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The Job Guarantee and the Phillips Curve

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1. Introduction

Debates about the likelihood of a trade-off between unemployment and inflation and the possibility that government policy can exploit it favourably can be traced back to Classical days (Mitchell, 1998a). Later, many of the major debates in macroeconomics have been conducted within the Phillips Curve framework (Phillips, 1958), which Desai (1981) saw as the ‘missing equation’ in the Neoclassical-Keynesian synthesis linking the nominal and real components. Disputes about the validity of the classical dichotomy, the role of money in the economy, the role of expectations, the capacities of central banks to manipulate perceptions, and the effectiveness of fiscal policy have all been waged within that framework.

The dominant policy consensus in macroeconomics has moved over time from the policy menu trade-off between inflation and unemployment provided by Solow and Samuelson (1960), who extended Phillips (1958), to the denials by Friedman (1968) and Phelps (1967, 1968) that fiscal and monetary policy could have enduring real effects. They introduced the Expectations-Augmented Phillips Curve (EAPC), which spearheaded the resurgence of pre-Keynesian macroeconomic thinking in the form of Monetarism. The natural rate of unemployment (NRU) concept became central to the idea that the trade-off between inflation and unemployment captured in the Phillips curve was in fact a trade-off between unemployment and unexpected inflation. Once expectations are realised as workers gain more information the trade-off vanishes. At this point there is only one unemployment rate consistent with stable inflation – the NRU, later the Non-Accelerating Inflation Rate of Unemployment (NAIRU) (Modigliani and Papademos, 1975).

The expectations-augmented Phillips curve led to the New Classical representation, which incorporated rational expectations, which cast price misperceptions as random variables and concludes that any observed tradeoffs arise because of random shocks, which are beyond the scope of policy (for example, Lucas, 1972; Sargent, 1973).

It is invalid to interpret this sequence of ideas as a consistent development of a paradigm with increasing theoretical and empirical content. The 1958 version of the Phillips curve and its subsequent Keynesian variants were based on a disequilibrium notion where prices and wages adjust to some labour market imbalance between supply and demand. There is no presumption that full employment is inevitable or a natural tendency of a capitalist monetary economy.

In contradistinction, the EAPC and later developments gained motivation from Fisher (1926) who worked within a market-clearing framework. These developments represent a major break from Phillip (1958) because the causality is reversed. Unemployment is considered to be the voluntary outcome of optimising choices by individuals between work (bad) and leisure (good). Full employment is assumed to prevail (unemployment at the natural rate) unless there are errors in interpreting price signals. The tendency is always to restore full employment by market mechanisms. There is no discretionary role for aggregate demand management.

While Modern Monetary Theory (MMT) works within the Keynesian disequilibrium tradition, it takes a different approach to the question of full employment and price stability. It identifies that governments have two buffer stock approaches to maintaining price stability in a fiat monetary system: (a) the orthodox NAIRU approach, which uses unemployment buffer stocks to discipline inflationary pressures; (b) an employment buffer stock approach (Job Guarantee), which involves the government making an

unconditional job offer at a socially-inclusive minimum wage to anyone who wants to work. We show that both approaches provide a nominal inflation anchor. But the former is very costly in terms of foregone output and income, in addition to broader social and personal costs. It violates any notion of macroeconomic efficiency. Conversely, the Job Guarantee flattens the conventional Phillips Curve by allowing a nation to maintain (loose) full employment with price stability.

Section 2 traces the early views about the relationship between unemployment and inflation through to Phillips (1958) and the introduction of the EAPC. Sections 3 and 4 consider the validity of Natural Rate Hypothesis and whether the concept of the NAIRU is useful for policy development. Section 5 discusses how the hysteresis literature impacts on the policy positions adopted by proponents of the EAPC. Section 6 introduces MMT which leads to a discussion of buffer stocks and price stability in Section 7. Sections 8 and 9 critically analyse the juxtaposition between unemployment and employment buffer stocks. We demonstrate in Section 10, how the introduction of a Job Guarantee flattens the traditional Phillips curve framework and provides a superior inflation anchor relative to unemployment buffers. Concluding remarks follow.

2. Early views on unemployment and the Phillips curve

While Classical economists such as David Hume, Henry Thornton, Thomas Attwood and John Stuart Mill discussed the relationship between output (employment) and money supply growth and the role of the Bank of England, there was no common thread evident (see Mitchell, 1998a).

The 1973 Journal of Political Economy reprinted Fisher (1926) under the heading ‘I discovered the Phillips Curve by Irving Fisher’. While Fisher produced a correlation between employment and a complex lagged version of price inflation, it is hard to make the case that his model was akin to the later Phillips curve. Fisher’s (1926) tried to establish causality from a money expansion to rising prices, rising profits, increasing output and higher employment starting from a full employment level. In effect, he was just restating the Quantity Theory of Money although his work on misperceptions certainly laid the ground for the Friedman-Phelps EAPC.

Phillips (1954) presented the foundation for Phillips (1958), where he examined the relationship between price inflation and production levels. In contradistinction to Fisher approach, Phillips articulated a process where disequilibrium in the real sector caused changes in nominal aggregates.

