

Macroeconomic policy space and African economies: An Empirical Sifting Through Reality and Rhetoric

Angelica E. NJUGUNA
Stephen N. KARINGI*

Trade, Finance and Economic Development Division,
United Nations Economic Commission for Africa

Abstract

The challenge that Africa faces to reduce poverty by half by the year 2015 calls for high and sustained economic growth rates. Scaling up of aid to create fiscal space is seen as one way of achieving faster growth. However, fears have been expressed that this cannot be realised within tight macroeconomic frameworks. This paper uses an approach of measuring the output gaps in selected African economies to determine whether or not the calls for macroeconomic policy space are justified. Relying on a simple Hodrick-Prescott measure of output potential and output gap, and comparing this with the policy stances that are reflected by inflation rates and fiscal balances, the paper provides evidence on where the truth might lie on the issue of scaling-up. It concludes that in the first five years of post-Millennium Summit period, African countries found themselves stuck in a stabilisation trap, with low growth rates that could not promise the realisation of halving of poverty amidst a stable macroeconomic environment. Given that the African economies are characterised by marginal positive output gaps, with a few of them having excess capacity, there is merit in the debate that current macroeconomic policy stances are not consistent with the objective to achieve the first MDG. The implication is that countries — even those with positive output gaps — should consider resetting their thresholds for monetary and fiscal

* The authors are, respectively, a Consultant and a Senior Economic Affairs Officer of the Trade, Finance and Economic Division (TFED) of the Economic Commission for Africa (ECA). This paper should be attributed only to the authors. It is not meant to represent the positions or opinions of the United Nations or its members, nor the official position of any UN staff member. The authors may be contacted at Skaringiu@uneca.org.

policy targets if they want to accelerate economic growth towards the desired rate of seven percent annually.

Keywords: Fiscal space, output gap, fiscal policy, monetary policy

1. Introduction

The question of policy space is now a central feature of macroeconomic policy discourses in Africa. This has been more the case in the realm of fiscal policy discussions, but has also been important in monetary policy. In the context of actions towards achieving the Millennium Development Goals (MDGs), there have been strong arguments that African countries will be challenged unless there is scaling up of aid in order to assist them.

Sachs (2005) ignited a strong debate from his idea of the big-push. Its main tenet is that it is possible to end poverty in 20 years through increased aid¹, and by extension, increased fiscal space. The suasion for this impetus received considerable boost from the pronouncements made at the Gleneagles G-8 Summit of 2005, which considered recommendations from the Commission for Africa². An implicit assumption of the big push through aid is that African countries have room to relax their macroeconomic policy stances. But on the other hand, there have been strong counter-arguments that the current policy space is well defined and the macroeconomic policies are just right given the capacities in these economies. The proponents of the latter argument point out that any deviation from the status quo is likely to unsettle the macroeconomic stability regime that African countries have attained and which has resulted in the right macroeconomic fundamentals over the last few years. Easterly's (2006) critique of Sachs (2005) and the more middle-ground Collier (2007) are just a small part of a raging debate on the idea of creating fiscal space for economies such as those of Africa. Indeed, Easterly (2006) and Collier (2007) both point to other reasons why fiscal space from the aid push is not likely to realise its expected results of helping developing countries, such as those in Africa, to have any dent on poverty.

It is important to highlight at this point that while the debate has tended to focus on fiscal policy, the direct and indirect consequences of relaxed fiscal policy on monetary indicators have also led to considerations of monetary policy stance that is conducive for the attainment of MDGs. Seeing the tight monetary conditions under which many African countries operate, it is pointed out that expansionary fiscal policy in support of scaling-up of aid to achieve the MDGs will lead to higher inflation. In which case, arguments that

-
1. Essentially, Sachs (2005) was specific that a doubling of aid from US\$65 billion in 2002 a year by 2015 would be necessary in order to eliminate poverty defined on the basis of US\$1/day poverty line.
 2. The G-8 countries at Gleneagles committed to double development aid to Africa from US\$25 billion to US\$50 billion.

the monetary policy targets as currently pursued are not favourable to accelerated progress towards the MDGs emerge.

Is this debate mere rhetoric? Is it also warranted, given the real situation in most of the African countries? This paper aims at providing empirical evidence on whether the debate is relevant in the first place. The paper also demonstrates the importance of taking a country-by-country view in establishing the implications of scaling-up of aid or relaxing fiscal and monetary policy constraints. The paper applies the output potential and output gap measurements for selected African countries to answer the broad question regarding whether the debate is relevant or misplaced in an African context.

Theoretically and conceptually, there is a link between an economy's potential output and output gap with a desirable macroeconomic policy stance. For example, when the actual output is greater than potential output (positive output gap), it implies that an economy is experiencing excess demand. This situation is believed to create inflationary pressures and calls for appropriate policy responses that involve reducing aggregate demand, such as reduced government spending and tightening of monetary policy. The reverse, which indicates excess capacity, may require easing of monetary conditions and other policies to stimulate demand. It is worth recalling that while high inflation is agreed to be injurious to growth and hence undermines the prospects of achieving the MDGs, there is also an understanding that there is a band within which a country's inflation could lie, and outside which it would not be conducive for growth.

