

Inadequacies of monetarism for Developing Countries with Mass Unemployment: A Theoretical Framework

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Abstract

The paper provides a theoretical framework for analysing expansionary monetary policy impact on inflation, output and employment in developing economies with sustained mass unemployment where some unemployment is disguised under the dominant informal sector. Under the monetarist analytical framework, expansionary monetary policy does not have permanent impact on output because after initial disturbance, economy moves back to original output that is consistent with natural rate of unemployment, and the full impact of the expansionary intervention is on the price level. Thus, the assumption of full employment is the anchor of monetarist view that expansionary monetary policy only leads to inflation. Since this assumption is not realistic or relevant to developing economies, the relevance of monetarism to developing economies is brought into question. The inadequacies of monetarism for developing countries arise from the irrelevancy of two critical monetarist assumptions to the underdeveloped economies. The first is the existence of natural rate of unemployment or practical full employment. The second is that of confining expansionary monetary policy impact to aggregate demand (AD), without impact on aggregate supply (AS)

Inspired by Keynes (1936), the realistic analytical model that is relevant to developing countries is developed based on realistic assumptions of a) mass unemployment, and b) expansionary monetary policy shifts both the AD and AS curves. In this model, an expansionary monetary policy leads to shifts in AD and AS to the right, leading to a new stable equilibrium with unambiguously higher levels of output. However, the change in the price level will depend on the elasticities of AD and AS (with respect to money supply changes) which determine the relative shifts in AD and AS.

Since the elasticities of AD and AS are the ultimate determinants of final impact of monetary policy on output and inflation, the policy focus should be on factors that have a bearing on the elasticities. These factors are the monetary policy efficiency drivers that can be pursued to achieve high impact on output and employment with low inflation.

While this framework provides real opportunity for expansionary monetary policy to stimulate output with low inflation, the practical implementation is premised on conducive conditions that should include absorption capacity of the economy for increases in money supply. A critical requirement is an effective financial intermediation system that can channel increased financial resources to the productive sector. In underdeveloped economies with dysfunctional financial systems, it may be necessary to address the challenge of financial intermediation system before embarking on expansionary monetary policy to address unemployment.

Key Words: Expansionary monetary policy, output, inflation, disguised unemployment, aggregate supply, aggregate demand, elasticity, financial intermediation, policy efficiency driver

1. Introduction

During the last century most of the debate on inflation has been boxed into Monetarist and Keynesian orthodoxies. From the 19th century until the great depression of the 1930s created a vacuum in economic theory, the quantity theory was the dominant theory for analysing inflation. The vacuum was filled by Keynes (1936) who provided an alternative theory that appeared more realistic and responsive to the economic crisis of the day.

Keynes primary contribution was to highlight the role of Government intervention in stimulating and sustaining economic performance, and to provide a link between money supply and the real sector. Although the Keynesian doctrine

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spread rapidly and became the dominant orthodoxy by mid 1950s, its dominance did not last long. By 1970, "despite the absence of an overwhelmingly obvious inadequacy of the established Keynesian orthodoxy for most of the post war period ; the quantity theory had re-emerged under the banner of monetarism as an influential doctrine in economic policies" (Johnson, 1971). This was especially so in USA where monetarism gained wide acceptance and in developing countries which accepted IMF facilities on monetarist proposition of stable money supply as a basic conditionality for macroeconomic stability. (Friedman (1977). This development brings into sharp focus Irving Fisher's (1927) observation "The quantity theory has been one of the most bitterly contested theories in economics, largely because the recognition of its truth or falsity affected powerful interests in commerce and politics".

Today, monetarism is driven by the dictum "inflation is always and everywhere a monetary phenomenon". This is rationalised by defining inflation as persistent and rapid rise in the price level, and assuming limitations of fiscal policy to drive and sustain that process. In spite of Sargent and Wallace (1981) strong empirical evidence against this dictum, monetarism continues to reign high especially in developing countries where IMF inspired policies still hold money supply as the dominant if not the only policy variable for inflation. The practical thrust of monetarism in developing countries has been the discouragement of expansionary monetary policy as an option for stimulating or sustaining economic growth.

The ideological inclinations of monetarism are underscored by the fact that Milton Friedman, the acknowledged Dean of the monetarists "neither has nor claims to have a monetary theory. His strong and influential views are not founded on any understanding of how money works but on what his empirical studies have led him to believe to have been the course of monetary history" (Hahn,1971). This view of Friedman is shared by Thygesen (1977) in his exhaustive survey of Friedman's contributions on the occasion of Friedman's Nobel Prize award.

Clearly the dominance of monetarism is not a reflection of a strong coherent and relevant theory or special responsiveness to the economic conditions especially of developing countries. According to Mishkin (2009) inflation is not significantly correlated with money supply in some western countries. In Zambia where money supply has historically been the key policy variable in the control of inflation, studies by Ng'andwe (1980) for the immediate post-independence period (1965-1976) ; and Pamu (2006) and Mutoti (2006) for recent periods (1992-2003) have shown inflation not to be correlated with money supply.

Today, the biggest mischief of monetarist hegemony especially in developing world is the wide spread dogmatic affinity to monetarism which tends to stifle honest enquiry into the underlying factors that cause or sustain inflation. Thus, many country studies on inflation are mere econometric assessments or extensions of the monetarist dictum rather than efforts aimed at establishing fresh insights into the genesis of inflation or the imaginative utilization of monetary policy. These include Kihangire and Mugenyi (2005) for Uganda ; Leheyda (2005) for Ukraine ; Rodolphe (2004) for Guinea ; and Williams and Adejeji (2005) for the Dominican Republic.

The monetarist key assumption of full employment may be relevant to developed western countries which have not experienced serious sustained unemployment since the great depression of the 1930s. However, this assumption has little relevance to many developing countries that suffer from sustained mass unemployment. In these countries some open unemployment is disguised through the informal sector which is characterised by flexible and free entry(exit) into (out) of the labour market. Many people in the informal sector belong to a sub category of Disguised Unemployment in that their services can be withdrawn from the labour market without much impact on the flow of goods and services in the economy. They are in petty trading and services for basic survival to avoid the full impact of open unemployment.

The informal sector, especially the disguised unemployment component is characterised by low productivity and low incomes. In many countries it is seen as a labour holding platform for employment in the formal sector, and many participants of this sector are actually busy trying to get employment in the formal sector where wage income is higher. Disguised unemployment is a peculiar phenomenon of the underdeveloped economies without formal unemployment social safety nets. The informal sector is important in providing petty employment opportunities and modest incomes for basic survival of people who would otherwise suffer the full consequences of open unemployment in economies without unemployment social safety nets.

In Zambia, for instance, only around 20% of the employed labour force is employed in the formal sector where the productivity and incomes are high, and this sector constitutes the productive engine of national output. The full extent of unemployment is disguised by the informal sector which employs the other 80% of the employed labour force. In terms of fully productive employment, the 20% formal sector counts differently from the 80% informal sector with disguised unemployed labour force. The general perception in the country and especially among those in the informal sector is that the majority in the informal sector represent high levels of "real" unemployment, and they do not consider themselves as employed, but "merely trying petty activities to survive". For "real jobs", the informal sector is generally seen as the holding platform for those in search of "real jobs" in the formal sector. This paper treats the Zambian economy and similar economies as having sustained mass unemployment based on the formal sector employment levels.

This paper attempts to develop a theoretical framework in which to investigate behaviour of an economy with mass unemployment in response to expansionary monetary policies. The focus is on the impact of expansionary monetary policy on economic growth and inflation. The initial point of departure is to make assumptions that reflect the practical realities of the typical underdeveloped economy like Zambia. This is not a

case study of Zambia, but Zambia is used extensively to demonstrate and render practical illustrations of issues related to underdeveloped economies with mass unemployment.