A.J. Brown published his opus *The Great Inflation* in 1955, which provided an account of the role of expectations and real wages in the determination of the trade-off between inflation and unemployment. The importance of Brown’s contribution lies in the institutional depth of his analysis of the factors that drove wage-price spirals and the formation of expectations. He operated in the Keynesian mould, so his discussions of expectations and real wage resistance did not anticipate the EAPC. His motivation was, in fact, Lerner (1951) who had hinted to an inverse relationship between wage and price changes and the level of unemployment. He produced two ‘Phillips curve’ scatter plots which depicted the relationship between the unemployment rate (horizontal axis) and hourly earnings inflation (vertical axis).

Unlike Fisher (1926), Brown’s causality saw fluctuations in effective demand driving labour market disequilibria, which changed the bargaining power in the labour market where “the two parties ... are competing for the real income” (p. 105). Significantly,

Brown was the first to conjecture the likely instability in the wage change-unemployment relationship.

His account of inflationary pressures emanating from distributional struggle over available real income, anticipated the Post Keynesian and Marxist conflict theories of inflation that would emerge in the late 1960s. This aspect of the discussion was, seemingly brushed aside, in the 1960s, when Phillips (1958) became the central focus in the literature despite his deficiencies in statistical technique.

Phillips (1958) was seen as the path breaker, although given Brown's earlier contribution, one wonders why. Phillips and the Keynesian models that followed (for example, Samuelson and Solow, 1960) specified the relationship between wages (and prices) and the unemployment rate in nominal terms. This ran against the dominant neoclassical microeconomics which considered Keynesian economics flawed by money illusion.

The dispute between those that built on Phillips (1958) in the Keynesian tradition and saw price adjustment as a response to disequilibrium arising from the labour market where unemployment was involuntary, and the later offerings from Friedman (1968) and Phelps (1967, 1968), reflected the neoclassical discontent with the lack of optimising microfoundations in Keynesian macroeconomics. Phillips' own curve was not an optimising function derived from rational, maximising behaviour (Klein, 1985). Thus, the EAPC was not a sequential development from Phillips, but, rather, represented a paradigm change back to pre-Keynesian thinking, which had never accepted the concept of involuntary unemployment.

Friedman's emphasis on expectations in 1968 was rooted in his earlier work, which recognised that the Quantity Theory of Money was a long-run theory that allowed for non-neutrality in periods of adjustment between equilibrium (Friedman, 1956; Patinkin, 1956). Friedman was concerned with incorporating inflationary expectations, as a source of temporary disequilibrium into the money demand function. By extending the role of inflation expectations to the labour market, Friedman was able to solve the problem that Phillips's 1958 model and subsequent developments presented for neoclassical monetary theory.

In reasserting neoclassical microfoundations, Friedman and Phelps were then left to explain why Say's Law did not work all the time. To overcome that problem, they followed Irving Fisher and identified misperceptions of inflation as the culprit in a market-clearing model. Ultimately, under their natural rate hypothesis, Say's Law imposed itself in the long run. Their assumption of adaptive expectations soon gave way to the rational expectations approach, which effectively strengthened the case that under extreme versions of rational expectations, Say's Law always holds, and any departures are transient and random.

Clower (1965) and Leijonhufvud (1968), however, demonstrated, how neoclassical models of optimising behaviour were flawed when applied to macroeconomic issues like mass unemployment. They showed that the basis on which Friedman and Phelps constructed the EAPC was unconvincing.

The battlelines between the Keynesians and the Monetarists was well expressed by Solow (1997: 433):

Monetarists interpreted the correlation as Fisher did, with changes in prices eliciting, one way or another, opposite changes in unemployment. On the whole, Keynesians thought they were seeing a disequilibrium relationship, with high or

low unemployment eliciting small or large changes in wages and prices. In this they were closer to Phillips, not to Fisher.

Friedman and Phelps allowed economists who were uneasy about the absence of microfoundations in the Keynesian model to see the Phillips relationship in the way that Fisher (1926) had first conceived it, which then led to the burgeoning literature on expectations and, ultimately, the arid terrain of rational expectations.

3. The Natural Rate Hypothesis and the NAIRU

The natural rate approach asserted that there was no legitimate role for aggregate demand management to manipulate unemployment rates. The dynamics of unregulated labour markets would then ensure the natural rate of unemployment was sustained. This approach equated the natural rate of unemployment with full employment, irrespective of the level of unemployment that might prevail. The natural rate theory reinstated Say's Law and full employment as it had been defined by Beveridge and others, as sufficient jobs to satisfy the desires of the available labour force, was abandoned.

In the decade that followed Friedman (1968), econometricians devoted considerable energy to estimating the NAIRU from wage-price equations (for example, Solow, 1969; Perry, 1970; Gordon, 1976). The early attempts by Keynesian economists to sustain the Phillips trade-off, focused on the value of the coefficient on the newly introduced price expectations term in the EAPC. They argued that if the coefficient was less than one, then a long-run trade-off was not rejected (Solow, 1969). However, Sargent (1971) claimed that the estimation methods were invalid and as a result the rejection of a unit coefficient did not justify the rejection of the accelerationist hypothesis.