Empirical literature suggests that the relationship between inflation and growth is likely to be non-linear, whereby too low or very high rates of inflation have a negative correlation to economic growth (see Chowdhury 2005). Results from Bruno (1995) and Bruno & Easterly (1998) showed that the negative relationship between inflation and growth operates only at very high inflation rates, defined in the range of 40 percent and above. For the moderate inflation cases (in the range of less than 20 percent), there is no clear relationship between inflation and economic growth. Moreover, Bruno (1995) found that based on the 1960-1992 data, economic growth on average, increased as inflation rose, from negative to low rates to the 15 to 20 percent range. The reason is that in the 1950s and 1960s, low-to-moderate inflation went hand in hand with very rapid growth because of the investment demand pressures in expanding economies. Thus, inflation that results directly from economic expansion does not create any significant barriers to expansion.

On the fiscal side, potential output and output gap can be used in the determination of the cyclically adjusted budget balance. A cyclically adjusted budget balance is equal to the actual budget balance corrected for divergences of actual from potential output. It therefore provides a measure of the government's structural fiscal position. There are two points that arise with respect to fiscal policy outcomes. First is the question of whether given an economy's

potential output, there could be scope for an expansionary stance. The second is whether cyclical adjustment is taken into account when deciding that the observed fiscal balance indicator is out of line with the target.

This paper therefore presents empirical evidence on where the reality lies for selected African economies. Essentially, the paper measures the historical and current potential output and an output gap of selected African countries, and then associates the results with the outcomes of macroeconomic policies (fiscal and monetary) of these countries. This not only draws an important macroeconomic policy stance timeline, but also enables us to confidently point out where there could have been a mismatch between the prevailing policy stance and the economy's output and output gaps. Relying on a measure for the current potential output and output gaps, the paper then presents what macroeconomic policy stances African countries could realistically adopt in the broad context of moving towards the MDGs.

The paper is organised as follows: Section 2 summarises some of the literature on fiscal and monetary policy space. Section 3 provides the empirical analysis. The section discusses method used to measure the output potential and output gap. It also provides a caveat on the measurement, given that there are different techniques for determining the output gap of an economy. The second part of the section analyses the established historical and present output gap of the selected African countries using the indicators of the monetary and fiscal policy outcomes of each of these countries. Section 4 concludes and also indicates areas for further work in this subject.

2. Macroeconomic Policy Space Debates

Goldsbrough (2006) gives a non-technical summary of the policy debate between proponents and opponents of tight macroeconomic frameworks for low-income countries. In a nutshell, in the context of poverty reduction strategies for low-income countries supported by the IMF, there has been concern that the underlying macroeconomic frameworks are too tight. The conservativeness of these macroeconomic frameworks is thought to constrain desirable expenditures that ideally would help these countries achieve the MDGs. As a result, the low inflation rates or target fiscal deficits underpinned in these frameworks are considered to be unjustifiable and actually lower than what is needed for stability purposes and growth. Many economists support the latter argument. For example, in Pollin *et al.* (2006 and 2007), they argued that given the nature of employment dynamics in African countries, monetary policy aimed at controlling inflation might be pro-cyclical, when inflationary pressures are the result of supply-side shocks. There is a general need to move from targeting inflation to targeting 'real' development outcomes. The improvement of employment opportunities in Africa represents a critically important 'real' policy target.

Fiscal space debate

Heller (2005) defines fiscal space, in its broadest sense, as the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position. Moreover, creating fiscal space allows for the availability of additional resources for some form of meritorious government spending (or tax reduction) that may enhance future economic growth and the possibility of future fiscal revenue. According to Heller, there are several ways in which governments can create fiscal space: First, additional revenues can be raised through tax measures or by strengthening tax administration. Second, lower priority expenditures can be cut in order to make room for more desirable ones. Third, resources can be borrowed, either from domestic or external sources, and fourth, governments can use their power of seignorage.

The creation of fiscal space is not an easy task since there are a number of issues that need to be considered. The key issues as discussed in Goldsbrough (2006) are fiscal sustainability, the Dutch disease, the absorptive capacity, and the effectiveness of the expenditures. Fiscal sustainability relates to the capacity of a government to finance its desired expenditure programmes, to service any debt obligations (including those that may arise if the created fiscal space arises from government borrowing), and to ensure its solvency.

