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## 8. Government As Employer Of Last Resort: An Outline Of A Proposal For Full Employment With Price Stability

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### Introduction

Currently, industrialized nations appear to have abandoned the goal of true full employment (zero involuntary unemployment), and seem prepared to accept the existence of millions of unemployed, even during economic expansions. In the United States, Federal Reserve Chairman Alan Greenspan has recently declared that labor markets are too tight, the economy is 'unsustainable,' and that we must be 'realistic.' This coincides with U.S. implementation of a 'welfare reform' that seeks to force recipients off assistance through setting time (and other) limits on eligibility, while leaving it to individual states to try to find employment for these individuals, a task which they are unable--even if they were willing--to shoulder. Failure to find employment leaves individuals without a means to provide for themselves and their families. This development is part of an overall trend toward the progressive dismantling of the social safety net traditionally provided by the Federal government that protected the most vulnerable sectors of the population against the even worse economic and other hardships they might experience without such aid.

A similar situation looms in Europe, where with double digit unemployment the Bundesbank has raised interest rates (with France, the Netherlands, Belgium, and Denmark following suit), and where nations are preparing to give up the ability to conduct coordinated fiscal and monetary policy by signing on to a fundamentally flawed EMU (Godley, 1997; Goodhart, 1997). This situation is by no means confined to the U.S and Europe; austerity and structural adjustment programs rather than expansionist approaches guide the policies imposed on politically weak transitional and developing economies by international institutions such as the IMF and the World Bank, as well as wealthier trading partners and 'donor' nations (see, e.g., Bello, 1994; Danaher, 1994).

Such approaches cannot result in full employment and economic prosperity and in fact are actually recipes for disaster. An alternative expansionist full employment approach has been offered by a small minority (for excellent overviews of austerity vs. expansion see Parguez, 1990; Nell, 1996, ch. 5). These voices include the (barely noticed) proposals made by Minsky (1986) and Lowe (1988)--from different but complementary theoretical perspectives--that government act as an employer of last resort (ELR), hiring anyone who is ready and willing to work at an appropriate money wage rate. This same idea has recently (and apparently independently) been put forward by Mosler (1995, 1996), and further developed by Wray (1997a, 1997b). This paper outlines this general approach to full employment, elaborating some of its theoretical bases and highlighting some of its strengths and possibilities in the light of current political and economic developments, including the challenges that face any attempt to put full employment back in a central position in any discussion of economic and public policy.

### Defining Full Employment

The term 'full employment' has come to mean different things to different people, and it should therefore not be taken for granted that it is clear what the term means. The first issue concerns the resources referred to by the term. Does the term refer to full employment of all resources, or only the full employment of labor? While there is obviously *some* relation between the employment of labor and the employment of other resources, full employment will be used here to refer only to labor. Full employment of plant and equipment as well as labor will be referred to as 'full capacity utilization' or 'full employment of resources.'

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The second definitional issue regards the level of employment referred to by the term. Contrary to the intuitive, common-sense meaning of the term, most economists and policy makers do not equate "full employment" with "zero unemployment." Looked at through the lens of concepts such as the "natural rate of unemployment" and the "non-accelerating inflation rate of unemployment" (NAIRU), "full employment" has come to indicate that level of employment that is associated with price stability, *even if that means millions of individuals ready and willing to work are unemployed*. Such a usage obviously places fighting inflation above combating unemployment in the list of macroeconomic priorities. Otherwise, we would speak not of NAIRU, but of "ZUROI" (zero unemployment rate of inflation), and we would define "zero inflation" as that positive rate of inflation (however measured!?) associated with zero unemployment. In both conceptions, however, a trade-off between unemployment and inflation is taken as given. Such an assumption is not made here.

Full employment here refers to zero involuntary unemployment. This simply means that no one who is ready and willing to work for an appropriate wage is without a job. This also means zero involuntary part-time employment. Involuntary part time workers, counted in conventional measures of employment statistics as fully employed, are those who want to be working full-time but can only find part-time employment. There may be included in this definition some very small amount of frictional unemployment, but only *voluntary* frictional unemployment (some individuals may choose to forego employment in order to devote full time to job search). Thus we are concerned with true full employment of labor, where every person ready and willing to work full-time has full-time employment that pays a living wage.

### Why Full Employment?

It is clear that we can no longer assume full employment to be an explicit or implicit goal of governments, central banks, or international institutions. Nevertheless, the arguments for full employment, individually and taken together, continue to make for a compelling case for action. It may be worthwhile to briefly review some of the these arguments.