By 1978, the two leading macroeconomics textbooks (Gordon, 1978; Dornbusch and Fischer, 1978) presented vertical long-run Phillips curves as core theory, with some allowance for short-term trade-offs as a result of various rigidities or expectational errors. The incorporation of the 'Natural Rate Hypothesis' into the mainstream macroeconomics framework spelled the end of the concept of full employment as it had become defined in the Keynesian period. Unemployment once again was considered to be a voluntary outcome of optimising choices by individuals and only unforeseen changes in inflation, instigated by the central bank, would promote temporary variations around the optimum. There was no discretionary role for aggregate demand management.

4. The NAIRU as a guide to policy

The efforts to estimate the unobserved NAIRU proved to be vexed. It also became obvious that as inflation rates fell sharply in the 1990s, unemployment rates also fell, which was in contradistinction to conventional NAIRU wisdom (Chang, 1997).

Varying NAIRU estimates appeared to be highly sensitive to the functional form, estimation techniques and sample periods deployed. The standard errors were so wide to be useless as a guide to policy. For example, Staiger *et al.*, (1997) reviewed many models and concluded that a plausible 95 per cent confidence interval would run from 4.74 per cent to 8.31 per cent. Even if policy makers accepted the NAIRU as sound concept upon which to base policy, they would never be able to reliably conclude that unemployment was above or below the steady-state, given the breadth of the interval.

Further, NAIRU estimates were cyclically unstable and tracked actual unemployment up and down, which negated the idea that only structural factors were determinant.

Chang (1997: 12) concluded that “... in practice, the concept of a noninflation accelerating rate of unemployment is not useful for policy purposes ... First, the NAIRU moves around. Second, uncertainty about where the NAIRU is at any point of time is considerable. Third, even if we knew where the NAIRU were, it would be suboptimal to predict inflation solely on the basis of the comparison of unemployment against the NAIRU.”

It was also obvious that the labour market dynamics that were required to give credence to Friedman’s misperceptions hypothesis required the labour supply to rise and fall inversely with unemployment. The most damning piece of evidence against these supply-side explanations of unemployment is that quits are strongly procyclical. Such evidence was ignored.

5. Hysteresis and Labour Market Adjustment

Despite the efforts to refute the accelerationist hypothesis via testing for unity coefficients on the expectations terms in the wage-price equations, another path emerged in the 1980s, which focused on the likelihood that the steady-state unemployment rate was cyclically sensitive – the hysteresis effect (Hargreave Heap, 1980; Mitchell, 1987). This effect describes the interaction between the actual and equilibrium unemployment rates. The significance of hysteresis is that the equilibrium unemployment rate associated should not be conceived of as a rigid inflationary constraint on expansionary macro policy. Instead, it can be reduced by policies, which reduce actual unemployment.

The rising NAIRU estimates in the 1980s in many countries were constructed by Monetarists as indicative of rising structural impediments in the labour market. Given the dominance of the accelerationist hypothesis, the use of aggregate policies to redress the wastage was eschewed in favour of microeconomic reform aimed at structural reform. The problem was that all the studies that incorporated ‘structural’ variables, such as mismatch, tax wedges, and the like were fraught because these variables were highly cyclical (Mitchell and Muysken, 2008).

Mitchell (1987) demonstrated that so-called structural imbalances in the labour market increase during recession but reverse at higher levels of demand. These non-wage labour market adjustments that accompany a low-pressure economy include firms varying hiring standards and provision of training opportunities across the cycle. As vacancies fall, firms become more selective hiring, whereas, when the labour market is tight, firms have to be more flexible, and, rather than disturb wage structures, they offer entry-level jobs as training positions to ensure they maintain market share. Upward mobility and skill accumulation accompany a high-pressure economy (Okun, 1973).

Increasing structural imbalance drives a wedge between potential and actual excess labour supply. Hysteresis means that aggregate demand expansion can trigger these underlying cyclical labour market processes (hiring, skill development, etc) to reduce the steady-state unemployment rate as well as reducing actual unemployment because the unemployed are able to develop new and relevant skills and experience. In that sense, the speed of adjustment of price expectations to actual inflation becomes moot.

Mitchell (1987) found that the steady-state unemployment rate is not exclusively determined by structural factors (as in Friedman and Phelps) and is a transient state. Importantly, the steady-state in this model is sensitive to fiscal and monetary policy settings, which represents a significant departure from EAPC orthodoxy.

6. The emergence of fiat currencies

Around the time that Monetarism was emerging as the dominant paradigm in macroeconomics, the Bretton Woods system collapsed which ushered in the modern era of fiat monetary systems. This change undermined the veracity of all the key neoclassical claims about the impact of fiscal deficits on interest rates and inflation, which had been derived from the so-called micro-founded Monetarist revolution. The shift to a fiat monetary system was a point of departure for MMT. Under the fixed exchange rate system, central banks had to manage the amount of their currency in the system to maintain the agreed parities with other currencies. An excess supply of one currency in foreign exchange markets required the relevant central bank to purchase their currency with foreign currency reserves and increase domestic interest rates to attract foreign investment (and demand for their currency).