Heller (2005) discusses the issues of fiscal sustainability within two broad policy spheres. First, the creation of fiscal policy needs to consider the scope for increased public savings through tax reform and expenditure rationalisation. Secondly, it is also determined by the additional resources that can be mobilised from borrowing and grants, consistent with maintaining macroeconomic stability and debt sustainability. Increasing the revenue share of GDP seems to be the first option for countries with low tax shares. For low-income countries, raising the tax share to at least 15 percent of the GDP would be a minimum objective. Raising tax revenue beyond this level, however, is not an easy option since it has some political implications and is economically hard to justify. These challenges notwithstanding, it is important to note that fiscal space is not just a question of more taxation and spending, but doing both in a better way. Countries can manage to increase spending through better tax mobilisation. However, the benefits of such action should require thinking through the effects of tax mobilisation on private consumption. Such effect could be a negative influence on growth, contrary to its intended outcome. Alternatively, a country may not increase tax but could endeavour to implement tax reforms that will promote efficient tax collection and broaden the tax base. On the expenditure side, a re-orientation of government spending to shift resources towards strong public investment, which helps the economy to accumulate infrastructure and skills it needs to grow rapidly, would constitute a positive approach to fiscal space creation.

Borrowing and external grants are alternatives for financing additional expenditure. In the case of borrowing, the question of repayment vis-à-vis the

cost of borrowing arises. Governments may choose to borrow without taking specific account of the direct returns from the particular expenditure item. But then, they must do so in the context of an assessment of the overall sustainability of a government's borrowing programme, given the size of existing obligations for debt service and principal repayments by governments. The important point to bear in mind though, is that increasing fiscal deficit will increase aggregate demand, which in turn could promote employment. However, one should weigh the benefits of the deficit over the intended increase in growth. And as a rule of thumb, public debt should not get out of hand. The economy should grow faster than the stock of public liabilities.

For many developing countries, the possibilities of higher external grants are increasingly plausible, given the strengthening consensus on initiatives to reach the MDGs. However, as noted above, the raging debate as exemplified by Sachs (2005), Easterly (2006) and Collier (2007), points to an unsettled proposition with regards to creating fiscal space. Nonetheless, the point remains that grants may provide desired room for some fiscal space, although there is merit in the questions regarding its sustainability and predictability. Ideally, greater fiscal space is implied by a commitment by external donors to provide a given flow of resources over a number of years, as opposed to the provision of the same amount of such resources over time but without certainty each year regarding its provision.

Monetary policy space

The debate on policy space in relation to monetary policy has revolved around the inflation targets underlying macroeconomic frameworks that would enable developing countries, such as those in Africa, to attain the MDGs. It is important to note that the inflation targets are also directly linked to the fiscal space question. In this regard, as Goldsbrough (2006) points out, the debate on inflation targets revolves around two arguments. On the one hand, are arguments that low inflation targets limit the fiscal space possible for MDGs-oriented spending. But this is more to do with fiscal space created through monetary financing of the fiscal deficit. On the other hand, there is the argument that low-income countries such as those in Africa are more vulnerable to exogenous shocks, which makes it important for them to be more conservative as they may not be in a position to accommodate accompanying price shocks.

Chowdhury (2005) and IMF (2005) suggest existence of a consensus about the non-linearity of the relationship between inflation and growth. However, differences emerge in the empirical literature over the threshold band of inflation rate beyond which high prices hurt the economy. From cross-country regressions results cited in Goldsbrough (2006), some studies arrive at a threshold of 5-10 per cent, while others have it at 10-20%. The issue of the appropriate inflation targets threshold aside, the critical point is

also whether there is scope to expand the fiscal space without creating inflationary pressures. Relating the potential output and the output gap to the fiscal space and its attendant possible link to inflation is one focus of this paper.

3. Measuring Potential Output and Output Gap

These measures are essential in identifying a sustainable non-inflationary growth and assessing macroeconomic policies. Potential output is considered the best composite indicator of the aggregate supply side capacity of an economy. This is also important even for LDCs whose supply constraints are an important determinant of macroeconomic policy stance. For as long as there is sufficient data, it should be possible to take account of potential output of any economy in policy formulation.

Potential output is the maximum output an economy could sustain without generating rise in inflation (De Masi 1997). Its estimated trend helps to determine the pace of sustainable growth. In general, output gap represents the difference between the actual and the potential output or the transitory movements from the potential output, measured as a share of potential output. Its estimates provide a key benchmark against which to assess inflationary pressures and the cyclical position of the economy. When the actual output is greater than the potential output, this implies that an economy is experiencing excess demand. This situation is often seen as a source of inflationary pressures, and calls for appropriate policy responses that involve reducing aggregate demand, such as reduced government spending and tightening of monetary policy. The reverse, which indicates excess capacity, may require easing of monetary conditions and other policies to stimulate demand.

Potential output and output gap have also direct relevance on government fiscal policy since government revenues and expenditures are affected by the cyclical position of the economy. In an upturn, the budget balance will be more positive, owing to higher revenues and lower growth of expenditure. In a downturn, the opposite holds. In this case, potential output and output gap can be used in the determination of the cyclically adjusted budget balance. A cyclically adjusted budget balance is equal to the actual budget balance corrected for divergences of actual from potential output, and thus provides a measure of the government structural fiscal position.