The first argument for full employment is that the economic and social costs of unemployment—direct and indirect—are staggering. Unemployment causes permanent losses in potential output of goods and services; losses of tax revenues; higher government spending in the form of various types of assistance; economic, social, psychological and other problems resulting in crime, ill health (physical and mental), divorce, suicide, etc.; deterioration of labor skills and productivity; and more. The argument that full employment is key to social stability may also be included here. Quite simply, a compelling argument can be made that the benefits of full employment outweigh the costs of its achievement, and that unemployment, rather than inflation, ought to be viewed as 'Public Enemy Number One' (see, e.g., Hughes and Perlman, 1984; Dawson, 1992; Moosa, 1997).

The second argument for full employment is based on the idea that, just as there are human, political, and civil rights that may be considered "inalienable," so too are there economic and social "rights," of which the right to employment is one of the most important (see Harvey, 1989). This view was expressed by Franklin Delano Roosevelt in his 1944 State of the Union Address, and may also be found in a number of UN documents, including the "Universal Declaration of Human Rights." Similar proclamations can be found in many other countries as well. If individuals are ready, willing, and able to work and have no employment opportunities, it is government's responsibility to guarantee employment. Therefore, even if it was argued or could be shown that the costs of eliminating unemployment were greater than the monetary benefits, government would still be responsible for guaranteeing employment.

The third argument is that the promotion and maintenance of full employment is required in many countries by law. In the U.S., this is due to legislation such as the Employment Act of 1946 and the Full Employment and Balanced Growth Act of 1978 (Humphrey-Hawkins bill). The former corresponds roughly to the 1944 British White Paper on Employment Policy. Similar legislation exists in many other industrialized nations as well. Thus, even if it was argued that the costs are prohibitive and that employment is not an "inalienable" right, it may be argued that under current law many governments are obligated to guarantee employment.

The fourth argument is that full employment is an ethical imperative in a capitalist economy. In a society in which unemployment is systemic, public inaction constitutes social assignment of workers and their families to poverty and/or other forms of assistance.

Therefore, even if the costs are prohibitive, employment is not considered an inalienable right, and current legislation is not interpreted as legally requiring government to do so, it would nevertheless be wrong for government not to take action to promote and maintain full employment.

Doubtless there are many other arguments, and these categories overlap and should be treated as provisional. Clearly, however, the arguments for full employment—both individually, and taken together—are compelling. The crucial point is that unemployment is endemic to capitalism. Of course, even if unemployment were not inherent in capitalism, the arguments for government policies to promote full employment would still be strong, but the existence of involuntary unemployment provides a strong justification for the priority of full employment initiatives.

### The Method Of Full Employment Analysis

There is a methodological issue that should be addressed, and that regards the place of "full employment" in economic models or economic theory. Here we can distinguish between: 1) full employment as assumption; 2) full employment as logical or theoretical tendency; and 3) full employment as postulated goal. Models that *assume* full employment are certainly of little value in analyzing unemployment, if they are of any value at all. To assume full employment is, as Keynes remarked, "to assume our difficulties away" (1936, p. 34).

Traditional Neoclassical theory puts forward a theory of how, under certain conditions, a market economy will tend to full employment of resources. The price mechanism—perfectly flexible wages, prices, and interest rates—constitutes the self-adjusting mechanism that endows the system with an inherent tendency to full employment of all resources. This is not, strictly speaking, *assuming* the state of full employment, though the conditions under which the self-adjusting mechanism smoothly operates are being assumed. The assumption that all markets are perfectly competitive includes even more than perfectly flexible prices. A trailer-load of assumptions are hauled in behind the cab of 'perfect competition': assumptions regarding the knowledge and response-time of economic agents, factor mobility, factor substitutability and divisibility, factor homogeneity, the number and size of firms, and so on. Nevertheless, there *is a theory*—however unrealistic—of how full employment is supposed to be established.

Faced with persistent unemployment, then, there are two possible responses: 1) the theory is wrong; or 2) there are market imperfections and rigidities that prevent the smooth workings of the self-adjusting mechanism. Which view is taken has serious implications for economic and public policy. If the theory is wrong, we can work on formulating alternative theories of employment determination. Such was the approach of Keynes (and the Post Keynesians), who demonstrated that even with flexible wages the economy has a tendency to a state of persistent unemployment due to insufficient aggregate demand. State intervention is thus necessary to promote full employment and economic growth.

If, as in mainstream economics, it is concluded that unemployment is due to "imperfections" then the policy implications are that the State should try to eliminate these rigidities—often attributed to government intervention such as regulation or minimum wage laws, or the existence of unions—and promote the conditions for the smooth workings of the price mechanism. Promoters of the neoclassical synthesis ('Bastard Keynesians') were successful for some time in balancing acceptance of neoclassical micro theory with a 'pragmatic' approach to public policy ('fine-tuning' with 'Keynesian' fiscal and monetary policy), but their policy stance did not follow from their underlying theoretical model, and they eventually lost their position of influence within the discipline to supply-siders, monetarists, and adherents of rational expectations and 'new classical' approaches.

