Second, does the central bank know how these mechanisms work? Third, how long are the lags associated with these channels of influence? In discussions on inflation targeting it is often explicitly or implicitly assumed that there is a monetary transmission mechanism that links interest rates and the price level via various channels, that the central bank knows how these channels work and that the approximate length of the outside lag associated with monetary policy is also known. This is in stark contrast to Friedman (1968) who argued that we simply do not have sufficient knowledge about the monetary transmission mechanism or the lags associated with it to enable us to use discretionary monetary policy to achieve specific objectives.

The SARB’s views on the monetary transmission mechanism have been summarised in Smal and De Jager (2001) and SARB (2004: 23-25). By changing the repo rate, the SARB affects retail interest rates and various asset prices (including exchange rates). These changes then eventually impact on the inflation rate. The important question here is how the change in the repo rate is supposed to influence inflation. Essentially, the SARB’s view seems to distinguish three basic channels: via aggregate demand, via import prices and via expectations. In most elements of the transmission mechanism interest rate changes are supposed to eventually affect the various components of aggregate demand, particularly investment spending and consumption spending. The change in aggregate demand then changes real output relative to its potential level (ie the output gap). The size of the output gap, in turn, affects the rate of change in the price level. Another channel whereby interest rate changes can affect the inflation rate is via exchange rates and import prices. The basic argument here is that an increase in interest rate will result in an appreciation of the currency and a decrease in a depreciation. Thirdly, a change in interest rates may affect expectations and thereby have an impact on price and wage decisions. Interestingly enough, no mention is made of the possibility of a cost channel, whereby higher interest rates raise the cost of capital for firms and households and these agents then try to pass the increased costs on to others.

The SARB’s view of the transmission mechanism of an anti-inflationary monetary policy can thus be summarised as follows: use interest rates to keep output significantly below its potential level (to moderate the rates of wage and price increases), to achieve a currency appreciation and to dampen inflationary expectations. Although none of these possible influences can be discounted, there is a lot of uncertainty about the strength (and even the existence) of the links, as well as about the lags involved. This implies that inflation targeting can never be a mechanistic anti-inflation policy, with the sacrifice ratio (ie the trade-off between disinflation and growth - or employment) being the only cause for concern. As mentioned earlier, inflation targeting is essentially a monetary policy framework rather than an anti-inflation policy. However, it can have an impact on the course of inflation. The key lies in the essential features of an inflation-targeting framework, namely transparency, accountability and, eventually, credibility. Credibility, in turn, can have an important impact on inflation expectations and therefore on the transmission of wage and price increases over time. In terms of the structuralist approach, inflation targeting can be regarded as both a positive underlying factor, which reduces the inflation bias in the economy, and a means of limiting the propagation of price increases (via its influence on expectations).

As part of the preparation for the adoption of an inflation-targeting regime, the SARB commissioned the Stellenbosch Bureau for Economic Research in 1999 to conduct regular quarterly surveys of inflation expectations among three different sets of respondents (financial analysts, businesspeople and trade union members) (Kershoff and Smit, 2002). The first survey was conducted during the third quarter of 2000. The results, published bi-annually in the SARB’s *Monetary Policy Report*, appear to indicate a downward trend in inflation expectations over the period during which inflation targeting has been in operation. The experience also seems to indicate that expectations tend to be adaptive, with the expected rate declining in the wake of lower recorded inflation rates. Once the target was reached, the expected inflation rates tended to stay in the target range. The expected rates have also been very stable. This raises

the question as to why inflation targeting has apparently had a positive impact on inflation expectations. Among the possible reasons are that the idea of setting an inflation target is simple to understand, that the SARB has shown that it is serious about achieving the target and that it has proven that it can reach it. In other words, both the inflation-targeting framework and the SARB have become credible.

To the extent that expectations have been dampened, inflation targeting has probably helped to keep inflation low, but it does not necessarily follow that the SARB has succeeded in reducing inflation. As indicated earlier, the decline in inflation in South Africa can be attributed to a wide range of factors. However, as long as there is a general perception that the SARB can do the job and has done the job, and if it is incorporated into inflation expectations, it would be counterproductive to try to prove that the perception is incorrect. Moderate inflation expectations go a long way towards helping to keep inflation low, even in the face of significant shocks.

