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# The Taxes-Drive-Money and Employer of Last Resort Approach to Government Policy

# The Taxes-Drive-Money and Employer of Last Resort Approach to Government Policy

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## Abstract

*This paper critically examines and seeks to stimulate debate on a new approach to government policy, which postulates that taxes drive the money supply and that the state should act as employer of last resort to ensure full employment. Taxes are said to drive the money supply and hence government spending derives from money; budget deficits are, therefore, generally needed to propel private investment and profitability. Since deficits should be the norm, this enables the state to finance a system of employing all who are willing to work at a basic-level-wage in the public sector doing social jobs. The findings of this study are that taxes do or should indeed drive money, but that money is better spent on public investment projects and skills associated with the leading sectors of the economy, rather than simply on consumption goods. Therefore, the employer of last resort policy, which is based largely on consumption spending, may be problematical. Hence, either a new approach to employment is needed or the last resort approach needs to expand its concerns to public investment and skills especially in the knowledge, infrastructure, information, social and communications areas.*

## Introduction

In recent years, a 'new' theory of economic policy has been established, one that promises to resolve the dual problems of inflation and unemployment. It is called the 'taxes-drive-money and employer of last resort' approach, and emanates from research being conducted at the Jeremy Levy Institute at Bard College, on the Hudson River in New York, by scholars such as L. Randall Wray, Warren Mosler, Mathew Forstater and Dimitri Papadimitriou.<sup>1</sup> A number of journal articles, discussion papers and conferences have been based on this new theory, as well as a book by Wray (1998) called *Understanding Modern Money: The Key to Full Employment and Price Stability*. It has stimulated a good deal of interest because it seems to provide a robust theoretical and practical basis for 'progressive' socioeconomic policies.

Like all 'new' theories, it is based on various academic scribblers from the past. Of special importance is the work of the Chartalists, such as Nicholas Barbon (1637-1698), George Berkeley (1685-1753), John Law (1671-1729) and James Steuart (1713-1780), who argued that money is a token established by legal convention backed up by the state (see Vickers 1959). Georg Knapp (1842-1926) continued the tradition of the Chartalists in *The State Theory of Money* (1924), where he argued that

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<sup>1</sup> Wray and Forstater (and others with similar interests) also reside at the University of Missouri at Kansas City, where they have a research center concentrating on full employment policies. Similar activities are ongoing, for instance, at the University of Newcastle, Australia.

citizens need government money to pay their taxes, and it is, therefore, taxes that form the basis of money creation for government spending purposes. This tradition, critical of the quantity theory of money, was continued in the work of J.M. Keynes, the French circuit school and the functional finance framework of Abba Lerner in *The Economics of Employment* (1951b)<sup>2</sup>.

The taxes-drive-money (TDM) and employer-of-last-resort (ELR) approach to government policy is a challenge to orthodoxy. TDM argues that *taxes* are not used to finance government spending, but are necessary for the state to create its own money, which then finances spending. Government *borrowing* is primarily used for interest rate manipulation and, similarly, is not crucial to finance spending. *Money* creation, therefore, is the basis of government spending. Budget deficits are thus normally essential for the provision of liquidity to the system. Deficits financed by money creation should thus be the norm since balanced budgets (and more so surpluses) will generally retard economic activity, especially if the population requires savings and the holding of money. ELR is based on TDM through the provision of the state to employ all those willing to work at the basic ELR wage on various social projects.

Such are the main tenets of this radical new policy proposal. Clearly, much work needs to be activated to investigate critically the validity of the approach. This paper is a first step in this direction. While the TDM and ELR theories are closely intermeshed in Wray's (1998) analysis, and while they complement each other, TDM can stand alone, while ELR seems to need something like the TDM to justify the 'budget deficit position'. For this reason we shall discuss them in separate sections for analytical purposes. Hence, the first part of the paper centres on TDM, the second on ELR, with further sections relating the approach to major impediments to long-term employment, investment and growth. A conclusion follows.