Already it appears that we have slipped in the assumption that full employment is an economic goal. Mainstream methodology is not comfortable with such proclamations at the level of *analysis*, however, for it blurs the distinction between 'positive' and 'normative' economics. The third method of full employment analysis listed above, however, takes full employment as a postulated goal as the analytical point of departure. In such an "instrumental" approach (Lowe, 1965), the purpose of economic theory is to 'work backwards' from the stipulated

end-state (e.g., full employment, price stability, economic growth, more equitable distribution of income) to discover the suitable paths—including policies—by which the goal(s) may be achieved (Forstater, 1998). Such an approach is at once strange and familiar. Strange, because it is so at odds with the traditional approach of beginning with data and then employing the deductive method to explain or predict outcomes, whatever they might be. Familiar, because it has an intuitive, common-sense appeal to it that in fact that is how economic policy is or should be conducted.

This approach may be said to be characteristic of Lowe (see, e.g., 1976), but also the work of, among others, Pasinetti (1981, 1993). The works of these authors, while differing in some important ways, share a common focus on *structural and technological change*. This focus is different, though complementary (and related), to the Post-Keynesian focus on aggregate balance, i.e., the aggregate demand-constrained nature of capitalism. These two concerns—the effective demand concern and the structural dynamics concern—correspond to two different questions (or sets of questions) and two different theories of unemployment as the normal outcome of unfettered market activity. It is to these questions and theories to which we must briefly turn.

### Attaining And Maintaining Full Employment

The two analytically separable but related questions concerning unemployment may be posed as follows:

1) If there is unemployment in the economy, is there a self-adjusting mechanism inherent in the market system that will tend to push the economy back to the full employment level of output? If not, why not, and what policies follow from the analysis? If so, what is the nature of that mechanism?

2) Under what conditions can full employment and full capacity utilization be *maintained* in the face of ongoing structural and technological change, such as labor- or capital-displacing technical change, changes in labor supply, changes in the supply of natural resources, or changes in the composition of final demand? Are these conditions likely to be met by the market system? If not, what types of policies might be implemented that can satisfy the conditions?

As we have seen, and as is well-known, neoclassical theory answers 'yes' to the first question, and the mechanism that assures the tendency to full employment is the price mechanism, under the condition of perfectly flexible prices (including factor prices) and perfectly competitive markets. Keynes and the Post Keynesians answer 'no' to the same question, based on an alternative theory of the savings-investment relationship that refutes Say's Law, and the analysis of capitalism as a monetary production system. Thus, for Keynes, *involuntary unemployment is normal*, with full employment to be expected "only by accident or design" (1936: 28). 'Design' refers first and foremost to demand management policies conducted by the State.

As to the second set of questions concerning the maintenance of full employment, in the neoclassical view, the same features that provide the system with the tendency to full employment, also endow the system with an amazing degree of flexibility. Prices (including factor prices) are fully flexible, and prices correctly convey information that economic agents with full knowledge instantaneously respond to in pre-determined ways. Factors of production are perfectly mobile, perfectly divisible, perfectly substitutable, homogeneous. The principle of substitution likewise dominates the analysis of consumer behavior. There is no historical time, uncertainty, or money. Thus, not only is there an inherent tendency to full employment and full capacity utilization, but the system in such a state instantaneously and easily adjusts to changes in technology, labor supply, supply of natural resources, and the composition of final demand. The production system, even at full employment of all resources, is fully flexible. As Basu has remarked, "in standard neoclassical models, flexibility is unimportant because it is total" (1995, p. 64). At the same time, the primary source of rigidity in the standard view is government intervention (Chang, 1995; Marshall, 1995).

Analyses of structural dynamics that reject most or all of the neoclassical assumptions are based on a very different vision of the economic system that is more compatible with the Post Keynesian view, and is reflected in their conclusions. Key to these analyses is that economic processes take place in historical time. There are no instantaneous adjustments. Capital goods are highly specific and in no way necessarily shiftable between different

lines of production. Means of production are not highly divisible or substitutable, if at all. There is a significant amount of uncertainty regarding the future, and the past is unchangeable.

Modern economies are interindustry systems, with complex sectoral interdependencies such as are described in input-output analyses. Even analyses that are not as disaggregated as input-output models highlight the sectoral interdependence and interindustry linkages and their implications (see, e.g., the three sector models in Lowe, 1976). There are thus timelags, distortions, bottlenecks, and rigidities that reflect the physical and technical nature of the system.