Measuring potential output and output gap is often associated with business cycle decomposition methods of separating the trend or permanent component of a series from its transitory or cyclical component. Potential output corresponds to the trend or permanent component while output gap is the transitory or cyclical component. Pagan (2003), however, argues that such gaps are not business cycle indicators, even though they are commonly

labelled as such. Accordingly, a given level of an output gap is compatible with being in either an expansion or a contraction.

In general, there are two types of approaches to estimating potential output. They may be classified into statistical detrending, and estimation of structural relationships. The difference is that the former approach attempts to separate the process into permanent and cyclical components, while the latter isolates the effects of structural and cyclical influences on output using economic theory. Some of the detrending methods include the Hodrick-Prescott filter and the unobserved components methods. The approaches for estimating structural relationships include the linear method, structural vector autoregression (VAR) method and production function method. A more detailed discussion of the different approaches to estimating potential output and output gap is found in Njuguna *et al.* (2003), for example.

In this section, the specific tools for measuring potential output used in this study are discussed. Due to lack of data available for most African countries³, the methods used here are limited to the linear method and the Hodrick-Prescott method.

3.1. Estimation methods

The Linear Method

The simplest way to estimate the output gap and potential output is to use a linear trend. This method is based on the assumption that potential output is a deterministic function of time and the output gap is a residual from the trend line. This method presumes that output is at its potential level on average, over the sample period. Hence trend in output, which represents potential output, may be estimated as:

$$y_t^* = \hat{\alpha}_0 + \hat{\alpha}_1 \text{Trend} \quad (3.1)$$

In this estimation, y_t^* stands for output trend, while $\hat{\alpha}_i$, $i = 0, 1$ are estimated coefficients from the regression of the actual output on time trend variable. The output gap is obtained using:

$$c_t = y_t - y_t^* \quad (3.2)$$

In this calculation, c_t is the output gap, y_t the actual output, y_t^* the potential output from (3.1), and $t = 1, 2, \dots, T$ is a time index.

The major limitations of this method includes: (a) The long-run evolution of the time series is deterministic and therefore perfectly predictable; (b) The estimate of the output gap is found to be sensitive to the sample period used in the regression estimation (*see for example, de Brouwer 1998*); and (c)

3. For example, to estimate potential output and output gap using the production function approach, data on employment is necessary, but they are not available for many African countries.

This method assumes that the potential output grows at a constant rate, which often does not hold.

The Hodrick-Prescott Method

The Hodrick-Prescott method or Hodrick-Prescott filter (Hodrick and Prescott 1997), hereafter referred to as HP method, is a simple smoothing procedure. The main assumption of this method is that there is a prior knowledge that growth component varies “smoothly” over time. The HP method operates on a framework that a given time series, say y_t^* (or output), may be expressed as the sum of a growth component or trend y_t^* (or potential output) and a cyclical component or output gap c_t , such that:

$$y_t = y_t^* + c_t \quad (3.3)$$

The measure of the smoothness of y_t^* is the sum of the squares of its second difference. The average of the deviations of c_t from y_t^* is assumed to be near zero over a long period of time. These assumptions lead to a programming problem of finding the growth components by minimising the following expression:

$$\begin{aligned} \text{Min } L &= \frac{1}{2} \sum_{t=1}^T c_t^2 + \lambda \sum_{t=2}^{T-1} (\Delta y_t^* - \Delta y_{t-1}^*)^2 \\ &= \sum_{t=1}^T (y_t - y_t^*)^2 + \lambda \sum_{t=2}^{T-1} [(y_t^* - y_{t-1}^*) - (y_{t-1}^* - y_{t-2}^*)]^2 \end{aligned} \quad (3.4)$$

The parameter λ is a positive number, which penalises variability in the growth component series. The larger the value of λ , the smoother the solution series. Moreover, as λ approaches infinity, the limit of the solutions for equation (3.4) is the least squares of a linear time trend model. On the other hand, as the smoothing factor approaches zero, the function is minimised by eliminating the difference between actual and potential output. This is tantamount to making potential output equal to actual output. In most empirical work, the value of $\lambda = 1,600$ is chosen when using quarterly data.

The HP method has been used in a number of empirical studies (for example, De Masi 1997; de Brouwer 1998; Scacciavillani and Swagel 1999; and Cerra and Saxena 2000). The popularity of this method is due to its flexibility in tracking the characteristics of the fluctuations in trend output. The advantage of the HP filter is that it renders the output gap stationary over a wide range of smoothing values, and that it allows the trend to change overtime. Moreover, in most studies for developing countries, this method is preferred because of considerably less data requirements (see De Masi 1997).

As in the other methods of measuring potential output and output gap, the HP method also has some constraints (see *Harvey and Jaeger 1993 for documentation*). The first weakness of the HP method is that changing the

smoothing weight (λ) affects how responsive potential output is to movements in actual output (de Brouwer 1998). De Brouwer (1998) found that a lower smoothing factor produces a 'smaller' estimate of the gap. For high smoothing factor, the estimate indicates output above potential, but for moderate or low smoothing, the estimate suggests output below potential. De Brouwer also found that the cycles in output are sensitive to the smoothing weight. Thus, an appropriate smoothing parameter (λ) is difficult to identify.