The problem was that the money supply contraction and higher interest rates increased unemployment and if expansionary fiscal policy, which put currency back in the system, was used too aggressively in response, then the central bank's efforts to maintain currency stability would be compromised. As a consequence, without an increase in gold reserves, increased government expenditure (injecting currency) had to be matched ('financed') by taxation and if government wanted to run deficits, then they had to issue debt (draining currency).

The collapse of the Bretton Woods system dramatically altered the options available to currency-issuing governments. First, under a fiat monetary system, 'state money' no longer had any intrinsic value (gold convertibility was abandoned). The motivation to use an otherwise 'worthless' currency in exchange emerges because the sovereign government requires its use to relinquish private tax obligations.

Second, as the monopoly issuer of the fiat currency, the Bretton Woods restrictions were no longer binding on government. There is no financial constraint on government spending. It can buy any goods and services that are available for sale in its currency including all idle labour. The only meaningful constraint is the 'inflationary ceiling' that is reached when all productive resources are employed. Accordingly, our focus must shift from thinking about financial constraints on government spending, to a focus on real resource constraints.

Third, logically, the government no longer needs to issue debt, given it is the issuer of its own currency. Debt issuance serves other purposes which evade public scrutiny (Mitchell *et al.*, 2019).

The perennial question: 'How are we going to pay for it' gives way to questions that relate to the functional outcomes we desire from public spending and public use of available real resources. Importantly, we understand that mass unemployment becomes a political choice and we are forced to ask what purpose it serves and whether that function can be fulfilled in another way. This understanding opens up new perspectives on the Phillips curve debate.

7. Buffer Stocks and Price Stability

In this regard, the MMT literature breaks with the traditional Phillips curve discourse by focusing on two buffer stock mechanisms that are available to government desiring a nominal inflation anchor:

- Unemployment Buffer Stocks – where inflation is controlled through policy that creates a jobless pool that disciplines the distributional struggle (the orthodox NAIRU approach).
- Employment Buffer Stocks: The national government makes an unconditional job offer at a fixed wage to anyone who desires to work and during inflationary periods uses policy to shift workers from the inflating sector to the fixed price sector Job Guarantee sector.

Clearly, an employment buffer stock approach has quite radical implications for how we construct the Phillips curve.

8. Unemployment buffer stocks

As the Keynesian full employment consensus broke down, with the dislocation arising from the OPEC experience, central banks adopted an ‘inflation first’ strategy. Unemployment ceased to be a policy target, and, instead, became a tool to suppress price pressures. Elevated levels of unemployment during ‘disinflation’ adjustments were considered ephemeral as the economy resolved to the natural rate. The OECD experience of the 1990s shows that high and prolonged unemployment will eventually result in low inflation, which suggested that empirically, at least, some trade-off mechanism existed (Mitchell, 1996). We can motivate an understanding of these dynamics in a number of ways. The conflicting claims literature provides a highly plausible framework in this regard (see Kalecki, 1981; Rowthorn, 1980; Mitchell, 1987). Accordingly, inflation results from incompatible nominal claims on available real income – the so-called ‘battle of the mark-ups’. Unemployment can temporarily balance the conflicting demands of labour and capital by disciplining the aspirations of labour so that they are compatible with the profitability requirements of capital (Kalecki, 1971). Similarly, low product market demand suppresses the ability of firms to pass on prices to protect real margins.

While the Monetarists downplayed the costs of these disinflation strategies, the reality is that the unemployment buffer stock approach generates very large with long term negative outcomes. A central idea in economics is efficiency – getting the best out of what is available. At the macroeconomic level, the ‘efficiency frontier’ is normally summarised in terms of full employment. It is well recognised that sustained unemployment imposes significant economic, personal and social costs that go well beyond the massive, daily losses of current national output and income. Given the cyclical behaviour of quit rates, alone, it is unlikely that mass unemployment can be cast of as a voluntary, optimising state. Large pools of involuntary unemployment violate our concept of macroeconomic efficiency. When James Tobin (1977: 468) said that “it takes a heap of Harberger Triangles to fill an Okun Gap”, he was answering a long-standing question about the relative magnitudes of microeconomic inefficiency and macroeconomic inefficiency.

Persistently high unemployment also reduces potential output and future growth prospects. The accompanying erosion of skills and lack of investment in new capacity means that future productivity growth is likely to be lower than if the economy was maintained at higher rates of activity.

The NAIRU approach to price stabilisation has also been accompanied by ‘activation’ policies which impose obligations on the unemployed in exchange for income support. In a job constrained economy these policies just redistribute unemployment among the jobless queue.

It is also not clear how the economy, once deflated by restrictive aggregate demand management, can be restarted without inflation. If the underlying causes of the inflation are not addressed, a demand expansion will merely reignite the distributional tensions. In other words, the NAIRU approach addresses the symptoms and not the causes of inflation, and as a consequence, provides no firm basis for sustained full employment and price stability.