The paper starts by evaluating the monetarist theory of inflation on more realistic assumptions, and to show that just like the classical theory failed to deal with the great depression of the 1930s, the monetarist theory is not realistic for explaining the economic dynamics in the typical undeveloped economy with mass unemployment. This is followed by a model that is more realistic to the underdeveloped economy. On the basis of this model, the paper attempts to identify the factors that have a bearing on the impact of expansionary monetary policy on economic growth and inflation in an economy with mass unemployment. These factors are referred to as policy efficiency drivers because they are the ones that ultimately determine the effectiveness and impact of expansionary monetary policy on output and inflation.

2. Review of the Monetarist Theory of Inflation

The monetarist dictum “inflation is always a monetary phenomenon” is premised on persistent and rapid increase in the price level, and is basically anchored on the assumption of full employment. This is demonstrated by Figure 1 below. The economy is initially in

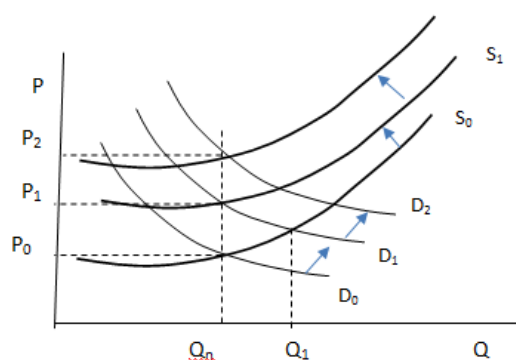


Figure 1: Monetarist Inflation Process

Equilibrium at the intersection of aggregate demand (D_0) and aggregate supply (S_0) with price level (P_0) and output at Q_n which is consistent with the natural rate of unemployment. When money supply increases, the D shifts from D_0 to D_1 which intersects S_0 at a point giving a new equilibrium output of Q_1 . This equilibrium is not stable because it is above the natural rate of unemployment. To be able to attract workers at this level of output, wages will have to rise. This increase in costs will push short run S curve from S_0 to the left until it intersects D_1 at the point that is consistent with natural rate of unemployment i.e Q_n and giving a new equilibrium price of P_1 . This new equilibrium is stable since it conforms to the natural rate of unemployment. The increase in money supply has not led to any (sustainable) increase in output, but results in an increase in price from P_0 to P_1 .

If there is a further increase in money supply, aggregate demand curve will shift from D_1 to D_2 , and the same process will repeat itself leading to a new equilibrium at Q_n and P_2 . Any further increases in money supply will have similar effects of shifting D to the right and creating backward movements in S which keep output constant at the natural rate of unemployment, while increasing the price level with each increase in money supply. Thus, there is persistent increase in price level which monetarists believe is only possible with monetary policy. According to Mishkin (2009) the Keynesians agree that because of various constraints on fiscal policy management, such persistent push on the price level is not possible with fiscal policy. This would give apparent agreement with the monetarist dictum that inflation is always and everywhere a monetary phenomenon. With similar analysis premised on the tendency of the economy returning to the output level that is consistent with the natural rate of unemployment, the monetarists have also rejected the possibility of supply side phenomenon causing inflation.

This monetarist dictum has been questioned by the empirical findings of Sargent and Wallace (1981) who observed that during the American civil war the fiscal policy pressure to sustain the war was the driver of rapid and sustained pressure on the price level as expansionary monetary policy was passively used to accommodate fiscal deficits. In Zambia there have been periods of persistent increase in the price level in spite of consistent control of money supply growth (Ng'andwe, 1980). But our primary concern at this stage is the relevance of the monetarist theory to the objective economic conditions of economies with sustained mass unemployment. In the monetarist analytical framework, the position of persistent increase in the price level is derived only from the assumption of the economy operating at the natural rate of unemployment. This is the assumption which also rules out any possibility of expansionary monetary policy resulting in any increase in output. But this assumption is clearly not realistic for economies with mass unemployment. Hence, monetarism is not relevant to developing economies with mass unemployment.

This paper also questions the assumption that the impact of expansionary monetary policy is confined to the shift in aggregate demand, without any impact on aggregate supply. Our position is that expansionary monetary policy will shift both the aggregate demand curve and aggregate supply curve to the right. This position is consistent with Keynes (1936) observation that an increase in the quantity of money will spend itself partly in increasing the cost unit and partly in increasing output. "When a further increase in the quantity of money produces no further increase in output, and entirely spends itself on an increase in effective demand, we have reached a condition that might appropriately be designated as one of true inflation" Keynes (1936, P.303). To assume that expansionary monetary policy will have no impact at all on aggregate supply will require extraordinary assumptions on transmission mechanisms for the typical underdeveloped economy with mass unemployment.

A detailed discussion of transmission channels may derail our primary focus, but the current perspectives on direct and indirect transmission channels are recognised. It is observed that David Hume (1752) had recognised both channels while Irving Fisher (2011) emphasised direct transmission channel "... everybody will want to exchange this relatively useful extra money for goods..." and because of his affinity to full employment (fixed output) assumption, he concluded "and the desire to do so must surely drive up the price of goods". The Keynesian indirect channel is premised on increased money supply driving interest rate down which in turn stimulates investment and output.

In the tradition of Hume (1752), this paper recognises both channels. It is our view that regardless of whether the change in money stock is exogenously or endogenously determined, once the processes of money increase are completed, the likely result is that there will be increased spending power for both consumption and investment. Under circumstances of mass unemployment and (or) underemployment of labour and other resources, such increases in spending power will inevitably lead to a shift in the aggregate supply curve. Of course the overall exact impact may vary according to the transmission channels and other factors, but the resultant shift in aggregate supply is inevitable.

3. Model of expansionary monetary policy for economies with mass unemployment

3.1 Critical assumptions

The model is premised on assumptions that reflect the objective conditions in less developed countries characterised by large informal sectors with significant levels of disguised unemployment. The critical assumptions are:

a) Mass unemployment

The 80% labour force in the informal sector is assumed to be in that sector to mitigate the consequences of open unemployment, and is actively trying to join the formal sector. Thus, based on the formal sector employment levels there is mass unemployment in the economy that is effectively cushioned and significantly disguised by the informal sector. The supply of labour in the formal sector is perfectly elastic at the going wage rate because of this high demand from the informal sector. Thus any increase in employment level will not distort the marginal cost of labour, and there will be no resultant marginal cost pressure on the aggregate supply curve.

b) Impact of expansionary monetary policy on aggregate supply and demand

Consistent with Keynes (1936) analysis, the impact of expansionary monetary policy will be assumed to be on both aggregate supply and aggregate demand. Both curves will shift to the right when there is expansionary monetary intervention.

c) Existence of desirable unemployment level

While the concept of natural rate of unemployment is assumed not tenable in an economy with mass unemployment, there exists a desirable level of unemployment in the formal sector which is consistent with feasible monetary and fiscal policy space. Policy makers will try to achieve this desirable level which in practice means increasing the share of the formal sector in total employment.

d) Structural maladjustment

The economy is assumed to suffer from serious structural imbalances. The economic sectors are not in harmony with one another or the social and political structures. For instance, the modern mining sector in Zambia is more linked to the outside world in terms of sources of inputs and markets than it is to the domestic manufacturing and agricultural sectors. There is also some imbalance in the external sector. Under these circumstances, a stimulus in one sector does not necessarily lead to corresponding increases in other sectors of the economy. This lack of harmony among sectors tends to dampen any growth momentum in the economy, and breeds imbalances in aggregate demand and supply leading to inflationary pressure. This assumption is consistent with the Latin American School of structuralists who maintained that in an economy with structural imbalances, the full impact of an economic stimulus in one sector will be significantly moderated by this lack of harmony, and some inflationary pressure is inevitable.