Another weakness of the HP method is the high end-sample biases, which reflect the symmetric trending objective of the method across the whole sample and the different constraints that apply within the sample and its edges. This is especially a problem when one is interested in the most recent observations in the sample for purposes of drawing conclusion for policy implementation and projections for the immediate future. To counter this problem, however, researchers use output projections to augment the observations. The reliability of measured potential output and output gap would then depend on the accuracy of the forecasts used to avoid the end-sample bias.

3.2. Empirical Measures

Table 1 in the Annex summarises the estimation results for the output gap of selected African countries using the HP method for the period 1986-2005 in five-year intervals. The table also shows two important indicators used in the fiscal space debate. They are inflation rates and the government budget balance. In order to link the output gap and the fiscal space to the MDGs discussions, the table also presents the real GDP growth rates. It is generally accepted that for African countries to reach the MDG of halving poverty by the year 2015, their economies need to grow by more than seven per cent annually in real terms. The discussion in the remainder of this section focuses on whether scope exists for scaling up expenditures for MDGs in the context of output potential and output gap. While the table shows results for the 1986-2005 period, the debate about scaling up is more in the context of the post-Millennium Summit. However, the critique that macroeconomic stabilisation focus could have hindered exploitation of opportunities for growth is still valid, and as a result drives the discussions for the pre-2000 period.

A focus on macroeconomic stabilisation in the late 1980s is reasonable

As estimations in Table 1 show, two-thirds of the African countries in the sample had positive output gaps in the 1986-1990 period, indicating that their economies were experiencing excess demand and hence operating above capacity. At the same time, inflation was evidently a problem during this period. A significant number of countries had rates above 20 percent. Despite this, only four of the countries with excess demand had average growth rates

above five per cent. For the majority of cases, having tight macroeconomic frameworks with low inflation targets appear to have been quite reasonable. In theory, the possibility that the excess demand was also a source of the high prices cannot be ignored.

A few observations can be made at the country level. One of the best performing economy during the period under survey was Botswana. While it had a budget surplus and an inflation rate of 10 percent during this period, it was already operating above potential. Indeed, the fact that the slow down in the 1991-1995 period was accompanied by a budget surplus is an indication that the problem for Botswana might not have been fiscal space but absorption capacity.

In the second half of the 1980s, Lesotho, Nigeria, Kenya, Swaziland, and Seychelles were some of the best performers. They had average growth rates above five percent. Among these, Seychelles could have scaled up its growth performance based on its low inflation and the fact that it had excess capacity. The possibility that at this time country specific macroeconomic targets may have been relevant is demonstrated by the cases of Nigeria and Lesotho. On the one hand, Nigeria had a decent growth rate but with a negative output gap. This means it had room to scale up its growth. But its inflation rate of 26 percent was higher than the threshold, which could have been considered appropriate at the time. This was, however, not the case with Lesotho. The country had a low deficit and an inflation rate of 13.5 percent. Given that it also had excess capacity, it could have actually scaled up its growth with more aid.

*Persistence of macroeconomic instabilities in the early 1990s
in the face of excess capacities*

The case for tight macroeconomic frameworks in the first half of the 1990s is also evident. In the 1991-95 period, only one-third of the countries had excess-demand. The rest were operating below capacity, with many at the margin. While the result that many were either at the margin or with excess capacity suggests that growth could have been scaled up, given the poor growth performance at the time, the high inflation rates made scaling up not to be an option. Indeed, only three countries (Sudan, Mauritius, and Namibia), had growth rates greater than five percent.

But as can be seen from Table 1, 1991-1995 was a period of high inflation, with a sizeable number of countries with rates above 20 percent. Thus, even though many countries such as Madagascar, Malawi, Mauritius, Mozambique and Zimbabwe had excess capacity, the high inflation rates implied that it would have been more difficult to expand the fiscal space without the danger of worsening the macroeconomic situation. Besides, the same countries had deficits that left little room for exploiting the excess capacity without further macroeconomic stability concerns.

498 / Proceedings of the African Economic Conference 2007

Similarly, countries such as Angola and Democratic Republic of Congo (DRC) had negative growth rates, and even though they had excess capacity, the focus would have been macroeconomic stabilisation first. However, the case for specificity when it comes to policy prescription is demonstrated by Rwanda. At this time, the country could have benefited from scaled-up policy space through grants.

Could output gap in the second half of the 1990s have been exploited more?

There was evident improvement in the second half of the 1990s as growth improved. Many more countries had growth rates above five percent. At the same time, signs that inflation was being brought under control were evident. For many countries, single-digit inflation rates were being registered. However, several countries had double-digits, especially those in conflict, such as Angola and DRC. With respect to fiscal balance, many had deficits. On the output gap, two-thirds of the countries had excess capacity. Given the macro-stability achieved at this point, there was scope to increase the fiscal space that would exploit the excess capacity. Depending on the consensus of the inflation-thresholds at this period, the following points can be made: Countries like Zambia, Sierra Leone and others with double digit inflations but with excess capacity could have tried to raise growth with the danger of worsening the double-digit inflation rates. Nonetheless, this could not have been a risk if the fiscal space was to be created through grants rather than by borrowing from the central banks. It seems that focus on macroeconomic stabilisation was still the overriding concern, when probably a shift towards more focus on higher growth should have been the case.