There are two general approaches to the formal analysis of structural change, the 'vertically-integrated' approach and the 'horizontally-integrated' approach. The former is represented by Pasinetti (1981; 1993), the latter by Lowe (1976). Both of these approaches are non-neoclassical, despite the fact that they analyze systems operating at full employment and full capacity utilization. They do not assume full employment, or an inherent tendency to full employment. Rather, they take full employment as a stipulated goal and then analyze the conditions under which an economy operating at full employment and full capacity utilization might maintain that state in the face of ongoing structural and technological change.

We will not reproduce these analyses here; there is a sizable literature on each of these approaches, as well as a number of excellent surveys comparing and contrasting the strengths and weaknesses of vertical and horizontal approaches (see, e.g., the papers in Baranzini and Scazzieri, 1990; Halevi, 1994). For our purposes, what is important is that both approaches highlight how difficult it would be for a full employment/full capacity system to *maintain* itself, even if it could be *attained*.

A full employment policy must thus address both involuntary unemployment of the Keynesian variety, that is, unemployment due to the inherent demand constrained tendency of capitalist economies, and 'technological unemployment,' here used as something of a catch-all phrase for unemployment due to structural and technological change. Of course, these types of unemployment are related, as technological change can affect the level and not only the composition of aggregate demand. For example, labor-displacing technical change may result in income redistribution between sectors of the population with different saving propensities, which can set off—or exacerbate—an effective demand crisis. In addition, focus on technological and structural change highlights not only issues related to *unemployment*, but issues related to the operation of an economy *at full employment*, when aggregate balance is no longer an issue, but sectoral balance very much is. These issues—sectoral proportionalities and imbalances—are key to the bottlenecks and rigidities that are associated with higher employment and capacity utilization rates. System flexibility is fundamentally an issue of economic and technological structure. Until a full employment plan can demonstrate the possibility of a flexible and stable

full employment, the central banks, national governments, and supranational organizations of the world will continue to fulfill Kalecki's (1943) vision of politically-enforced unemployment and excess capacity.

### Real Life Flexibility: Unemployment And Excess Capacity

Standard neoclassical theory puts forward an idealized economy where methods of production and factor supplies instantly respond to demand that changes when relative factor prices change. Structural analysis highlights the impediments to rapid adjustment, the structural disequilibria, the disproportionalities, and the physical-technical consistency conditions for system viability (reproduction) that especially confront an economy brought to full employment by, e.g., Keynesian demand management. In neoclassical theory there is a trade-off between flexibility and reality; in structural analysis there is a trade-off between flexibility and full employment of resources. The only way to have both reality and flexibility seems to be with unemployment and excess capacity. Thus the primary 'real life' factor endowing the system with flexibility appears to be confirm the 'Central Bank' view. Capitalist systems gain flexibility by sacrificing full employment. Excess capacity and labor unemployment are reproduced in a different manner, however, and have different social and human costs.

Competition necessitates that firms be prepared to capture new sales should such opportunities arise. If there is an unexpected increase in demand firms that want to capture some of the potential sales must be able to increase

output without having to build new capital equipment that takes considerable time (Steindl, 1954). Thus firms plan reserve capacity. They build above and beyond the scale required to meet normal expected demand, so they can

meet peak and unexpected demand. This is planned excess capacity, in excess of the capacity associated with the normal operating level. Firms that are unable to respond to new opportunities for higher sales will lose out to firms that are prepared. Every firm, however, will not be successful in capturing the new sales, even if they all carry reserve capacity. This means that reserve capacity at the firm level translates into excess capacity at the industry and economy-wide levels (Nell, 1991).

Excess capacity adds to system flexibility. It enables bursts of capital accumulation to take place that otherwise would be foregone due to structural rigidities that result in production bottlenecks. Bottlenecks in key industries, such as the machine-tools industries, can cause economy-wide disruptions and prevent smooth expansion. Viscous system structure can result in sluggish growth and inflation. The system requires flexibility.

While individual firms can plan reserve capacity when making decisions concerning the scale of plant and equipment, they cannot (with some exceptions) maintain laborers on the payroll who will not be required when operating at normal capacity. But the ability to respond requires not only reserve capacity in terms of capital equipment, it also requires the ability to hire additional workers to add on production lines or work additional shifts. Capitalism has historically reproduced reserve pools of labor at the system-wide level rather than at the firm level.

Reserve pools of labor have historically served several purposes. Most of these fall under the categories of flexibility and stability. A reserve army of unemployed helps hold down wages by weakening the bargaining position of labor. The reserve army increases system flexibility by providing a pool of labor from which firms can draw during expansions. It has also been argued that the reserve army of unemployed serves to discipline workers (Kalecki, 1943; Shapiro and Stiglitz, 1984).