Ball and Sheridan (2003: 2) studied the impact of inflation targeting in 20 OECD economies concluded that overall ‘there is no evidence that inflation targeting improves performance as measured by the behaviour of inflation, output, or interest rates’. Sacrifice ratios across nations have also increased since the 1980s, which means that the Phillips curve has become flatter making the costs of disinflation higher (Mitchell and Muysken, 2008).

Finally, the inflation targeting approach has been accompanied by a view that fiscal policy must be passive and not compromise the inflation target. As a result, economies have tolerated persistently high rates of labour underutilisation despite having achieved low inflation.

Modigliani (2000: 3), one of the economists who coined the term NAIRU, reflected on his legacy:

Unemployment is primarily due to lack of aggregate demand. This is mainly the outcome of erroneous macroeconomic policies ... [the decisions of Central Banks] ... inspired by an obsessive fear of inflation, ... coupled with a benign neglect for unemployment ... have resulted in systematically over-tight monetary policy decisions, apparently based on an objectionable use of the so-called NAIRU approach. The contractive effects of these policies have been reinforced by common, very tight fiscal policies.

Given the scale of these costs, it is highly unlikely that using a persistent pool of unemployed or casualised underemployed is the most effective way to achieve price stability.

9. Employment buffer stocks

9.1 Job Guarantee basics

The alternative approach to price stability is to use an employment buffer stock or Job Guarantee (Mitchell, 1998a,b; Mosler, 1997-98). There is now an extensive literature outlining the Job Guarantee concept – its design, operation, the types of jobs, its relation to basic income, and more (see contemporary accounts in Mitchell *et al.*, 2019; Tcherneva, 2020). Here, we focus on the implications of employment buffer stocks for inflation and the Phillips curve. In terms of provenance, the Job Guarantee was developed, independently, by Mitchell (1998a,b) and Mosler (1997-98). Mitchell, in particular, saw it as a way of countering the orthodox presumption that there was no enduring trade-off between inflation and unemployment.

In November 1970, the Australian government introduced the Australian Wool Reserve Price Scheme, which was designed to stabilise prices and smooth out producer incomes. It was a typical commodity storage scheme (Graham, 1935). The scheme worked by government establishing a floor price for wool and maintaining a wool buffer stock to stabilise price in the face of market fluctuations. A government agency would purchase wool in spot markets if there was excess supply and sell wool from their storage when

there was excess demand. Mitchell (1998a) explained how in 1978 as an agricultural economics student he determined that this traditional buffer stock approach could be applied to the labour market and alter the way we conceive the Phillips curve.

With a Job Guarantee, the government operates a buffer stock of jobs to absorb workers who are unable to find employment in the non-government sector. The pool expands (declines) when non-government sector activity declines (expands). Workers would also be able to choose the hours they desire up to full-time, which would significantly reduce time-based underemployment.

The unconditional job offer would be at a socially-inclusive wage, which would be set at the bottom of the wage distribution. This wage would become the wage floor for the economy. At the point of introduction, government could set the wage above the prevailing minimum wage to facilitate an industry policy function (that is, shift resources out of low productivity, high cost private firms). The novelty of the Job Guarantee, as a 'commodity' buffer stock mechanism, is that the government purchases this labour off the 'bottom' of the labour market rather than competing for labour at market prices. By definition, the unemployed have zero bid in the non-government sector for their services.

The Job Guarantee wage could be supplemented with a wide range of social wage expenditures, including adequate levels of public education, health, child-care, and access to legal aid. Further, the Job Guarantee does not replace conventional use of fiscal policy to achieve social and economic outcomes. There is an argument that can be made for universal service guarantees to complement the employment guarantee. We do not extend that argument here. Other cash transfers based on family-units might also supplement the Job Guarantee wage to provide better resource security for working families.

9.2 Inflation control

Rather than construct the Job Guarantee as a job creation program, MMT economists conceive of it as a macroeconomic stability framework designed to maintain both full employment and price stability in the face of fluctuations in the non-government spending cycle.

The mechanics of inflation control under a Job Guarantee are straightforward. Instead of using unemployment to discipline an inflationary episode, policy makers manipulate the Buffer Employment Ratio (BER), defined as the size of the Job Guarantee pool relative to total employment. Tightening aggregate policy settings to stifle non-government spending creates unemployment under a NAIRU approach. Under a Job Guarantee, workers are offered jobs at a fixed wage and the BER rises. At some point, this transfer disciplines the distributional conflict driving the inflation.

Mitchell (1998a,b) termed the BER that results in stable inflation the Non-Accelerating-Inflation-Buffer Employment Ratio (NAIBER). Its microeconomic foundations bear no resemblance to those underpinning the NAIRU. It generates 'loose' full employment because skill-based underemployment would remain. But it means that a currency-issuing government, which faces no financial constraints can eliminate involuntary unemployment without endangering price stability.

The NAIRU approach is adopted, in part, because current fiscal policy practice is based on a flawed understanding of the capacity of the currency-issuing government. Claims that governments are financially constrained bias fiscal policy towards surplus creation.