## **Taxes-Drive-Money**

Wray's taxes-drive-money policy is derived from the Chartalist approach to money. According to Chartal doctrine, money is seen as a 'creature of the state'. Governments can purchase any good or service by printing and exchanging notes and coin that citizens require to meet their taxation obligations. Since citizens are required to pay their tax obligations in state money, they also accept this money as payment for goods and services. Taxes are required not to finance government outlays, but to provide a demand for currency. The government obliges citizens to pay taxes in the form of state money, thereby assuring that there will be a demand for government legal tender. Chartalism is significant because it reverses standard economic analysis: fiscal policy is the primary determinant of the quantity of money issued, while monetary policy has to do mainly with open market operations and determining interest rates through bond sales.

Functional finance is important to the TDM approach because it contradicts the 'sound finance' doctrine. Sound finance stipulates that, regardless of economic conditions, the budget should be balanced in the long-run. In essence, government should not spend more than it collects in taxes. The maintenance of balanced budgets

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<sup>2</sup> Functional finance was originally proposed in Lerner (1943).

over the course of the business cycle is said to increase prosperity and remove excessive debt burden on future generations (O'Hara 2000). When governments borrow money to finance deficits, they tap private savings and compete for capital that could be used more productively in the private sector. Such 'crowding out' of private investment, it is argued, will reduce investment and cause higher interest rates and inflation. Sound finance will increase the national saving rate and lower interest costs, raising rates of investment and productivity. The simple government accounting identity in orthodox theory may be represented as follows:

$$G_t + Tr_t + iB_t = T_t + \Delta B_t + M_t \quad (1)$$

Where the left hand side includes outlays:  $G$  is total government spending on goods and services (including capital and current components),  $Tr$  are transfer payments for unemployment benefits, pensions, and so forth; and  $iB$  is government interest payments on bonds. The left hand side is financed, it is argued, through taxation,  $T$ ; the issue of government debt (eg, bonds),  $\Delta B$ ; and the printing of money,  $M$  (see Parkin and Bade 1990, p. 526). In orthodox theory, governments should generally finance their outlays via the raising of taxes (balanced or surplus budget) or by selling government bonds (budget deficit). The printing of money is often seen to cause inflationary pressures (when expanded too much), thus supporting one of the oldest orthodox beliefs, the quantity theory of money, which stipulates causality running from money to prices.

In contrast to this orthodox view, the central idea of functional finance and TDM is that fiscal policy, in all its different aspects - taxing, spending, transfers, borrowing, printing money, etc. - should be undertaken not for financing government budgets but to achieve specific economic objectives, such as full employment. Should total spending be lower than the full employment level, the economy will experience 'unnecessary unemployment'. If an increase in spending does not increase inflation significantly then the economy has obviously not reached full employment.

Adopting the Chartalist approach to money, Wray recommends a fundamental change in the way economists view monetary and fiscal policy. TDM implies that, rather than striving for a balanced budget, deficits should be accepted as the 'norm'. In addition, rather than trying to use monetary policy to achieve stable prices, it is used to determine the short-term interest rate via the central bank, with fiscal policy being used to stabilise the currency. Therefore, governments do not need taxes or bond sales to finance government spending. Governments need only to print the 'symbol' that the public needs to pay their taxes. TDM stands conventional analysis on its head: 'fiscal policy has more to do with the quantity of money issued by the government, while monetary policy has to do with ... [the] determination of short-term interest rates' (Wray 1998, p. 34).

In a Chartal program, government taxes are solely required to provide the demand for fiat money. Fiat money is 'outside money' that is sanctioned through legal authority, where the value of the currency is determined by government decree rather than by the market value of the 'substance' embodied in the currency. In most parts of the world now, money is fiat money, mostly paper money and credit (and coin). Given that government outlays are the only means for households to obtain this money, government must spend in order to inject the required cash reserves used to meet

taxation obligations. Governments will need to inject more than the taxation liability of its citizens because a convention exists for households to save or hold a portion of their income. Therefore, there should be enough fiat money to cover desired savings holdings as well as taxation liabilities. This naturally requires a budget deficit. Anything less than a deficit as the norm will only drain the economy of its net holding of fiat money. A continual balancing of the budget will reduce savings because households will only have enough state money to meet their tax obligations. Consistent budget surpluses, according to Wray (1998, p. 79), will drain the economy of fiat money because households will be forced to dip into their hoards of fiat money in order to meet their tax liabilities. Eventually, households will run out of fiat money and will be unable to pay taxes.