For more details on the Latin American School of structuralism see Seers (1962) who on account of “an original and stimulating contribution to the field of economic growth’ had foreseen ‘The Latin American School of structuralists... could acquire in the 1960s an international interest comparable to that of Keynesian economics during the slump-ridden decade of the 1930s ‘.

3.2 Model of Expansionary monetary policy for economies with mass unemployment

The model shown in figure 2 is for expansionary monetary policy employed as the lead policy or for accommodating other expansionary economic policies. The economy is initially in equilibrium at the point where initial aggregate demand, D_0 intersects initial aggregate supply, S_0 giving equilibrium price P_0 and equilibrium output Y_0 . If there is expansionary monetary policy, both AS and AD will shift to the right where D_1 will intersect S_1 at new equilibrium point with P_1 and Y_1 . This new equilibrium is stable as there are no forces to disturb it. In particular, contrary to the monetarist assumption, there is no pressure on wages as additional labour is absorbed at existing wage rate.

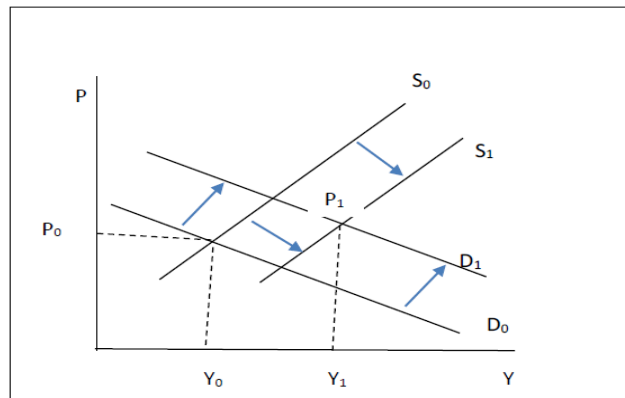


Figure 2: Response to expansionary monetary policy in economy with mass unemployment

It is noted that compared to the Monetarist assumption of only a shift of AD, the shift of both AD and AS in this model leads to a greater increase in output than was seen in the Monetarist model. Moreover, this increase in output is stable. While there is a definite increase in output from Y_0 to Y_1 , the impact on price will depend on the relative magnitudes of shifts in AD and AS.

- $P_1 > P_0$ if AD shifts relatively more than AS ;
- $P_1 < P_0$ if AD shifts relatively less than AS ;
- $P_1 = P_0$ if the shifts in AD and AS are the same

In a theoretical (mathematical) model based on Zambia with its mass unemployment, Ng’andwe (1981) showed that mathematically the impact of monetary expansion on output was unambiguously positive, but the impact on price was ambiguous. The impact on the price level depended on the relative elasticities of AD and AS with respect to change in money supply. His findings were summarised as below.

$$P_1 \geq P_0 \text{ or } \frac{\partial P}{\partial M} \geq 0 \text{ if } E_d \geq E_s$$

$$< \qquad \qquad < \qquad \qquad <$$

E_d and E_s are the elasticities of aggregate demand and aggregate supply with respect to money supply; M is money supply; and P is the price level

If the elasticity of AS is less than that of AD, the price level will rise and vice versa. If the elasticities are the same, there will be only a positive change in output without any change in the price level. While the mathematical probabilities were duly recognised, Ng’andwe (1981) acknowledged that in the practical world, the policy stimulus will face more and stronger barriers on the supply side than those on the demand side. The impact of expansionary monetary policy will be immediate on AD while various bottlenecks and supply rigidities will tend to moderate the impact on AS. In practice we can, therefore expect relatively greater policy impact on demand than on supply, and the net effect to be positive on the price level. The policy challenge then is to identify and manage the factors that have a bearing on the elasticities. These factors are the monetary policy efficiency drivers that can be manipulated to ensure good outcomes in output and inflation. An effective or efficient expansionary monetary policy is one which results in substantial increases in output with only modest increases in the price level.

3.3 Monetary Policy Efficiency Curve

Starting from initial equilibrium, each subsequent expansionary monetary policy intervention will stimulate both aggregate demand and aggregate supply curves leading to a new equilibrium point. In an economy with mass unemployment, each of these equilibrium

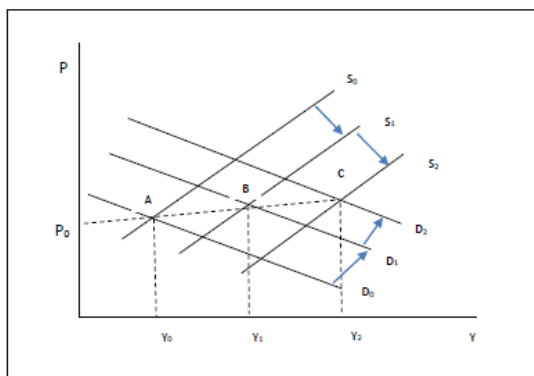


Figure 3: Expansionary Monetary Policy Efficiency Curve

Points are stable. A line joining these equilibrium points (A, B, C) is the Monetary Policy Efficiency Curve shown in figure 3. Efficiency is capturing the impacts of expansionary monetary policy on both the output and price level. The efficiency objective is high impact on output moving side by side with minimal effect on the price level. Thus, over a period of time, the most efficient expansionary monetary policy will be reflected by a horizontal Monetary Policy Efficiency Curve (or trend line) reflecting continuous increases in output with no increase in the price level. The most inefficient policy will be reflected by an almost perpendicular line.

In an economy with mass unemployment, a perpendicular curve is ruled out. Analytically, it is not possible for a series of increases in money supply to have no impact at all on output in an economy with mass unemployment. On the other hand, while a horizontal curve is mathematically feasible, it may be too optimistic in the real world to expect an outcome of continuous increase in output at the same price level. What can realistically be expected in the real world is a curve lying between the two extremes. Policies aimed at making the curve as flat as possible will be guided by the policy efficiency drivers to which we turn after a brief look at fiscal policy challenges.

3.4 Expansionary Fiscal Policy

According to Mishkin (2009), the Keynesians agree with the Monetarist dictum of inflation being everywhere and always a monetary phenomenon. The basic argument is that the fiscal policy will always face serious challenges that make it difficult for continuous expansionary fiscal interventions. Thus fiscal policy can lead to a one shot increase in the price level, but not persistent increases. Otherwise, the Keynesians are apparently also agreed with the Monetarists on the key assumptions of the existence of the natural rate of unemployment and the initial impact of expansionary fiscal policy to be confined to aggregate demand.

One can analyse expansionary fiscal policy on assumption of full employment, but to associate such analysis with Keynes (1936) model of expansionary fiscal policy is a fundamental error and distortion of Keynes (1936) analytical framework which was premised not on assumption, but the reality of mass unemployment which was the objective condition he sought to remedy. The essence of Keynes Government interventionist policy was to affect both AD and AS. Thus, even if initial Government expenditure was on “digging useless trenches”, which would stimulate demand, the subsequent expenditure of this income by trench diggers would lead to an upward pressure on aggregate supply in an economy with mass unemployment.