As a result, governments spend on a *quantity rule*, which means they allocate \$x, guided by what they think is politically acceptable. What defines political acceptability depends on a range of factors, including the economic literacy of the voters. MMT demonstrates that literacy levels are distorted by economic myths equating the currency-issuing government to a financially-constrained household. This deception restricts the fiscal space that governments are prepared to recognise (Mitchell, 2020a, b). The problem is that \$x may not bear any relation to what is required to address the non-government spending gap arising from the private desire to save and/or spending drains via external deficits. As a consequence, mass unemployment persists at elevated levels, which describes the history in most nations over the last 3-4 decades.

MMT provides a sounder basis for the conduct of fiscal policy by allowing citizens to appreciate that the fiscal space available to government is limited by the real resource availability rather than any erroneous financial constraints. As a result, the Job Guarantee would see the government spending on a *price rule*, by offering a perfectly elastic labour demand curve at the Job Guarantee wage and ‘buying’ whatever is forthcoming at that price. This behaviour is consistent with the MMT observation that the endogenous fiscal balance should adjust up and down to sustain full employment.

If the non-government sector considered the fiscal deficit was excessive at any point in time (meaning they would consider there were too many workers in the Job Guarantee pool), then the remedy is obvious – it can increase private spending. As a result, the fiscal balance and the Job Guarantee pool would shrink.

9.3 Automatic stabiliser versus generalised Keynesian expansion

The endogeneity of the fiscal balance, determined by non-government spending decisions means that the Job Guarantee is, in fact, an automatic stabiliser. Given policy settings, it allows the fiscal balance to adjust to the exact dollar amount that is necessary to employ the last worker seeking a job.

Automatic stabilisers have the desirable characteristic of providing immediate, countercyclical spending injections (or withdrawals) when non-government activity fluctuates. They avoid the so-called policy lags, which relate to time delays in the design and introduction of discretionary government interventions. These time delays would be non-existent in a properly managed Job Guarantee program. All the planning to facilitate these requirements would be already in place.

In this regard, the Job Guarantee is a more powerful stabiliser than a system of unemployment benefits because aggregate demand declines less when non-government spending falls. Further the operation of the Job Guarantee reduces the losses associated with mass unemployment that were discussed earlier.

Purchasing on a price rule stands in contradistinction to traditional Keynesian pump priming remedies to unemployment. Davidson (1994: 79) expounds the mainstream Post Keynesian approach to counter-stabilisation: “Government fiscal policy is conceived as the balancing wheel, exogenously increasing aggregate demand whenever private sector spending falls short of a full employment level of effective demand and reducing demand if aggregate demand exceeds the full employment level.” In other words, net spending rises because the government purchases goods and services and/or labour at market prices.

However, such an approach is unlikely to create employment for the most disadvantaged workers, ignores spatial disparities, and, importantly, excludes an

explicit counter-inflation mechanism. The ‘generalised expansion’ approach proposes incomes policies as the nominal anchor, which are notoriously ineffective. By not competing with the private market, the Job Guarantee would avoid the inflationary tendencies of past Keynesian policies, which attempted to maintain full capacity utilisation by ‘hiring off the top’.

10. The Job Guarantee and the Phillips Curve

10.1 Introducing a Job Guarantee to a recessed economy

Suppose we characterise a dual labour market: A (primary) and B (secondary) (see Doeringer and Piore, 1971; Okun, 1973) within a Phillips curve economy. Prices in each sector are set according to markups on unit costs. Wage setting in A is contractual and responds in an inverse and lagged fashion to relative wage growth (A/B) and to the wait unemployment level (displaced Sector A workers who think they will be soon reemployed).

An autonomous spending increase immediately stimulates output and employment in both sectors. Wages in Sector B are relatively flexible and increase as demand rises. The compression of the A/B relativity stimulates lagged wages growth in Sector A. Wait unemployment falls in Sector A as employment demand rises, but underemployed workers in B are attracted to A due to the increased probability of getting a job in A. The net effect is unclear although the unemployment will be lower after participation effects are absorbed. The wage growth in both sectors may force firms to increase prices, but cyclical increases in productivity serve as an offsetting factor.

A combination of wage-wage (wage demands to restore their relativities) and wage-price (real wage resistance and firms defending real profit margins) mechanisms in the softening product market may ultimately drive inflation. In a NAIRU world, government has to reduce overall spending to reduce the inflationary pressures as noted above.

The introduction of a Job Guarantee into this recessed economy immediately puts pressure on low wage, high cost Sector B employers to restructure so as to maintain their workforces. For given productivity levels, the Job Guarantee wage becomes the floor in the economy’s cost structure and the dynamics change significantly.

The elimination of all but wait unemployment in Sector A and frictional unemployment does not distort the relative wage structure so that the wage-wage pressures remain subdued. Other things equal, overall spending rises somewhat because the fixed, Job Guarantee wage is higher than the unemployment benefit payment.