The reality of the “stabilisation trap” and its implications for the policy space debate

Chowdhury (2005) defines a “stabilisation trap” as a situation characterised by low inflation and insufficient growth for poverty reduction. For an economy to move out of the trap, it will be necessary to exploit the possibilities presented by the non-linear relationship between inflation and growth. This means taking advantage of the positive relationship between moderate inflation and economic growth. The implication is that both too low and too high inflation rates must be avoided. They are harmful to economic growth. An implicit assumption of breaking out of the trap is that the probability of moderate inflation⁴ slipping into hyperinflation is low. What then was the justification for the African countries post-Millennium Summit when the focus ought to have been on scaling up economic growth?

4. Chowdhury (2005) suggests this may mean tolerating “moderate” inflation in the range of 10-12 per cent, which is within Goldsbrough (2005) threshold of 10-20 per cent.

As Table 1 shows, during the first five years after the Millennium Summit (2001-2005), average inflation rates for majority of the countries, from the point of view of macro indicators, were single digit. This means that the macroeconomic stabilisation objectives from the policies of the mid-1980s to the mid-1990s had been achieved. At the same time, the fiscal deficit was also low in all countries except for Sierra Leone, Madagascar and Benin. Unfortunately, the low inflation rates and fiscal deficits were accompanied with positive growth rates, but below five percent. Indeed, only four countries had the desired economic growth rate of seven percent. They were Sierra Leone, Mozambique, Angola, and Comoros. Not surprisingly, these were post-conflict countries.

The African economies were clearly in a stabilisation trap. This raises the question of whether there was room for scaling up of growth or not. There are two angles through which this question can be addressed in the context of MDGs realisation. First, is the examination of the output gaps of these economies, given their potential. As Table 1 shows, only five countries had excess capacity, and even then, only Mauritania had significantly unutilised capacity. However, countries like Seychelles, Malawi, Guinea Bissau, and Côtê d'Ivoire, had some scope of scaling up due to their negative output gaps, even though small. The excess capacity in these five economies could have been exploited without any impact on inflation and fiscal deficit.

The second view as to whether efforts of scaling up of growth were justified, or the debate of fiscal space is mere rhetoric, is presented by the countries that had excess demand. In a tight macroeconomic framework, one could argue that there was no scope for improving growth through creation of fiscal space as most of the African economies had positive output gaps. On the other hand, given the low rates of inflation, it is evident that there is scope for accommodating slightly higher fiscal space if more relaxed inflation and fiscal deficit threshold are pursued.

4. Conclusions

This paper has investigated the justification for or against the question of scaling up economic growth in Africa in order to achieve the target of halving poverty by the year 2015 through creation of fiscal space. The paper has attempted to show whether the debate for more policy space is founded on a strong empirical base, or a mere rhetoric. To answer these questions, the paper provides empirical measures of the output gaps in selected African economies. These output gaps are then presented side by side with two key indicators — inflation rates and fiscal balance — whose targets, it is argued, have to be low in order to be supportive of any initiative that would propel African economies into higher growth rates.

The paper has shown that at the onset of the implementation of tight macroeconomic frameworks, most African economies had positive output

gaps, meaning that they were operating above their capacity. But at the same time, they were characterised by high inflation rates. The demand management policies that were instituted to deal with the macroeconomic instabilities associated with the high inflation rates managed to shift most of the economies from positive to negative output gaps positions. However, inflation rates were still high and the risk of persistence of macroeconomic instability was real. The paper suggests that at the beginning of the second decade of tight macroeconomic frameworks, an opportunity was lost to have country-by-country approach. At this time, some countries had negative output gaps accompanied with low inflation rates and realistic fiscal balances. This somehow spilled over to the post-Millennium Summit period, leading to stabilisation trap for many of the African countries. Most of them experienced low economic growth in an environment of low inflation rates. Considering that a few countries had excess capacity, and those with excess demand just on the margin, the paper shows that there was scope to scale up growth via creation of fiscal space. This could have exploited the room between the tight macroeconomic targets and the more relaxed thresholds for inflation and fiscal balance, which is accepted as necessary to achieve the MDGs.

The evidence presented in this paper leads to the overarching conclusion that given the output potential and output gaps of most of the African countries and the stabilisation traps that they find themselves in, there is merit in the arguments for policy space,, be it fiscal or monetary.