The realistic assumptions made for our model of monetary policy are the same for fiscal policy. Specifically, we assume mass unemployment and the impact of expansionary fiscal policy to be on both AD and AS. Thus under fiscal expansionary policy, the economy will exhibit reactions similar to those observed under expansionary monetary policy. The shifts in AD and AS will yield a new equilibrium at a higher level of output. This resultant increase in output is stable because increased employment will be at existing wages, and there will be no pressure on costs arising from wage increase.

It is duly recognised that institutional barriers may limit the frequency of use of fiscal policy. However, even if it is a one shot intervention, expansionary fiscal policy will lead to increased output and employment in an economy with mass unemployment. However, the impact on the price level will depend on relative shifts in AD and AS.

4. Expansionary Monetary Policy Efficiency Drivers

This paper has demonstrated that the Keynesian model of expansionary fiscal policy is as relevant to today's underdeveloped economies with mass unemployment as it was to the great depression economies of the 1930s. The monetarist model premised on assumption of full employment is not relevant to the objective conditions of mass unemployment that characterise the typical underdeveloped economy. The basic thrust of monetarism is to discourage use of expansionary monetary policy which is portrayed as only capable of creating inflation without impact on output. For an economy with mass unemployment this resistance to expansionary monetary policy inhibits economic growth opportunities. But, perhaps a more devastating aspect of monetarism is the explicit or implicit notion that deflationary monetary policy merely helps to check inflationary pressure, and has no consequences for output and employment. Actually, deflationary policies go beyond inhibiting new development opportunities, but can also destabilize and undermine existing productive activities.

Thus there is scope for expansionary economic policies to stimulate and sustain growth in output and employment with modest inflation in the underdeveloped economies with mass unemployment. Hence, the policy focus should be on the policy efficiency drivers which are the factors that impinge on the relative shifts in AD and AS. We can now try identifying these factors and seeing how they affect and impact on AD and AS in economies with mass unemployment. In this paper, the detailed analysis is confined to monetary policy interventions.

The policy efficiency drivers are the factors that have positive or negative effect on the AD or (and) AS. They include internal structural elements of monetary policy itself and the external factors that act as the tail winds that enhance or retard the momentum of movements in AS and AD as they respond to monetary policy interventions. It is recognised that the impact of expansionary monetary policy will be on both curves, but the magnitude of the impact will depend on the inter-play of the efficiency drivers. In the typical economy we are looking at, the major factors include, but are not limited to the following:

4.1 Structural imbalances

In discussing economic policy drivers in a developing country it is appropriate to lay down the operational environment that is characterised by structural imbalances.

It is noted that structural imbalances can also be found in developed economies, but easy access to technology and organisational resources make it possible for these countries to remedy these problems immediately they appear. Due to poor access to technology and organisational resources, and the preponderance of supply rigidities in developing countries, the structural maladjustments tend to be long term, and often require well focused policies to remedy. Thus the structural maladjustment as a long term problem is peculiar to developing economies where they underpin the general macroeconomic operational environment.

In this study the structural phenomenon is actually stipulated as a basic assumption that underpins the general operational environment. Significant structural imbalances include:

- a) The persistent imbalance between the external and internal sectors that is reflected in perennial trade deficit and balance of payment problems ;
- b) The dichotomy of the major economic sectors, with a modern sector that is more linked to the outside world than to the local manufacturing and subsistence agricultural sectors ; and
- c) Weak political and administrative structures and systems not responsive to the needs of the private sector and other productive sectors.

These and other structural challenges have a bearing on the dynamics and momentum of economic variables that may be stimulated by monetary policy interventions.

4.2. Financial intermediation system

Monetary policy efficiency requires a credible, efficient and effective financial intermediation system that can quickly channel idle financial resources to the deficit sectors of the economy. If increases in money supply do not quickly find their way to the deficit productive units of the economy, the impact of expansionary monetary policy will be stunted.

In many underdeveloped economies, the financial intermediation systems are weak. The systems are underdeveloped with little scope for competitive behaviour. In Zambia for instance, oligopolistic tendencies among the banks have kept the lending interest rates prohibitively high, and interest rates on Government securities very high at around 32% in 2020. The system has high propensity for crowding out the private sector especially SMEs from bank resources.

Under such financial intermediary system, there is high risk of increases in money supply not being channelled to the private sector which is generally recognised as the most productive. As observed by Nicias (2016) “shallow financial systems harm the transmission mechanisms of monetary policy”.

A dysfunctional financial intermediation system can be the biggest curse in an economy with mass unemployment. The mass unemployment of labour sometimes goes with substantial underutilization of installed productive capacity. For instance, many farms in Zambia with significant investment in physical infrastructure are not operating at full capacity because of poor access to working capital. It is evident that such farms and other similar underutilized productive entities can operate at much higher level with just a stimulus of working capital. Indeed, any increases in money supply that are channelled through such underutilized establishments will have an immediate impact on employment and output. The increased output can absorb some increase in demand and mitigate any pressure on the price level. But, if prohibitively high interest rates or other barriers prevent additional money supply from reaching these productive units, or if the productive sector is crowded out of the increased money supply by Government borrowing, the impact of expansionary monetary policy on employment and output may be negligible.

Thus, the model of effective expansionary monetary policy in an economy with idle resources is premised on an effective financial intermediation system. In economies with weak financial intermediation system, the implementation of an effective expansionary monetary policy will require prior, not concurrent attention to the financial intermediary system to ensure that increases in financial resources will smoothly flow to the productive sectors of the economy.

What are the major factors in a weak financial intermediation system? Weakness here refers to the inability of the system to mobilize financial resources from those with surplus and channel financial resources to the productive sector. The first challenge is structural. The typical underdeveloped economy is under-banked. The modest number of banks have opportunity to collude, and the market is often characterised by lack of competitive practices. There is need for more banks and branch expansion by existing banks.

In the promotion of more banks, a major concern is basic stability of the financial system. Thus there is an understandable preference for large banks. In the Southern African Development Community (SADC) region the minimum statutory primary capital for a bank is US \$10million. Without questioning the fundamental concern for financial system stability, one may ask if a viable bank cannot be established with a lower primary capital base.

While holding financial system stability as sacred premise, there should be room for creativity in promoting the establishment of a versatile competitive banking system in these countries. A high capitalization requirement may discourage potentially viable enterprises in the banking sector. Is it necessary or realistic to have a uniform statutory capital base for all local banks? Can monetary authorities for instance consider categorising banks into a) Category 1 banks: national banks with national coverage with minimum branches; and b) Category 2 banks: with local coverage or rural coverage. Category 1 banks can have \$ 10 million capital base, while Category 2 banks can have a lower statutory capital requirement.

While capital regulations can be used to promote the numbers of players in the banking industry, the resultant competitive environment and further regulatory interventions can help promote the flow of financial resources to the productive sector of the economy.

At the operational level, a major challenge is the high lending interest rates. Many potential borrowers with good projects find it unwise to borrow at such high interest rates which in Zambia stand at around 40%, and have in the past been as high as 100%. Those who borrow at such interests have often failed to service the loans with disastrous consequences for these enterprises and the economy at large. The implications of high lending interest rates for inflation are covered in section 4.4.1. In this section the observations on high lending rates are confined to the working of the financial intermediation system, and it is observed that the high lending rates are both a symbol and cause of a dysfunctional intermediation system.

Very often, in these economies, excessively high lending rates go with very low savings rates which are usually negative in real terms. This makes people with surplus funds to shy away from banks and other deposit institutions. Thus substantial financial resources are kept away from the national financial intermediation system which has the potential for optimal allocation of financial resources to the productive units in the economy. Thus the overall interest rate regime may not be conducive to an efficient financial intermediation system.