According to the TDM, the simple government accounting identity is as follows (see Mehrling 2000, p. 398 for a version of this):

$$G_t + Tr_t + iB_t = M_t = T_t + \Delta B_t + \Delta H_t \quad (1a)$$

This identity differs from the orthodox view, shown in equation (1), above, insofar as money supply equals those items on the 'expenditure' (left) side of the identity, since it is used to finance government outlays; and the 'budget deficit' depends also upon changes in the stock of hoards ( $\Delta H$ ). Hoarding will necessitate at least an equivalent increase in government spending or transfers in order to provide liquidity to the system (if we ignore interest paid on borrowings). The right hand side of the identity is not 'government receipts' (in *function*), however, since taxes are supposedly not used to finance government spending; bonds are used to influence interest rates as monetary policy, and hoarding is (mostly) a practice of consumers and businesses.

The main methods by which 'state money' is injected through the economy are via government spending on goods and services and transfer payments. Once the government spends and injects its own state money into the economy it is then available to be paid back to the government in the form of taxes. Wray admits that in a modern capitalist economy:

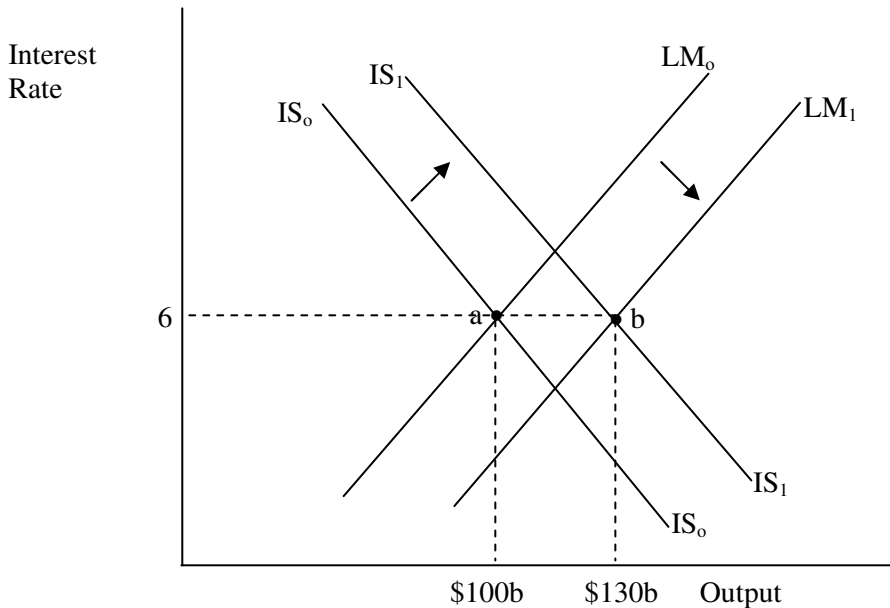
it may appear more complex than this because most taxes are paid using cheques drawn on bank deposits, rather than currency. However, these amounts do the same thing since every payment of taxes generates a reserve drain, or, loss of reserves. Thus taxes cannot be paid until actual coins or notes are injected into the economy, or bank reserves have been created. Government spending will generate coins, notes or bank reserves that are needed to 'pay taxes'. (Wray 1998, p. 80)

Taxes are thus required to generate a demand for fiat money and are not required to finance government spending (Wray 1998, p. 75). Bond sales are required only to drain excess reserves in order to achieve central bank interest rate targets. Thus, government outlays are not financed by bond sales and taxes, but by the printing of fiat money. Budget deficits thus do not normally (on balance) crowd out investment or cause inflationary pressures because government outlays represent an expansion of both the goods and money markets.<sup>3</sup>

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<sup>3</sup> Wray (1998, p. 81) argues that, although the government provides fiat money via the sale and purchases of government securities, 'this is small relative to government spending and taxing and is taken as a defensive action to add/drain reserves on a short-term basis'.