Different explanations have been offered concerning how the reserve army is reproduced at the system level. Marx and others root the reproduction of the reserve army in endogenous technical change. As accumulation takes place, the reserve army shrinks, pushing up wages and cutting into capitalists' profits. Competition forces firms to introduce labor-saving technologies, displacing workers and causing the reserve army to expand, taking the pressure off wages. The efficiency wage hypothesis posits wages above the equilibrium level resulting in neoclassical unemployment. Alternative views include the maintenance of unemployment by political means (Kalecki, 1943; Boddy and Crotty, 1975).

It is not clear what policies would ensure full capacity utilization. Given the desire for flexibility at the plant or firm level, the system would likely still reproduce some excess capacity even absent Central Bank enforcement policies (the system would not tend to full capacity utilization just because Central Banks suddenly stopped promoting slack). It is not even clear that, despite the potentially negative consequences, true full capacity utilization would be desirable.

Full employment of labor, however, is both possible and desirable. The problem has been how to maintain the system flexibility and stability that unemployment helps ensure, without the social and economic costs of unemployment. Minsky and Lowe each viewed the employer of last resort approach as a viable means of addressing some of the obstacles that full employment policies have traditionally faced, including the contradiction between full employment and flexibility.

### Minsky's "Employment Strategy"

For Minsky, full employment approaches based on 'subsidizing demand' are likely to result in inflation, financial crisis, and serious instability (1986, p. 308). He thus sought an alternative to reliance on schemes based on stimulating private sector demand:

The main instrument of such a policy is the creation of an infinitely elastic demand for labor at a floor or minimum wage that does not depend on long-or short-run profit expectations of business. Since only government can divorce the offering of employment from the profitability of hiring workers, the infinitely elastic demand for labor must be created by government. (1986, p. 308).

Minsky proposed dismantling "the massive transfer-payment apparatus" and removing barriers to labor force participation (1986, p. 309). Both of these goals require creating sources of income through increasing the supply of jobs. Minsky believed the model for such a plan existed in the New Deal's Civilian Conservation Corps (CCC), National Youth Administration (NYA), and Works Projects Administration (WPA). Unlike the New Deal programs, however, Minsky viewed his employment programs as not transitory, but permanent (1986, p. 310).

Minsky also believed that such a plan needed a means of constraining money wages and labor costs:

For income from work to be available to all, the demand for labor must be infinitely elastic over a wide range of labor types and geographical regions. At the same time, this infinitely elastic demand must not unduly decrease the supply of labor to other occupations and employers, creating upward pressure on wages. Furthermore, the employer, while willing to hire all who offer to work, is not committed to hiring any particular number of workers. This can be achieved only by government-funded employment at wage rates that do not place an upward pressure on private wages. (1986, p. 310)

Thus, with government acting as employer of last resort, "cyclical variations in employment will be replaced by variations in the proportion of workers on WPA" (Minsky, 1986, pp. 312-23). WPA wages will be lower than in private employment, so "the supply of labor to private employers will be infinitely elastic as long as WPA employment is positive" (1986, p. 313). When private sector demand for labor rises (falls), WPA employment will decrease (increase).

Thus, we have in Minsky's brief outline of his 'Employment Strategy' the basic operation of the Employer of Last Resort approach to full employment. Government announces that it will hire anyone ready and willing to work at an appropriate money wage rate that does not compete with the private sector. The level of the ELR wage is a matter of social policy: health care or other benefits may be included; implementation may be seen as an opportunity to increase the minimum wage (as Minsky pointed out, the effective minimum wage in an economy with involuntary unemployment is zero, so the ELR wage will become the effective minimum, wherever it is set). Such decisions will be based on a consideration of a number of political and economic factors. Of course, these decisions are not fixed forever, and the wage and benefits package of the ELR workforce may (and will) be adjusted over time.

It should also be stated at the outset that ELR must not be used to replace normal public sector employees. Nor will individuals unable to work be 'forced' into labor through being deprived of other government assistance. ELR, as it is being put forward here, is not draconian workfare, which is based on the idea that unemployment is due to 'laziness' or other 'deficiencies' on the part of the unemployed and the government must therefore enforce a 'work ethic.' Rather, ELR recognizes that unemployment is normal in capitalism, regardless of the traits of individual workers, and that it is therefore the responsibility of government to guarantee decent work at a living wage when the private sector is unable to provide such employment.

ELR also is conceived here as providing important public goods and services of which there is presently a shortage, as well as preserving and even enhancing the skills of ELR workers. As Minsky envisioned it:

These permanent programs will provide outputs—public services, environmental improvements, etc. that transfer-payment government does not yield, as well as the creation and improvement of human resources. In our urban centers, where there are concentrations of unemployed and welfare recipients, the improvement in public environment should be marked. WPA, CCC, and NYA will succeed precisely because they are job programs that perform useful tasks and yield visible benefits." (1986, p. 312)

## Lowe's Full Employment Proposal

Lowe also put forward a proposal for full employment based on government as employer of last resort. Interestingly, while Minsky's focus was on addressing unemployment due to insufficient aggregate demand, Lowe's emphasis was on structural and technological challenges to full employment. Thus Minsky and Lowe deal with the 'effective demand' concern and the 'structural change' concern, respectively.