4.3 The Anatomy of Monetary Policy

The choice of monetary policy variables to be used as intermediate targets in managing monetary policy will be very important. This is the primary test of the anatomy of monetary policy that ensures that appropriate

constituent components of monetary policy are employed in the design and execution of monetary policy. The traditional reliance on money supply as the driver of inflation is not a very realistic catch of the most relevant monetary policy target for Zambia where the growth in money supply per se may not be very useful to anticipate or determine likely impact on inflation. Studies on Zambia's inflation by Ng'andwe (1980), Mutoti(2006) and Pamu (2006) have shown no significant link between money supply and inflation. In summarizing his findings, Pamu (2006) observed "These results are in contrast with the orthodox or monetarist view that the primary cause of inflation in developing countries is the recourse to money creation by governments faced with limited borrowing options, ... and thus set a platform for future research on the significance of structural factors related to food bottlenecks and income distribution". In a study of inflation for the early post-independence period (1964-1976), Ng'andwe (1980) found that in spite of the IMF instigated consistent restraint on money growth, inflation was rising in Zambia. He argued that the money supply aggregate was not a realistic variable for influencing inflation under Zambia's circumstances. In a situation where monetary restraint meant that the productive private sector was significantly crowded out by Government heavy reliance on the banking system, the monetary policy restraint was more effective in frustrating private sector productive activities than it was in controlling overall consumption. "Indiscriminate cuts in money supply growth may be more harmful than helpful in the fight against inflation. Government money creation for deficit financing has been excessive, and certainly needs to be cut to reasonable limits. But the level of commercial credit to the private sector may have been more inflationary in its inadequacy to promote and sustain healthy growth in output than it may have been in controlling excess demand. Therefore, in seeking to control money supply, some discrimination is necessary to promote imaginative growth in credit to the productive private sector while reducing Government money." Ng'andwe (1980).

Mainly based on this discriminatory monetary policy (pushed by Ng'andwe as Central Bank Board member), around 2007 the Bank of Zambia introduced a Selective Monetary Restraint Approach under which credit to the private sector was allowed some growth even when overall money supply was being restrained. Emphasis was also on controlling Government dependence on the banking system and deliberate prevention of crowding out of the private sector. There is no empirical study yet on the impact of this policy stance on the down ward trend in inflation, but it is encouraging that this policy stance coincided with the beginning of significant down ward trend in inflation in Zambia.

In terms of monetary variables, we should not look at the aggregate money supply, but emphasize proper decomposition of money supply into the components that can have real impact on AS and AD. Special focus should be on the shares of the productive sector and the Government in the total claims on the banking system. The share of Government will mainly be associated with increases in aggregate demand and only modest increase in aggregate supply. Thus, a high Government share can be associated with a net upward pressure on the price level.

A high share of the productive sector will be associated with more impact on the AS curve as this will increase resources for the productive sector. For more refined analysis, the productive sector may be broken into the private sector and the quasi-Government or parastatal organisations that are engaged in productive activities. The parastatals in Zambia have generally been associated with poor performance and low productivity. At the height of the parastatal domination of the economy in the 1980s, the parastatals had better access to bank credit than private sector.

In the light of assumed relatively low productivity in the parastatals, the bias of financial credit services towards parastatals can be associated with relatively low positive impact on output and consequently relatively more impact on inflation. Further refinements can be made by decomposing the private sector into various sub sectors based on the levels of productivity. A more responsive monetary policy can then be developed based on selective restraints and incentives according to the relative productivities of the sub sectors rather than a narrow focus on money supply. This discriminatory targeting of financial resources to priority sectors was also the basic thrust of Nampewo (2016) in a study of Uganda. By focusing monetary policy interventions on factors and sectors with more likely impact on output and inflation, central banks can use money supply aggregates as a supplementary, but not primary strategy. Otherwise to use money supply as the primary or only policy variable may not lead to desirable policy outcomes.

4.4 Tail winds on monetary policy

In the real world many of the factors with a bearing on monetary policy efficiency are themselves the results of complex multi-dimensional dynamics. Very often the observed statistical quantum and relationships are reflections of net effects of these complex dynamics. A systematic analysis of policy efficiency should, therefore, systematically delve into the channels of transmission for these variables.

4.4.1 Interest Rates

Interest rates are one of the main transmission channels through which monetary policy impacts the real sector. Primary focus for interest rates will be on bank lending rates. The high lending rates in Zambia constitute a major barrier to the productive activities of industry and agriculture especially among small and medium enterprises (SMEs). Many SMEs that wish to expand their operations are often frustrated by prohibitively high interest rates and the generally poor access to bank finance. For those who access bank loans at annual interest rates of around 33 -118% for the period 1990-2019, the high cost of finance tends to be a major limiting factor on the expansionary and normal productive programmes of the businesses. Thus, even where expansionary economic policy provides definite stimulus to the productive sector, the response of the aggregate supply curve will be significantly moderated by the high cost of finance.

In Zambia most of the financial sector credit goes to the productive sector, while consumer loans are relatively modest. Thus the impact of lending rates is more on the supply side than it is on aggregate demand. Assuming an expansionary monetary policy, the high interest rates will tend to significantly moderate the outward shift in AS, while there may be no additional special influences on the outward shift of AD curve. The net effect will be a modest increase in output and a relatively more significant increase in the price level. A similar reaction can also be expected from expansionary fiscal policy under this interest rate regime.

The financial sector in Zambia remains underdeveloped with little competition in products and pricing. In the 1990s the high interests were generally explained by high inflation which had consistently been very high, but interest rates have remained high even after inflation had fallen and remained at single digit around 2012-2015. This may reflect inefficiencies in the uncompetitive banking industry.

With regard to inflation, such high interest rates have a two pronged pressure on inflation. The high interest rates impact negatively on national output by discouraging potential borrowers and preventing potential increases in capacity utilization and expansion of productive activities. Secondly for those who access loans at such high rates, the high cost of finance will be directly transmitted into the pricing of goods and services. More over the high cost of finance will have a catalytic impact on the entire cost structure resulting in some shift of the aggregate supply curve to the left.

In 2012, in line with trends around the world, the Bank of Zambia (BOZ) introduced policy interest rate as the new approach to monetary policy management. The policy rate is determined on the basis of macroeconomic fundamentals notably inflation and is therefore a realistic guide to market rates. For Zambia this marked the shift from monetary aggregates as intermediate targets to interest rates as is currently the practice in developed western economies. The practice in western economies where financial systems are competitive is that all market rates quickly respond to the policy rate set by the central bank. In Zambia where the financial systems are underdeveloped, Ngoma (2017) has observed that the signal of the policy rate is confined to the interbank rate which quickly moves close to the policy rate, but has no impact at all on the lending rates of commercial banks. Indeed, the IMF has observed frequent discrepancies between the policy rate and market rates. (Nicias,2016).

This lack of reaction of lending rates to the policy rate reflects serious market failure in the financial system stemming from underdeveloped financial markets. It also highlights challenges faced by the Bank of Zambia in shifting to policy rate regime. In its circular to commercial banks to introduce the policy rate, BOZ noted that it was responding to the request from the Bankers Association for "setting up a transparent policy lending rate.... which is a resilient rate that captures the total strength of the economy and liquidity costs" Ng'andu (2012). Apparently the circular provided a firm regulatory framework for the interbank rate. "The BOZ will set the BOZ rate and regulate the supply of liquidity such that the overnight interbank rate moves in line with the BOZ rate... For this purpose, the BOZ is establishing a corridor that will define the band within which the interbank rate will be allowed to fluctuate. The band will initially be..."