Wray probably would have some valid objections to the conventional IS-LM apparatus. The traditional IS-LM curves usually assume that the goods market curve (IS) is largely independent of the money market curve (LM) (unless money is used to finance the government deficit). In the example shown below - consistent with the TDM analysis - interdependency between the goods and money markets is the prime characteristic of the government outlays created through money. This *dual influence of government spending* on interest rates and output is shown below:



**Figure 1: Dual Influence of Government Outlays**

Starting at an initial position of 'a', with interest rates at 6% and output at \$100b, an increase in government outlays represents a movement of the goods market (IS curve) from  $IS_0$  to  $IS_1$ , increasing interest rates and output; as well as an expansion of the money market (LM curve) from  $LM_0$  to  $LM_1$ , reducing interest rates and expanding output. The net result being, in this simple example, no net change in interest rates and an expansion of output to \$130b. Government outlays, generally, do not crowd-out private spending because such outlays impact on both the goods and money markets simultaneously with little or no net impact on interest rates. This is a critical result of the analysis.<sup>4</sup>

Wray concludes that the government would have to provide more state money than is required to pay taxes because of a tendency for households and banks to 'hoard' money. Thus:

Household hoards of currency are ... a function of *uncertainty* over the safety of banks, illegal activities, convenience and other idiosyncratic factors. In turn, bank holding of fiat money is a function of required reserve ratios, which are effectively 'minimum balance' requirements.<sup>5</sup> (Wray 1998, p. 81; emphasis added)

The government is obliged to run a budget deficit in order to provide the state money to meet all tax obligations as well as meeting the hoarding needs of households and banks. Persistent government surpluses only reduce the amount of fiat money available in the economy. Firms may resort to barter, but since businesses themselves have liabilities to the government, they would be less likely to accept any other commodity than fiat money in exchange for goods and services.<sup>6</sup>

For Wray, unemployment is a result of an imbalance between actual savings and desired savings. If desired savings exceed actual savings then aggregate demand will be lower than that which achieves full employment. Desired savings will not equal actual savings when the government has kept the supply of fiat money too low (Wray 1998, p. 84). By increasing government spending, the government can equalize desired and actual savings, thereby achieving full employment. On the other hand, if actual savings are smaller than desired savings, then aggregate demand is in excess of that required for full employment, potentially causing inflation. The government can sell bonds or increase taxes to inhibit the supply of funds in the market. This should lower inflation to the point that desired savings is once again equal to actual savings. Hence, budget surpluses may be required from time to time; although only temporarily.<sup>7</sup>

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<sup>4</sup> The IS-LM apparatus could be criticised for utilising equilibrium analysis; for separating the goods and money sectors; and for failing to examine long-term expectations (especially for investment). Figure 1 may illustrate the problems with the IS-LM apparatus in the face of interdependency of markets: perhaps circular and cumulative models would be better suited to the analysis.

<sup>5</sup> Of course, banks hold fiat money to cover their own daily requirements in order to meet the withdrawal needs of their customers.

<sup>6</sup> The only sector that would be willing to accept other forms of payment would probably be the black market. This, of course, would be limited because even criminals need to purchase goods and services that are paid in state money.

<sup>7</sup> An effective means to moderate inflation in the TDM-ELR policy proposal may be to reduce the ELR basic wage, which would influence other prices in the economy. And the basic wage could be increased during recessions. However, Wray (2000) disagrees when he says: 'the base wage would be kept constant to the extent that it is politically feasible. Of course, if the CPI drifts up over time there will be pressure to adjust it upwards now and then - just as the minimum wage is currently adjusted periodically.'