References

- Bruno M. (1995), "Does inflation really lower growth?", *Finance and Development* 32(3), pp. 35-38.
- Bruno M. and W. Easterly (1998), "Inflation crises and long-run growth", *Journal of Monetary Economics* 41, pp.3-26.
- Chowdhury A. (2005), "The 'Stabilisation Trap' and Poverty Reduction – What can Monetary Policy Do?", mimeo, University of Western Sydney.
- Collier P. (2007), *The Bottom Billion: Why the Poorest Countries are Failing and What can be Done about It*, Oxford University Press.
- De Brouwer G. (1998), Estimating Output Gaps, Discussion Paper No. 9809, Economic Research Department, Reserve Bank of Australia.
- De Masi P. R. (1997), IMF Estimates of potential output: Theory and Practice, IMF Working Paper No. WP/97/177.
- Easterly W. (2006), *The White Man's Burden: Why the West Efforts to Aid the Rest Have done so Much Ill and so Little Good*, Penguin Press.
- Goldsbrough D. (2006), "The Nature of the Debate between the IMF and its Critics", Working Group on IMF Programmes and Health Expenditures Background Paper, Centre for Global Development.
- Heller P. (2005), Understanding Fiscal Space, IMF Policy Discussion Paper PDP/05/4, International Monetary Fund.

Macroeconomic policy space and African economies... / 501

- Hodrick R. and E. Prescott (1997), "Post-War U.S. Business Cycle", *Journal of Applied Econometrics* 8, pp. 231-247.
- Njuguna A., S. Karingi and M. Kimenyi (2003), Alternative Methodologies for Measuring Kenya's Potential Output and Output Gap, KIPPRA Discussion Paper No. 28, Kenya Institute for Public Policy Research and Analysis.
- Pagan A. (2003), Three Views of the Business Cycle and their Implications, Australian National University and University of New South Wales, Mimeo.
- Sachs J.D. (2005), *The End of Poverty: Economic Possibilities for Our Time*, Penguin Books: New York.

Annex: Table 1. Output Gap of Selected African Countries

	1981-1985				1986-1990				1991-1995			
	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential
Angola	1,46			-3,74	3,28			8,92	-3,78	1 076,54		-6,65
Benin	4,66			1,65	0,89			0,14	4,25	17,81		-1,91
Botswana	10,01	10,94		-1,41	11,87	10,23	19,085	1,69	4,06	12,66	11,02	-0,44
Burkina_Faso	40,18	7,90		-0,12	2,64	-0,47		1,15	3,84	6,73		-1,27
Burundi	5,35	8,86		-2,45	3,75	6,39		2,10	-2,40	10,92	-4,82	5,00
Cameroon	9,40	12,10		1,38	-2,22	4,41	-5,5858	7,05	-1,86	8,20	-2,13	-7,06
CAR	2,29	8,17		-0,42	0,04	-1,66		2,65	1,09	7,46		-3,51
Chad	9,18	12,70		-0,46	1,94	-1,60		2,61	2,44	8,52		2,02
Comoros	4,29			0,54	1,62			1,36	0,89			-0,35
Congo DR	1,86	44,94		-2,53	0,01	75,91	-6,5219	8,55	-7,12	6 517,08	-8,57	-5,18
Congo R	10,57			6,04	-0,26	1,34		-1,34	0,70	10,23		-0,66
Cote_d_Ivoire	0,32	5,63		-0,04	1,18	4,76		1,01	1,51	9,69		-4,46
Gabon	2,56	9,86		3,33	1,73	2,21		-4,39	3,13	5,01		-0,70
Gambia	3,23	13,57		0,11	4,10	22,44	0,12569	0,01	2,11	6,66		0,57
Ghana	-0,25	62,33		-2,97	4,81	31,64		0,04	4,28	27,48		0,46
Guinea B	6,45			1,89	3,78	58,02		-2,97	3,18	47,17		0,43
Kenya	2,53	13,39		-2,12	5,64	11,00		2,01	1,61	24,75	-2,61	-0,39
Lesotho	3,09	13,27		-0,52	5,86	13,51	-0,4929	-1,99	3,96	13,10	4,17	-0,62
Liberia	-1,88	3,31		0,28	-16,48	6,94		16,24	-21,66			-48,01
Madagascar	-1,55	20,41		-2,49	2,75	15,43		2,31	-0,28	24,22		-1,93
Malawi	2,17	13,14		-0,43	2,32	19,48		-0,57	3,52	35,42		-2,03
Mali	-2,25			-0,60	3,86	0,26		0,21	2,99	6,38		-0,49
Mauritania	0,92			-59,17	2,47	7,29		-66,46	3,26	7,16		-72,12
Mauritius	4,33	9,11		140,88	7,39	7,49	0,33141	200,73	5,13	7,10	-0,10	254,93