In a clear misread of the national financial system, the Bank of Zambia did not provide for a specific band of deviation for lending rates. "The actual lending rate, therefore, shall be the BOZ rate plus a margin. The margin shall be set by commercial banks on the basis of their risk assessment." Ng'andu (2012). This is a reckless abandon - Nay-surrender of regulatory responsibilities by the regulator to the regulated. The consequences are clear on the Zambian market where the lending rates remain (in 2020) prohibitively high at above 30% regardless of movements in the policy rate and interbank rates.

The policy rate is today said to be the major monetary policy variable, and its overall effectiveness was expected to come through the lending interest rates which have remained immune to policy rate changes. In developed and competitive financial systems where market forces could align market rates to interbank rates, it may be enough to influence intermarket rates, and expect market dynamics to spill over to lending rates.

In a developing economy with underdeveloped and uncompetitive financial systems, the regulatory framework must be realistic and practical enough to spell out its regulatory targets and specific measures. As things stand now, the Bank Zambia primary tool of policy rate appears to be a really blunt tool, and chances are that the traditional monetary aggregates which were maintained as supplementary tools after the adoption of the policy rate have once again become the de-facto principal variables for monetary policy management. In a review of Zambia's modernization of monetary policy framework, the IMF observed "Thus, the frequent discrepancies between the policy rate and market rates blurs policy signals, making monetary policy opaque, harms the transmission mechanisms of monetary policy and undercuts the credibility of the new operational framework" Nicias (2016).

4.4.2 Fiscal policy

In the real world, monetary policy is always assumed to operate with fiscal policy. Since both policies have strong influence on economic performance, one can render the other impotent if it operates in opposite direction. For optimal results of any policy, the two policies should, therefore, be aligned. Historically the primary channel for fiscal policy impact on inflation has been the fiscal deficit. There have been mixed results in empirical studies. Kabir et al (2016) found negative impact of fiscal deficit on GDP for Bangladesh, and Amwaama (2018) found similar results for Namibia, while Onwiodnokit and Bassey (2014) found a positive relationship between fiscal deficit and real GDP in Gambia. Bulawayo et al (2018) found no long run relationship between fiscal deficit and inflation for Zambia.

Indeed, as shown by Mitchell (2005), Muthui et al (2013), and Muyaba (2016) there is no consensus even on the impact of Government expenditure on real economic growth. Mitchell (2005) observed that excessive growth of American public expenditure "in last couple years" has negatively impacted on American economic growth, while Muyaba (2016) found a positive relation between public expenditure and economic growth in Zambia.

The Keynesian view is that an upward adjustment in public expenditure stimulates economic activities and leads to economic growth. But, the financing of this expenditure may come with taxes that tend to depress private sector activities. Similar opposing dynamics play on the fiscal deficit. Hence, the impact of public expenditure and the deficit on economic performance is the net of these opposing dynamics. Thus, the policy efficiency drivers should not be the quantum of public expenditure or fiscal deficits, but these should be found from systematic break down of expenditure structure and the budget (balanced or otherwise) financing strategies.

On the expenditure side, the Government expenditure pattern may be very important because different heads of expenditure may have different impacts on output and inflation. In an empirical assessment of inflation in Nigeria, Awogbemi (2012) found "expenditure backed by productive activity is counter- inflationary." In Zambia, a possible candidate for the analysis of public expenditure structure is the relative shares of capital expenditure and recurrent expenditure in the national budget. Capital expenditure is generally associated with strong impact on private sector productivity, while recurrent expenditure is more associated with increased consumption. A relatively high share of recurrent expenditure in the national budget could, thus, be associated with strong inflationary pressure and a depressed impact on output. In general, policy efficiency strategies will aim at channelling resources in sectors with high potential impact on real GDP. While the deficit and Government expenditure may be useful in giving a general picture of fiscal stance, for realistic analysis of policy efficiency drivers it is necessary to look at the detailed breakdown of public expenditure and the financing mechanisms for the budget regardless of whether there is a deficit or not.

4.4.3 Exchange Rate

In a small open economy, the exchange rate affects the economy in a complex multidimensional way that may be different from the stylized effects of currency devaluation. In Zambia, for instance, the major mineral exports are sold on the international markets in US\$, and changes in the exchange rate may therefore not affect export volumes of copper and other mineral exports, the main national export. However, what is definite is the increased incomes in local currency (Kwacha) that can improve the mining companies' ability to deal with domestic (Kwacha denominated) expenses. When the Kwacha is depreciating, the exchange rate gains in Kwacha of the multinational mine owners may not be confined to the Zambian economy as they can be used anywhere in the world. These companies are known for extended arrears in settling outstanding bills with local suppliers which tend to frustrate the investment and routine operations of local suppliers. The improved flow of Kwacha to the mining firms can help improve financial resources of the mine suppliers with positive impact on the aggregate supply curve.

The mining companies will use a lower amount of dollars to meet its Kwacha denominated expenses, and can therefore have more dollars available for their multinational investments including possible reinvestments in Zambian mining operations. While many factors will affect the global distribution of any exchange rate gains by multinational mining companies there is strong chance that some of these gains will be used to consolidate or improve the Zambian operations. Thus, a depreciation of the Kwacha is likely to impact positively on the Zambian mining operations and the operations of local suppliers to the mines with positive impact on AS. It is noted that the depreciation will have no impact on the flow of imports for the mining companies because the sales revenue that cover imports are denominated in foreign currency. Thus, the mining sector in Zambia has always seen any Kwacha depreciation as a positive development for the sector.

The non-traditional exports (NTEs), mainly agricultural produce are sold mainly in \$. The local exporters of NTEs enjoy higher Kwacha incomes from depreciation of the Kwacha, but suffer higher Kwacha costs for their imported productive inputs and consumer items. The net impact on their behaviour will depend on the share of imported inputs in their production system. For those who are well established with suitable equipment in place, the imported items may be limited to consumables that can easily be absorbed with net effect being an increase in incomes, and possible positive impact on AS. For those in need of imported equipment in addition to imported consumables, the Kwacha depreciation can frustrate investments and operations with negative or dampening effect on AS. There is general recognition in Zambia of these conflicting forces from depreciation that impact on AS. Around 2016 the Bank of Zambia commissioned a study to determine suitable policy measures towards the beneficiaries and victims of Kwacha depreciation. The results of that study have not been publicly released, but the mere act of commissioning the study showed BOZ feeling that the impact of Kwacha depreciation on the economy could not be assumed on stylized patterns.

On the demand side of the NTE sector, we need to recognise the positive impact on AD of all these improvements in Kwacha denominated incomes arising from devaluation. While the expected positive influence on AS may be modified or frustrated by a host of supply rigidities including deficient domestic technological base, the impact on AD may not face serious restraints, and the net impact on AD can be immediate and quite strong. The net effect of depreciation (on NTE sector) can be some increase in output, but the impact on the price level will depend on the relative outward shifts in AS and AD.

On the demand side of the general public or house holds the higher cost of imported goods will tend to reduce demand for imported goods. If local substitutes were available this may shift demand to local products, and promote local production. If local substitutes are not available, the higher prices of imported goods may pull prices of local goods up. Indeed, the general response in Zambia to currency depreciation has been an increase in the prices of domestically produced goods even those with the remotest link with the cost implications of depreciation. For instance, villagers who walk to the nearby forests to harvest wild mushrooms will hike their prices whenever there is publicised currency depreciation. Their typical response to any buyer who gets surprised by the sudden change in price is "The Kwacha has gone down". The basic rationale for this is the fact that for the mushroom gatherer who depends on mushrooms to purchase imported goods, she can only maintain her consumption of imported goods by increasing the price of her marketable goods even though the exchange rate did not directly affect the cost of harvesting the wild mushrooms.