There are frequent calls to adjust the index that is used as a basis for inflation targeting. An argument that has often been raised, *inter alia* by SARB officials, is that fuel and food prices should be excluded since the monetary authorities are powerless to stop increases in these prices. This is not a valid argument and is indicative of a lack of understanding of the inflation process. Most initiating factors (or “first-round effects”) are beyond the control of the SARB, not only fuel or food price increases. Ironically, the only one that is directly under its control (ie interest rate increases) is excluded from CPIX inflation. The Bank must focus its efforts on limiting the “second-round effects”, that is, it must try to influence the propagating factors (eg by influencing inflation expectations). As we have seen, this is no easy task, partly because we know very little about the monetary transmission mechanism. But eliminating items from the price index that is used to calculate the target rate of inflation serves no purpose whatsoever. Adjusting the index for interest cost does make sense, since it helps to avoid a perception that monetary policy has perverse effects on inflation, but all the other items should remain in the basket. Moreover, juggling with the index will undermine the credibility of the policy framework and without credibility there will be no impact on inflation expectations and limited, if any, impact on inflation.

4.2 *Incomes policy*

As mentioned earlier, the SARB’s view of the monetary transmission mechanism appears to indicate that increases in the repo rate help to combat inflation mainly by affecting the general price level via its impact on aggregate demand (particularly investment and consumption spending). Increases in interest rates usually entail some sacrifice of growth and employment in the short run. Moreover, the transmission mechanism does not specify direct links between changes in interest rates and wage and price determination in the economy. To avoid a possible trade-off between price stability and output and to affect wage and price behaviour more directly, some observers call for an anti-inflationary incomes policy (eg in the form of wage and price controls or guidelines). It is argued that such a policy can stimulate aggregate supply and result in higher growth and lower inflation than would otherwise have been possible.

In terms of the structuralist approach, an incomes policy is aimed primarily at the propagating factors (or second-round effects) in the inflation process. The task is to prevent initiating factors generating or aggravating inflation. Suppose, as in the Japanese example discussed earlier, the initiating factor is an increase in the price of imported oil at a rate significantly exceeding the current inflation rate. This implies a decline in real incomes in the domestic economy. If economic agents try and succeed to be compensated for the loss in real income by raising their nominal incomes, prices will increase and the higher prices will erode the nominal income gains. This process will continue as long as agents continue to try to protect their real incomes through raising their nominal incomes, thereby generating a process of higher inflation. However, if the various agents can somehow be persuaded or forced to accept that their real incomes have fallen and to refrain from trying to be compensated for price and cost increases, higher inflation need not result (as illustrated in the Japanese example).

An anti-inflationary incomes policy is conceptually attractive, but unfortunately has at least two major shortcomings: an economic one and a political one. In a market-based economy changes in relative prices have an essential function. Except in a state of economic emergency, or during wartime, it would be folly to suspend or suppress the working of the market mechanism, thereby rendering it ineffective. The political problem concerns harnessing the necessary support for such a policy. How does one get the various interest groups to support the policy and to limit their income claims, especially if there is no guarantee that everyone will cooperate? In Japan it may have worked in the 1970s and in West Germany there was some scope for cooperation, because of that country’s experience with both an open hyperinflation (after World War I) and a suppressed hyperinflation (after World War II), but these and a few other similar instances have been the exceptions rather than the rule. Faced with high inflation and rising unemployment in the 1970s, countries like the United Kingdom, United States and Canada implemented

comprehensive anti-inflationary incomes policies, but they tended to become administrative and political nightmares with little or no economic benefit.

For economic, political and administrative reasons a comprehensive incomes policy is neither desirable nor feasible in South Africa. The fact that inflation is at fairly low levels further militates against any notion of implementing such a policy. Paradoxically, however, one could argue that we already have a type of incomes policy in place. In the discussion of inflation targeting it was suggested that the announcement and pursuit of a quantitative inflation target is arguably the most important aspect of such a framework (at least as far as combating inflation is concerned). The target provides a reference point or nominal anchor for inflation expectations and wage and price decisions. Conceptually this does not really differ from the wage and price guidelines that usually form part of an incomes policy. The only real difference is that instead of having to resort to bureaucratic controls or other mechanisms which will invariably prove ineffective, the success of the policy depends mainly on the credibility of the monetary authorities. By setting an inflation target, the government and the central bank indicate where they want the inflation rate to be (in the prevailing circumstances) and if the bank can convince the various economic agents that it is serious in pursuing the target and that it can be reached, the target rate will become a guideline for wage and price decisions. It is by no means a perfect solution, but appears to be an eminently sensible approach, especially if credibility can be maintained.

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