As a result, sales and the demand for labour rise in Sector A. There is no new problem faced by employers who wish to hire labour to meet the higher sales levels. The going rate must be paid, which in most cases will be preferable to the Job Guarantee wage.

This raises the question as to whether the NAIBER would have to be larger than the NAIRU to stabilise price inflation.

10.2 Would the NAIBER be higher than the NAIRU?

There are two arguments that might be used to argue that the NAIBER would have to be larger than the NAIRU for an equivalent amount of inflation control.

First, if the NAIRU achieved output levels commensurate with price stability then, higher aggregate spending as a result of workers having higher incomes should,

logically, generate inflationary impulses. However, while it is true that the Job Guarantee workers will enjoy somewhat higher incomes relative to being unemployed, the rising demand *per se* is unlikely to introduce inflationary pressures in demand-constrained economies because firms are more likely to increase capacity utilisation to meet the higher sales volumes rather than risk losing market share by increasing prices. Further, cyclical productivity improvements reduce pressures on unit costs.

Second, wouldn't Sector A workers use the presence of a Job Guarantee as a bargaining weapon to push for higher wage demands based on the view that the unemployment threat is now absent? Gordon (1997: 833) argued "If there is a job guarantee program, the employees can simply quit an obnoxious employer with assurance that they can find alternative employment."

It is true that under a Job Guarantee, wage bargaining is freed from the threat of unemployment. However, this freedom is unlikely to generate higher wage demands than otherwise. In professional occupational markets, it is likely that some wait unemployment will remain. Skilled workers who are laid off receive redundancy payments, which reduce the need to get immediate work. They may also see a Job Guarantee job as a stigmatised option. On-going wait unemployment will continue to discipline wage demands in Sector A.

Further, in an economy where unemployment buffer stocks discipline inflation, rising long-term unemployment during an extended downturn reduces the effectiveness of the threat somewhat because of rising hysteretic inertia. Job Guarantee workers are far more likely to have retained higher levels of relevant skills than those who are forced to succumb to lengthy spells of unemployment. It is thus reasonable to assume that an employer would consider a Job Guarantee worker, who is already demonstrating a commitment to working, to be a superior training prospect relative to an unemployed and/or hidden unemployed worker.

This changes the bargaining environment rather significantly because firms now have reduced hiring costs. Previously, the same firms would have lowered their hiring standards and provided on-the-job training as the labour market tightened. Thus, in this sense, the inflation restraint exerted via the NAIBER is likely to be more effective than using a NAIRU strategy.

In summary, the Job Guarantee buffer stock is likely to be a qualitatively superior inflation fighting pool than the unemployed stock under a NAIRU. In that sense, the NAIBER will be lower than the NAIRU, which means that private sector employment can be higher before the inflation barrier is reached.

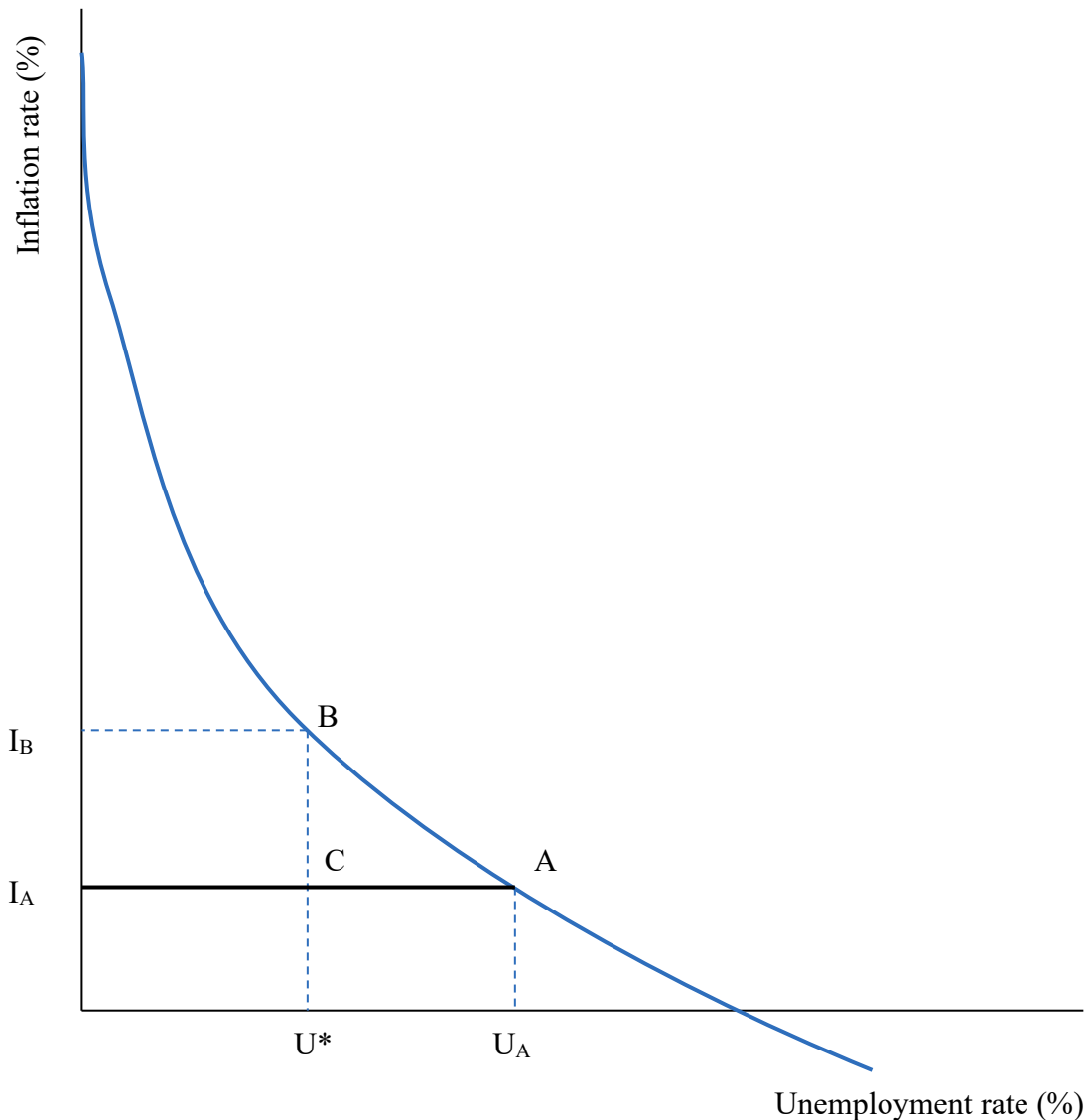
Of course, when the non-government labour market tightens, market wages will rise relative to the Job Guarantee wage, and the buffer stock drains. This is no different to a non-Job Guarantee economy. The smaller the Job Guarantee pool, the less influence the Job Guarantee wage will have on wage bargaining.