Like Minsky, Lowe was very skeptical about the possibility of attaining or maintaining full employment through indirect means such as stimulating private sector demand, while seeing a number of clear advantages to public employment programs:

Unlike private investors, public investors are not hampered by uncertainties about future demand, because they themselves determine the purpose that investment and its final output is to serve, for instance, the items that make up the infrastructure. (1988, p. 107).

Lowe saw in public works a degree of variability and flexibility not possible in the private sector, where competitive pressures legislate methods of production, the composition of output, and the types of capital equipment and natural resources utilized, and where private decisions governed by narrow economic motives may not be consistent with what is best for society as a whole.

Lowe saw some of the major obstacles to full employment as being rooted in the technological conditions of production. Employing workers available as a result of labor-displacing technical change or increases in labor supply depends on the prior construction of real capital. But the public sector has the ability to vary the labor intensity of productive activity in ways that the private sector cannot. The public sector may choose to utilize a more labor intensive method of production that would be 'inefficient' for a private firm, but which is quite reasonable from the perspective of social well-being. The public sector may also vary ELR employment between different tasks, for the purpose of altering overall capital-labor ratios or easing the utilization of certain types of capital equipment or increasing the utilization of yet other types. The spectrum of choices open include activities which approach the level of "pure services in the fields of health, education, and general welfare" as well as activities that do not use or make more limited use of precious natural resources and that do not pollute (1988, p. 107).

Minsky and Lowe both highlight the benefits of the ELR approach, but while they do argue that where there is the political will there are ways to finance full employment, the proposals of Mosler and Wray go much further in developing this part of the argument. Mosler and Wray depart from the "deficit-dove" position and put forward an analysis that draws on general themes of Post Keynesian monetary theory, e.g. endogenous money, exogenous interest rates, central bank as lender of last resort, forging an approach perhaps best described by Lerner's (1943) term, 'functional finance.'

### Paying For Full Employment (1): Functional Finance

The confusions regarding national budget deficits and the debt are important and real. There are measurement problems, mistreatments (or non-treatments) of capital budgeting, fallacies concerning 'crowding out' and the relation of deficits and interest rates (and of deficits and inflation), unfounded views on the 'burden' on future generations, and more ( see, e.g., Heilbroner and Bernstein, 1989; Eisner, 1994; Cavanaugh, 1996). As Bator (1962) pointed out some time ago, while these are all issues on which points may be scored in a debate, concentration on these areas keeps the discussion at a level which actually concedes too much. For example, it may be true that due to measurement and accounting problems, the deficit (or debt) is 'not as big as it looks,' but this line of attack implicitly condones the 'sound money' view that smaller is inherently better.

Functional finance simply refers to an approach to public finance that sees the federal budget and the management of the national debt as *means* to economic prosperity. This notion needn't assume any particular *a priori* relation

between government expenditures and revenues or *a priori* most desirable absolute or relative size of the national debt:

The central idea is that government fiscal policy, its spending and taxing, its borrowing and repayment of loans, its issue of new money and its withdrawal of money, shall all be undertaken with an eye only to the *results* of these actions on the economy and not to any established traditional doctrine about what is sound and what is unsound. This principle of judging only by *effects* has been applied in many other fields of human activity, where it is known as the method of science opposed to scholasticism. The principle of judging fiscal measures by the way they work or function in the economy we may call *Functional Finance*...Government should adjust its rates of expenditure and taxation such that total spending in the economy is neither more nor less than that which is sufficient to purchase the full employment level of output at current prices. If this means there is a deficit, greater borrowing, "printing money", etc., then these things in themselves are neither good nor bad, they are simply the means to the desired ends of full employment and price stability.(Lerner, 1943, p. 354)

Thus, functional finance does not say anything about what the budget should be prior to economic analysis. If it is concluded that under particular circumstances, a balanced budget describes the best means to economic prosperity, then even a balanced budget is not inconsistent with a functional approach to public finance. 'Sound money' is therefore only inconsistent with functional finance if the balanced budget is seen as an end in itself, rather than as a means to an end. If a balanced budget--or surplus in order to decrease the national debt--is insisted upon, even if it may be shown to have negative economic consequences (or be impossible), then this is not functional finance (perhaps 'dysfunctional finance'). Likewise, functional finance does not stipulate that bigger deficits are 'better' or that deficits are 'good'; it is the effects with which we are concerned.