	1981-1985				1986-1990				1991-1995			
	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/Deficit % of GDP	Output Gap % of Potential
Mozambique	-4,62			-0,99	5,62	45,76		2,00	2,68	47,65		-2,20
Namibia	-0,19			-0,12	2,68			-1,83	4,96		-3,78	0,97
Niger	-2,32	7,90		-1,33	2,60	-2,99		2,19	0,81	6,62		-1,83
Nigeria	-2,75	15,40		-3,83	5,42	25,87		-1,53	2,49	48,92		2,96
Rwanda	2,68	6,55		-1,52	1,50	2,24	-5,3504	6,98	-3,95	13,85	-4,48	-5,77
Senegal	3,23	11,94		0,09	3,22	0,20		2,34	1,53	7,54		-2,22
Seychelles	0,92	4,13		-2,25	5,56	2,03		-2,03	2,90	1,62	-3,56	-1,04
S_Leone	0,87	52,39		-0,54	1,09	93,12		3,74	-5,05	48,12		2,72
S_Africa	1,40	14,00		0,60	1,68	15,33		1,54	0,89	11,31		-1,93
Sudan	0,83	32,09		1,45	4,55	48,32		-0,08	5,13	105,27		-0,87
Swaziland	2,61	15,17		-4,59	10,26	13,63		1,51	2,88	10,91		0,41
Togo	-0,24	6,97		-2,16	2,51	0,84		3,87	0,61	11,27		-6,43
Zambia	0,53			-0,51	1,64	76,86		1,84	-1,28	107,24		-0,31
Zimbabwe	4,36	15,11		0,66	4,60	12,89	-2,6296	-1,27	1,39	27,57	-4,10	-2,84

Annex: Table 1 (suite)

	1996-2000				2001-2005			
	GDP Growth Rate, %	Inflation %	Cash Surplus/ Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/ Deficit % of GDP	Output Gap % of Potential
Angola	6.43	1 008.95		-1.47	10.55	86.01		1.39
Benin	5.35	3.73		-0.03	4.08	2.84	-10.29	0.75
Botswana	8.35	8.36	9.85	-1.58	5.84	3.35		0.78
Burkina_Faso	4.32	2.43		-0.45	5.10	3.05	-4.38	0.66
Burundi	-1.34	19.55	-4.65	-6.49	2.20	8.00		1.55
Cameroon	4.75	3.00	1.62	-1.08	3.66	2.02		1.60
CAR	2.38	1.05		1.38	-0.68	2.22	-0.46	-0.05
Chad	2.74	3.39		-5.27	13.76	3.68		1.23
Comoros	1.47			-1.55	2.79			0.64
Congo DR	-3.91	311.00	-2.71	-3.21	4.04	78.00	-0.06	1.90
Congo R	2.52	4.44		-1.79	4.40	2.46	-0.03	1.08
Cote_d_Ivoire	3.21	2.89		4.71	0.11	3.21	-0.25	-1.61
Gabon	1.76	0.94		2.68	1.74	0.96		-0.81
Gambia	4.50	1.94		-1.40	3.92	9.49		0.56
Ghana	4.32	25.33		-0.44	5.04	20.43	-4.27	0.26
Guinea B	1.06	22.86		2.52	-0.12	1.47		-1.19
Kenya	2.16	8.53	0.21	-0.06	3.60	7.89	0.08	-0.19
Lesotho	3.01	7.73	4.84	2.03	2.83	7.87	-0.17	-0.55
Liberia	39.34			9.72	-3.36			7.89
Madagascar	3.84	10.48	-10.22	0.23	2.60	10.79	-20.62	0.08
Malawi	3.92	30.17		3.52	2.73	14.77		-1.53
Mali	5.19	1.72		-2.45	6.39	2.43		1.69

	1996-2000				2001-2005			
	GDP Growth Rate, %	Inflation %	Cash Surplus/ Deficit % of GDP	Output Gap % of Potential	GDP Growth Rate, %	Inflation %	Cash Surplus/ Deficit % of GDP	Output Gap % of Potential
Mauritania	2.61	4.93		-74.80	4.04	7.25		-76.24
Mauritius	5.38	6.26	-2.01	297.02	4.15	3.99	-3.26	322.27
Mozambique	8.00	14.58		-2.28	8.87	11.82		1.68
Namibia	3.51		-2.91	-0.13	4.40	4.52	-3.60	0.15
Niger	2.92	2.67		0.01	3.99	2.62		0.76
Nigeria	3.08	12.27		-1.31	5.66	15.76		0.20
Rwanda	9.80	5.50		-3.56	5.40	6.71		3.25
Senegal	4.42	1.41	-0.95	-0.39	4.73	1.50	-2.21	0.54
Seychelles	6.40	2.94	-13.42	3.24	-2.30	2.84	-0.90	-1.25
S_Leone	-3.54	21.37	-9.40	-12.84	13.94	6.53	-6.39	5.67
S_Africa	2.80	6.67	-1.96	-0.42	3.75	5.10	-1.43	0.38
Sudan	6.31	43.65	-0.39	-1.17	6.26	7.75		1.02
Swaziland	3.31	7.99		0.37	2.20	6.69	-2.59	-0.27
Togo	4.52	3.15		4.10	2.49	2.64	-2.91	-0.69
Zambia	2.84	28.95	-1.75	-2.28	4.79	20.26		1.20
Zimbabwe	0.89	37.27	-6.05	6.76	-5.56	108.40		-3.51