The other observation is that the aggregate demand impulse required to return the economy to what we might call loose full employment under the Job Guarantee is less than would be required in a NAIRU economy to provide an equivalent number of jobs in the non-government sector. In the latter case, the government stimulus would be calibrated at market prices rather than a fixed wage job offer.

10.3 The Job Guarantee flattens the Phillips Curve

We can summarise this discussion by tracing the introduction of a Job Guarantee in a traditional Phillips Curve model. In Figure 1, we begin with an unemployment rate at U_A and an inflation rate of I_A . The full employment unemployment rate is U^* , which defines frictional unemployment. The difference between U^* and U_A is involuntary unemployment and serves an inflation-suppression function, as described above.

Figure 1 The Job Guarantee and the Phillips Curve



Source: Mitchell *et al.*, 2019, page 309.

In a Phillips Curve world, if the government sought to eliminate involuntary unemployment through generalised expansion then the economy would move up the curve to B with inflation rising to I_B . There would be no guarantee that inflation would be stable at that level. In a NAIRU world, bargaining agents build the higher inflation rate at B into their expectations and resulting behaviour. As a result, the Phillips Curve would start moving out undermining the trade-off. However, whether that happens or not is not germane to the following discussion.

A Job Guarantee would provide jobs to $(U^* - U_A)$ workers. The improved labour market prospects would no doubt attract additional workers back into the labour force (hidden

unemployment) who would be likely prefer the Job Guarantee to remaining without an income.

As a result, the economy would move from A to C instead of A to B as the government fights the inflationary pressures. In other words, the introduction of the Job Guarantee flattens the Phillips Curve (Mitchell, 1998a; Mitchell *et al.*, 2019). The macroeconomic opportunities facing the government are not dictated by a perceived unemployment and inflation trade-off which might be unstable (as in a NAIRU world). Full employment and price stability can be simultaneously achieved.

The steeper the original Phillips curve, the smaller will the required increase in the Job Guarantee pool be to stabilise inflation at some desired level.

A-C reflects private employment losses. Government would clearly aim to minimise the NAIBER so that higher levels of non-Job Guarantee employment can be sustained with stable inflation. Initiatives that may reduce the value of the NAIBER include public education to stimulate skill development and engender high productivity growth; institutionalised wage setting processes where productivity growth is shared equitably across all income claimants, and restrictions on anti-competitive cartels which should reduce pressures for profit margin push.

11. Conclusion

The scope for non-government sector expansion is never unlimited. In an open economy, private domestic spending (consumption plus investment) and net external spending, will usually not be sufficient to generate full employment. The government must fill the spending gap to ensure that there is sufficient demand to justify production levels that will provide enough jobs for the available labour supply. If public net spending is insufficient, then mass unemployment arises. Conversely, if net public spending is greater than the required full employment injection, then inflationary pressures emerge.

The introduction of a Job Guarantee solves involuntary unemployment within the nominal anchor. In doing so it avoids the massive losses that accompany the unemployment buffer stock approach. However, we should make it clear that while it is a better option than the current NAIRU orthodoxy, it is always preferable to create non-inflationary room to allow non-Job Guarantee employment creation via direct job creation in the career section of the public sector or by a general fiscal stimulus designed to increase private sector employment. These jobs are likely to be higher paying and deliver higher productivity.

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