In general, the reaction to inflation expectations arising from currency depreciation is significant increase in prices of domestically produced goods which complement the exchange rate –induced increase of imported goods to generate comprehensive pressure on the price level. This is likely the most significant single source of pressure on the price level.

In general, small open economies are vulnerable to imported inflation. In a country with serious technological limitations and other domestic supply rigidities, there are very limited options for domestic substitutions for imported goods. Thus when prices rise for these imported goods, imported inflation is inevitable; and the overall price impact will depend on the import propensity. In countries with a high import content of national consumption, currency depreciation will have a high impact on inflation. Since imported inflation is transmitted very directly and immediately, it may be more significant than the transmission channels that involve shifts in AS and AD. But for policy options it is important that all transmission channels are duly recognised and analysed on the basis of the objective conditions of each country.

In the stylized literature on money supply and exchange rate, the interest rate channel is associated with transnational capital movements based on comparative movements in relative interest rates. For underdeveloped economies, this transmission channel may not be very active because the interest rate is not a major determinant of investments and capital movements. The analysis of capital flows must be based on realistic appraisal of the objective conditions.

4.4.4 Wages and incomes

Wages are treated as significant cost drivers. If wages are high they will tend to depress the AS curve or shift it to the left. This cost push phenomenon was very pronounced after World War II and led to the analysis of sociological and non economic explanations of inflation by Reder (1948), Holzman (1950), Duesenberry (1950), Turvey (1951) and Ackley (1959). This gave rise to what was called “income inflation” which was driven by different social groups’ demands for a higher share of national income. The typical groups are labour which seeks higher wages; shareholders who seek higher profits; land lords who seek higher rentals; business captains (as differentiated from wage labour) who seek higher bonuses. In the absence of improvements in output, claims for higher wages can only be met with increases in prices if shareholders want to maintain their real share of national income. Thus inflation was seen as a safety valve for social conflicts related to the distribution of national income among the competing social groups.

At independence in 1964, Zambia had a strong labour movement dominated by the African Mine Workers Union and the African Railway Workers Union with separate and antagonistic unions for whites. As the African unions sought higher wages partly to narrow the gap of the colonial legacy of racially segregated wage structure, the white unions made counter demands partly to maintain their privileges of the inherited segregated wage system. This led to a spiral in cost push inflation. The racial confrontation in wages was only brought to an end when the Government adopted a policy of one union for each industry, and the white unions disappeared. (Ngándwe, 1980)

The nationalist Government’s problems were not over. One of the major liberation struggle platforms was equality of wages between whites and blacks. It was not practical to get this equality in wages by reducing white wages to the low levels of African wages. The only way to equality of wages was to raise African wages to the level of white wages. This was still going to mean massive increments in wages. Worried by the possibility of high income inflation that would result from any attempt to equalize white and black wages, the Government was forced to abandon the policy of “Equal Pay for Equal work” and developed innovative ways in which to keep Zambian professional wages low compared to wages of comparable foreign experts. The most pronounced method in the 1980s and 1990s was the so called “Expatriate allowance” under which a basic salary was given to all professionals, but expatriate workers were given an inducement allowance which raised their total package to a level that was internationally competitive.

Today, the labour movement remains strong in Zambia, and fights hard for high wages for those in the formal sector. Consequently, wages have tended to rise while labour productivity has generally remained low. Unfortunately, the pressure for high wages and Government policy of wage restraint led to a strange compromise based on labour market segmentation. Massive wage increases for every worker was not feasible. On the other hand, wages for professional staff could not be repressed. In a country with mass unemployment, in spite of an active labour movement, the fight for high wages for the unskilled labour force was bound to be weakened by the large numbers of unemployed people who stood ready to accept employment at the going wages. At the same time the shortage of skilled labour made employers to offer high wages for that category in order to attract and retain that component of labour.

This distinction of raw labour from the skilled labour was also recognised in the labour movement where divisions arose based on level of skills for workers. Thus the Secondary School Teachers Union which represented higher skilled teachers broke away from the National Teachers Union which had represented all teachers. There were similar break ups of other unions on account of the need for effective representation based on the demands and needs of specific levels of skills and knowledge.

The net effect of these developments has been the deepening of salary differentials within the general severe income inequalities. The major driver of the Government role in this wages and incomes framework has been the concern for possible inflationary pressures arising from wages and incomes.

4.4.5 Regulatory Environment

Efficiency in the regulatory environment can have significant bearing on the performance of the productive sector. In Zambia significant regulatory interventions are those related to land acquisition and business licences. Investors who need land for various economic activities need title to feel secure about their investment. Many investments have been delayed for two years or even longer because of delays in the issuance of title deeds to the required land. Clearly such regulatory delays inhibit national production and tend to depress the AS curve.

Similar challenges arise from bureaucratic delays in the issuance of business licences and permits. In the past this problem was complicated by the multiplicity of institutions involved in the licensing of business activities. In many developing countries today, there has been strong trend towards a single window approach to business licensing which has reduced delays in business licencing.

4.4.6 Industry and Agricultural capacity utilisation levels

When major investments like mines are not operating at full installed capacity for any reason at all, it is big national news which attracts Government policy attention. Yet capacity underutilisation is a very common phenomenon in Zambia's industries especially small scale industries and agriculture. Many small industries and farms operate below installed capacity mainly because of poor access to working capital. Zambian based banks have historically shied away from small businesses, and have no specialised products based on the special circumstances of small businesses. Even the medium scale enterprises that may access credit on standard terms find the interest rates to be prohibitive. Thus the general situation is one of rampant capacity underutilisation in industry and agriculture.

In the event of expansionary policy, idle capacity will tend to provide a good starting point for full exploitation of available potential capacity. If expansionary monetary policy had a strong credit channel to stimulate capacity utilisation it can have quick and immediate impact on AS because the resources will go straight into production. This is different from a situation where resources are first used to develop productive capacity before being used on actual production.

5. Policy Mix

While the typical mission statement of many central banks today is price and financial system stability, we should avoid the fallacy of looking at monetary policy as the only competent policy for dealing with inflation. Any attempt to cure inflation with monetary policy alone can lead to futile overloading of monetary policy, and lead to its ultimate impotence.

Price and exchange rate instability can arise from structural imbalances, fiscal policy weaknesses, monetary policy weaknesses, supply shocks, and other causes. Realistic approach to price stability requires that the underlying drivers of inflation are clearly identified so that suitable response measures are designed based on the fundamentals or underlying causes of inflation. Monetary policy cannot, for instance provide a permanent cure for movements in any economic variable that are driven by structural imbalances. Thus effective management of inflation requires a policy mix in which monetary policy is harmonised with other policies that have significant remedial impact on any of the diverse causes of inflation.

The case for policy mix was evident in Zambia in 2015 when there was rapid depreciation of the Zambian currency. To most objective observers, this depreciation of the currency was mainly caused by historical structural imbalances in the external sector which is reflected in the sustained trade deficits. Thus the fundamental solution lied in addressing this structural problem. Of course, solutions to structural imbalances can take long, and can be quite complex. But this was no excuse for the Bank of Zambia to try and use monetary policy as the only viable solution. The monetary policy was over loaded and overstretched, and was destined to fail in its overall objective of helping to stabilize the economic fundamentals.