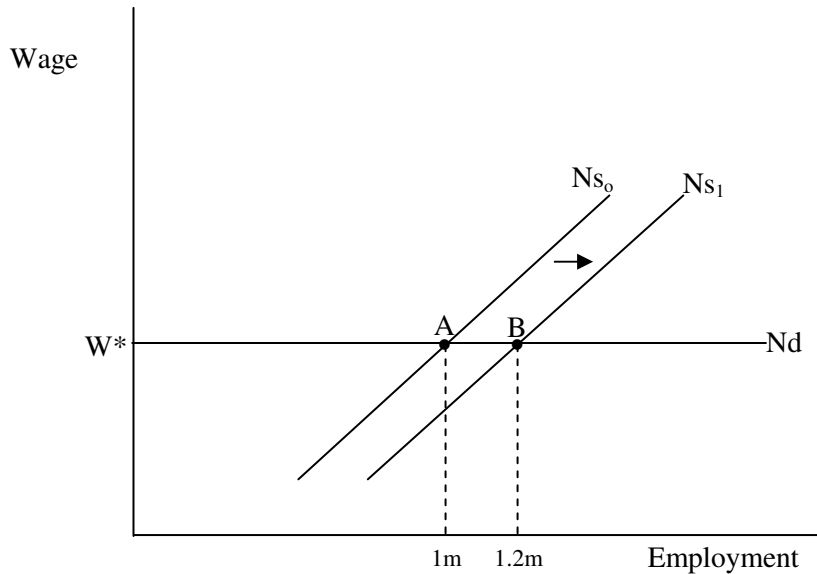


## **Employer of Last Resort**

Adopting the Chartalist approach to money, and influenced by Lerner's functional finance approach to government spending, Wray proposes the employer of last resort policy to achieve full employment without inflation and economic instability. He proposes that the government act as an employer of last resort, offering to hire all who are ready, willing and able to work at a fixed minimum wage. Other prominent post-Keynesian economists to advocate similar proposals include Minsky (1986), Mosler (1997), Mitchell (1998) and Forstater (1999, 1997).

Wray (1997a, p. 3) refers to this employment as the basic public sector employment program (BPSE). The government could guarantee a zero unemployment rate because only those who were not willing or able to work would be left without employment. His ELR policy advocates the creation of an infinitely elastic demand for labour at a minimum wage that is set by government and is separate from the spending and investment decisions of the private sector. Wray's ELR policy is said to help stabilise economic fluctuations by ensuring that the unemployment rate is always kept at zero. The ELR program can act as a 'powerful built-in stabiliser' that would assist the economy during all phases of the business cycle. Wray believes that the minimum wage could act as a price anchor that would provide stability for all prices in the economy.

This buffer stock portion of the labour market can be shown below:



**Figure 2: The Buffer Stock Segment of the Labour Market**

The government, as employer of last resort, can set the minimum wage rate ( $W^*$ ) so as to employ anyone ready, willing and able to work.<sup>8</sup> The ‘buffer stock supply of labour’,  $N_s$ , could be used in the public and private non-public sectors, providing many services that are currently not being provided. Anyone who is not ready, willing and able to work would not take up the scheme and would, therefore, not be considered unemployed. As the stock of those who enter the buffer stock expands over time from  $N_{s_0}$  to  $N_{s_1}$  (from, say, 1.0 to 1.2 million people, as shown above), demand for labour expands endogenously (from A to B) so that full employment prevails. Wray (1997b) believes the ELR can stimulate enough demand to ensure that deficit spending is at the required level to equate desired net savings with actual net savings. Social spending on unemployment benefits *per se* can be either eliminated or drastically reduced. In addition, social welfare could increase from the money paid out to those who otherwise would be unemployed<sup>9</sup>.

Wray (1998, p. 127) suggests that the unemployed ‘might be placed into a full time BPSE job to obtain on-the-job training; or the individual might be enrolled in a part-time or full-time educational program.’ With ELR in place, Wray believes that ‘labour is paid for working, which can lead to the production of publicly supplied goods and services, ... promote efficiency of the private sector, and ... increase the education and skills of the ELR worker’. The critical point is that *ELR will be funded through TDM*. Because the government can print and spend legal tender that the public is willing to exchange for goods and services, government spending can never be restrained. The government is in a position to hire all unemployed workers at any price it chooses, financing this labour force by printing as much money as required that will achieve full employment.