Such an approach has an immediate result which at first glance may appear shocking or surprising, but which it would do economists and policy makers well to consider: *neither taxing nor government 'borrowing' are funding operations*. Decisions concerning taxation are to be made only with regard to the economic effects in terms of the promotion of full employment, price stability, or other economic goals, and not ever because "the government needs to make money payments" (Lerner, 1943, p. 354). Likewise, "the government should borrow only if... the effects" of borrowing are desired, for example "if otherwise the rate of interest would be too low" (Lerner, 1943, p. 355).

### Paying For Full Employment (2): Money As A Creature Of The State

The ability of the government to conduct fiscal and monetary policy according to the principles of functional finance is greatly enhanced by the fact that, as the title of another, lesser known, Lerner article states, "money is a creature of the state" (Lerner, 1947):

The government--which is what the state means in practice--by virtue of its power to create or destroy money by fiat and its power to take money away from people by taxation, is in a position to keep the rate of spending of the economy at the level required to fill its two great responsibilities, the prevention of depression, and the maintenance of the value of money. (Lerner, 1947, p. 314)

In adopting this view Lerner followed Keynes in accepting the main thrust of Knapp's 'state theory of money.' (Keynes, 1930, p. 4, p. 6n1; Knapp, 1924). Of course, the basic starting point can be traced back at least as far as Adam Smith, who put forward the idea that "a requirement that certain taxes should be paid in particular paper money might give that paper a certain value even if it was irredeemable" (Cannan, 1904, p. 312). The state has the power not only to tax, but to designate what will suffice to retire tax obligations, that is, what it will accept at its pay offices. By determining public receivability, the state can create a demand for otherwise worthless pieces of paper, leading to general acceptability. The state can issue this currency, and use it to purchase goods and services from the private sector:

The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection, even of the most formal kind, with gold or backing of any kind. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing

constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in the payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept those pieces of paper because they know that taxpayers, etc., will accept them in turn. On the other hand if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability...What this means is that whatever may have been the history of gold, at the present time, in a normally well-working economy, money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state. (1947, p. 313)

Thus, a variety of state powers, such as government's ability to tax, declare public receivability, create and destroy money, buy and sell bonds, and administer the prices it pays for goods and services purchased from the private sector, constitute a menu of instruments with which full employment and stability of the value of the currency may be promoted.

Mosler and Wray incorporate these insights into a framework that draws on Post Keynesian monetary theory and a rigorous institutional analysis of the relation of the Treasury, the Central bank, and the banking system. The central bank does not control the money supply; it does however have significant ability to determine the short term interest rate. The central bank is the lender of last resort, a necessary function for the stability of the financial system. Open market operations, government spending and lending, borrowing and taxation, all affect reserves in the banking system. Excess reserves will cause short term rates to tend to zero, while insufficient reserves will send rates toward infinity. Thus bond sale are essentially a reserve drain used to maintain a positive overnight rate of interest (interbank lending rate). Government borrowing is not to fund untaxed spending. Government spending comes first; then the government borrows what it does not tax in order to drain reserves and maintain interest rates. The national debt is "the total number of dollars that have been drained from the banking system in order to maintain the fed funds rate [overnight rate]. A more appropriate name [for the national debt] would be the Interest Rate Maintenance Account (IRMA)" (Mosler, 1995, p. 14). Since money is a creature of the state, the Government does not need to tax or borrow to spend. Taxation is not to fund government spending, it is a means of creating a demand for fiat currency, while 'borrowing' is a reserve drain to support short term interest rates.

There is no problem 'financing' full employment. Unemployment is the result of a desired net savings greater than actual net savings on the part of the public. Government acting as employer of last resort simply 'closes the gap' between desired and actual savings. From the functional finance perspective, the goals are full employment and price stability, not any particular relation between government expenditure and tax revenues, or sales and purchases of government bonds. Obsession with budget balancing for its own sake makes no sense whatsoever, threatening the health of the economic system and blocking the way to full employment.

### Full Employment And Price Stability

It is well known that a major obstacle to full employment is that inflation may result. This inflation may be due to a number of (sometimes related) reasons. First, any further expansion--even of a particular sector--can only occur if either more resources become available, there is a technological advance, or if resources are bid away from some other use. In particular, in the case of labor, full employment means that any sector can expand only by attracting workers away from some other employment, presumably by offering a higher money wage. Another, somewhat related, cause of inflation at full employment would be due to the increased bargaining power that labor enjoys at full employment. With large pools of unemployed workers, labor has a relatively weak bargaining position in its negotiations with management. But as those pools shrink as unemployment declines, the bargaining position of labor is strengthened and that of management weakened, resulting in rising money wages.