The Bank of Zambia raised the policy rate and the reserve ratio, and took other measures that tightly squeezed liquidity in the market. These measures managed to temporarily stabilise the exchange rate which was politically emotive, but there were severe consequences for the economy. Inflation which had been steadily declining to single digit suddenly shot to around 20%. Although the Bank of Zambia managed to temporarily contain both the exchange rate and inflation, the problem of exchange rate instability has remained high because the underlying structural problem that causes weaknesses in the exchange rate remained strong. Indeed, to the extent the domestic production had been destabilised and continues to be discouraged by current tight monetary policy, the fundamentals for the exchange rate remain precarious. At the same time the drastic deprivation of business sector of essential credit facilities will tend to be more inflationary than deflationary. Thus in terms of economic fundamentals, the total dependence on monetary policy to cure exchange rate problem was futile, and created other serious problems without eliminating the long run fragility of the exchange rate.

A proper policy mix would have reduced the load on monetary policy, and could have made the policy more relevant to the broad economic fundamentals. The IMF observed "Monetary policy in Zambia appears to be trying to achieve multiple and often conflicting objectives. Three objectives stand out a) Containing cost of credit; b) Controlling inflation; and c) Controlling nominal exchange rate..... The Bank of Zambia ends up resorting to a peculiar instrument mix including use of unconventional and non-market based measures."

Nicias (2016). This reflected “lack of a coherent monetary policy framework which not only causes unintended consequences including some which are precisely what the central bank is trying to avoid in the first place” Nicias (2016). Among the unintended consequences identified by IMF were:

- a) The collapse of credit growth with soaring lending rates,
- b) Threat to the financial system arising from the transfer of costs and risks to the financial system, and increasing the interest rate uncertainty, and
- c) Impairment of the transmission mechanism

The structural foundations of the exchange rate problem will certainly require long term solutions involving investment and trade policies. However, short term measures aimed at controlling non-essential imports could have been employed. For instance prudent trade barriers against imports for which local substitutes were readily available could have been used.

The exchange rate challenge has given a practical example of the need for prudent policy mix. Inflation can be caused and driven by several factors. It is these same factors that create tail winds on expansionary monetary policy to enhance or retard its impact on output and inflation. Thus, in order to optimize the impact of expansionary monetary policy, it must always be implemented in alignment with other policies notably fiscal policies.

6. Expansionary Monetary Policy Absorption Capacity

Policy absorption capacity, here, refers to institutional capabilities of economic agents to absorb and process increases in financial resources such that there is increased employment and output with minimal inflationary pressure.

With the assumption of different impacts of expansionary policy on sectors, the absorption capacity assessment should be based on aggregation of different sectoral capacities. For instance, sectors with significant idle capacities that can easily be stimulated by credit into immediate impact on output will have higher absorption capacity than those operating at full capacity. Sectors with a relatively short policy reaction time frame will have different absorption capacities from those with long policy reaction time frame. Realistic expansionary monetary policy should only be implemented within the perimeters set by absorption capacity.

A high risk of failure of expansionary monetary policy can arise from

- a) Inaccurate assessment of absorption capacity
- b) Failure to operate within the bounds of the absorption capacity
- c) Haphazard implementation of policy without reference to absorption capacity

7. Concluding observations

This paper establishes an analytical framework for dealing with expansionary monetary policy in economies with mass unemployment. By adopting assumptions that are more realistic for the typical underdeveloped economy with mass unemployment, the paper shows that the dominant orthodox monetarist approach to expansionary monetary policy is simply not realistic for the underdeveloped economies with mass unemployment.

The critical assumptions of the paper are a) The economy has mass unemployment, and b) An increase in money supply shifts both the aggregate demand and aggregate supply to the right. The monetarist key assumption of economy operating at full employment is simply not realistic in the typical economy we are looking at.

Like Keynes (1936) rejection of this assumption of the classical model during the great depression, this is a fundamental point of departure from the monetarists.

Building on Ng’andwe (1981) model which showed that theoretically (mathematically) an expansionary monetary policy in an economy with mass unemployment will unambiguously lead to increased output, while the impact on price level will depend on the elasticities of aggregate supply and aggregate demand with respect to change in money supply, the focus of this study has been on the factors that impinge on the relative elasticities of aggregate demand and aggregate supply to determine final impact on output and inflation. These are the monetary policy efficiency drivers. Policy efficiency is seen in terms of strong impact on output with modest impact on inflation.

While the model shows that in theory there is ample scope for expansionary monetary policy to lead to increased employment and real output with modest inflation it should be emphasized that an efficient expansionary monetary policy will require good access to a broad range of policy efficiency drivers.

Optimal efficiency in terms of desirable outcomes in output and inflation will be premised on effective management of the monetary expansionary process. This includes the design of monetary policy and effective leveraging of tail winds. Since many policy efficiency drivers are outside the control of the central bank, harnessing these to leverage monetary policy interventions will require extensive collaboration and coordination between the central bank and other policy management centres.

The first challenge is the choice of monetary policy intermediate targets. These should be realistically determined on the basis of their connexion with output, and in the context of the objective conditions of the country. Otherwise a sheepish reliance on the orthodox monetarist variables of monetary aggregates may put the monetary policy on a futile course. A correct choice of intermediate targets will at least set the policy on the desired trajectory, but the ultimate results will also be influenced by the policy efficiency drivers acting as tail winds on monetary policy interventions.

For developing economies with underdeveloped financial systems, the highest risk of frustration of expansionary monetary policy could come from a dysfunctional financial intermediation system. Efficient expansionary monetary policy will be premised on an effective financial intermediary system that can efficiently allocate resources to the productive sector of the economy. Financial intermediary system is the arena in which expansionary monetary policy can flourish. If it is dysfunctional it can choke the expansionary stimulus of the monetary policy. It is, therefore, absolutely necessary that as part of clearing the ground for an efficient expansionary monetary policy, a credible financial intermediation system is established, complete with realistic savings and lending rates.

In managing the tail winds, the central bank will need to work closely with other policy centres. In particular, efficient expansionary monetary policy is premised on adequate alignment of monetary policy with fiscal policy and wages and incomes policy. Effectiveness of monetary policy requires that these policies reinforce monetary policy. There may be need for institutional arrangements that promote effective policy mix.

The common practice of employing monetary policy alone to deal with exchange rate problems carries a high risk of overloading monetary policy and rendering it impotent or even prone to stimulating new problems. It is necessary to identify the fundamental causes of foreign exchange instability. If it is structural, then structural solutions should be pursued as long term solution. Short term trade policies may be employed to supplement monetary interventions for short term relief. If the problem has multi dimensional causes a policy mix is the realistic route.

In recognition of the important role of tail winds in achieving the desired outcomes of expansionary monetary policy, a key challenge for monetary policy managers is the identification of the policy efficiency drivers. Once these are identified and ranked according to their potential impact on output and inflation, attention should be paid to effective implementation of necessary policy mix.

Effective implementation of expansionary monetary policy is also premised on proper assessment of policy absorption capacity. There may be high risks of policy failure if expansionary monetary policy design and implementation are not based on accurately assessed absorption capacity.

In developed economies with well-developed financial systems, market forces can play a significant role in the allocation of resources to the productive sector. On the other hand, in developing countries with high levels of market failure in the financial system, the financial regulatory framework needs to be vigilant and proactive in promoting the flow of financial resources to the productive sectors. For developing countries, implementation challenges for an effective expansionary monetary policy are real and can be daunting. Policy failures in developing countries are often blamed on wrong policy even where policy design was good, and failure was, as is often the case, the result of implementation challenges.

If policy makers are clear about the potential economic outcomes, it should be possible for any country to create a conducive environment for effective expansionary monetary policy. The model for expansionary monetary policy in economies with mass unemployment should, therefore be adopted with full confidence that is prudently moderated by full recognition of implementation challenges.

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