The ELR plan helps create a stable full employment by retaining something of a 'reserve army', only one that is employed at an appropriate money wage. Thus ELR workers are available for employment in the private sector as accumulation takes place. Firms will have but to offer the going money wage, which will be slightly higher than the ELR wage, in order to attract workers to meet the growing demand for labor. By 'employing the reserve army', the stability of the system can be maintained without the high social and economic costs of unemployment.

We have seen that once the economy has been brought to full employment, the problem of accumulation then becomes confronting the bottlenecks and timelags of a system running at full steam. Here we must again distinguish between full employment of labor and full capacity utilization, i.e. full employment of all resources, especially capital (plant and equipment). The ELR plan means full employment of labor, but the ELR workers serve as a kind of 'buffer-stock' of employable workers for the private sector. Thus bottlenecks in production will not generally result from labor shortages, as ELR workers are bid away from their ELR jobs at market rates of money wages. However, as we have seen, while some degree of flexibility may be maintained, full utilization of the capital stock can create impediments and bottlenecks that make the system inflexible. In fact, however, there is no reason to believe that firms will discontinue their practice of planning reserve capacity, i.e., planning normal rates of capacity utilization of plant and equipment below full capacity. This strategy enables firms to take advantage of unexpected growth in demand by meeting some of that higher demand with increased production. Thus, abandoning policies that enforce unemployment will not result in elimination of reserve (and therefore excess) capacity. In addition, as Lowe pointed out, government has a flexibility in choosing between alternative methods of production or alternative productive activities not available to the private sector, and which can be used to avoid such bottlenecks or obstacles of real capital formation.

Other factors associated with the ELR plan may also prevent inflation at full employment and thus promote a stable full employment. First, ELR workers may be engaged in public works such as infrastructure revitalization that promote private sector productivity growth. Second, ELR workers may be employed in activities that help reduce expensive social and environmental costs, such as environmental protection. Third, the increase in expenditure on ELR workers will be at least partially offset by decreases in other forms of expenditure on the unemployed, or the effects of unemployment. Thus, expenditures on unemployment insurance and some other forms of general assistance should be expected to decline with the ELR program. There may also be expected to be savings in the form of decreased expenditures on the indirect costs of unemployment. These factors range from reductions in spending on crime prevention and prosecution, and criminal justice related to unemployment, reductions in medical bills, and savings on other social and economic costs if unemployment. Fourth, public works tend to be less inflationary than 'the dole' because the former increases both supply and demand, while the latter increases only demand.

Another factor promoting stabilization refers to the way in which the national currency is defined by the ELR plan. By setting the ELR wage, the government in effect defines the currency in terms of fairly homogeneous, low or semi-skilled labor. Of course, changes in the ELR wage will constitute a redefinition of the currency. Nevertheless, the ELR wage may serve as a regulating anchor to which the currency is tied. Because labor is a basic commodity, employed directly and indirectly into the production of every other commodity, the ELR program offers a mechanism for regulating the value of the currency and thus controlling the price level. In this sense, the ELR resembles commodity buffer-stock schemes associated with the names of (among others) Keynes and Kaldor. Only here it is labor that is being used as the commodity buffer stock to stabilize the currency.

It is also possible that other benefits of high full employment growth may ease pressures on prices. High levels of demand and economic growth associated with full employment have the potential to open the way for productivity increasing economies of scale and increasing returns, i.e., Kaldorian cumulative causation. High productivity growth can also contribute to keeping a lid on rising prices, but without resulting in unemployment.

The possibility of 'fine tuning' the ELR workforce gives the plan further flexibility. If the ELR workforce is deemed too large, government can cut taxes or reallocate government spending elsewhere; given private expenditure, the ELR workforce will shrink as private sector employment expands.

### Conclusions

Despite the huge social and economic costs of unemployment for both individuals and society at large, political forces appear intent on enforcing unemployment as a means of providing a flexible, low inflation atmosphere for continued capital accumulation. Government as employer of last resort policy provides an interesting policy approach that has the potential for eliminating unemployment without resulting in the bottlenecks and rigidities

normally associated with full employment, and which are related to the price pressures so feared by the Central Banks.

The ELR proposals made by Minsky and Lowe address the appropriateness of the approach for dealing with unemployment of the Keynesian and technological-structural varieties, respectively. Mosler and Wray have further developed the plan along Minskian lines, and have contributed important Lernerian insights with regard to functional finance and money as a creature of the state. Further investigation of the usefulness of structural analyses of the operation of economies at full employment may assist in assessing the impact of ELR and its potential for offsetting the negative effects of large-scale structural and technological change. Thus a framework may be possible that incorporates both technological and monetary factors, and concerns regarding both effective demand and structural change into the analysis, formulation, and implementation of full employment policies.

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