<sup>8</sup> Papadimitriou (1998) indicates that the government could purchase all available unemployed labour at a minimum wage and provide the labour to the private sector at a higher wage.

<sup>9</sup> Proponents of ELR admit that there may be a one-time increase in the price level with the introduction of the buffer stock system. Employers who are currently paying a wage level below that what is exogenously set under the ELR program would have to compensate for higher wages with a combination of higher product prices, higher productivity, or lower realised profits. The important point is that any increase in the price level is a one-off phenomenon and not regarded as accelerating.

Thus, the normal course for the government is to run a deficit and fiscal policy determines money supply through the printing of money. The ELR program can act as a 'powerful built-in stabiliser' that would assist the economy during all phases of the business cycle. Wray's ELR policy would help stabilise economic fluctuations by ensuring that the unemployment rate is always kept at zero. The minimum wage could act as a price anchor that would provide stability for all prices in the economy.<sup>10</sup>

## Unemployment

This section investigates whether Wray's TDM and ELR policies can solve the unemployment problem in the long-term. In Wray's TDM and ELR approach, full employment is the abolition of structural and cyclical unemployment. Only those who wish to be unemployed are out of work. However, in Lerner's functional finance approach to government spending, full employment is the abolition of all unemployment up to frictional unemployment. In Lerner's model, frictional unemployment consists of what is now known as 'frictional unemployment' and structural unemployment. Functional finance, according to Lerner (1951a, p.192), is ineffective in solving what is commonly referred today as structural and frictional unemployment.

Whereas Lerner believes that functional finance can solve all unemployment up to frictional unemployment (including structural unemployment), Wray proposes to solve all unemployment except for that which is left because people are not willing, able or ready to work. The difference between the two interpretations of full employment is important because Wray bases his ELR policy on Lerner's functional finance approach. The rapid pace of structural change in many national economies has produced a considerable rate of structural unemployment (see Mocan 1999, Manacorda and Petrongolo 1999) and it is necessary to analyze the merits of the ELR approach in solving the structural limits to suitable employment.

Abba Lerner considers the difference between structural and cyclical unemployment to be paramount when discussing the relevance of functional finance. In a normal economy, when government spending increases aggregate demand sufficiently to reduce the rate of unemployment, actual job vacancies are created (1951b, p. 26). Lerner differentiates between an economy reaching 'low-full employment' and 'high-full employment'. Increased spending can continue to increase the number of vacancies and reduce the number of unemployment up until the level of low-full employment. Thereafter structural rigidities in the labour market results with the stock of unemployed labour being unable to fill new vacancies. This may be a result of a lack of skill, experience or education and generally resemble structural unemployment. Employers, who can not fill vacancies with the stock of unemployed labour, turn to already existing employed labour to fill their employment positions. In order to attract already employed workers, employers must offer higher incentives to employees to leave current employment. Higher wages and associated incentives must

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<sup>10</sup> Wray proposes that the ELR wage be paid at a 'minimum wage level' (Wray 1998, p. 128). Seccareccia (1999) is concerned that a 'low-wage ELR variant' may emerge (perhaps being similar to the 'work-for-the-dole' scheme introduced in Australia in the late 1990s). Such a scheme may stigmatize the unemployed, blame them for their unemployment, and inadequately remunerate them for their efforts. Wray is also concerned to prevent this from happening.

be financed by price increases. The remaining unemployed labour stays unemployed because they are structurally incapable of participating in the labour market. The end result is an economy approaching low-full employment while experiencing rising inflation and a stagnant structural unemployment rate<sup>11</sup>. High-full employment can only be reached if the stock of unemployed labour has the necessary skill, experience and education to participate in the labour market. Invariably, labour markets have become more specialised and the number of blue-collar vacancies has declined. The consequence of specialisation and technological improvements is a barrier between low-full employment and high-full employment. The level of structural unemployment prevents the economy from achieving high-full employment because the economy does not have the semi-skilled and low-skilled vacancies for the unemployed. In turn, the unemployed do not have the skills, education or experience to participate in the labour market.

Lerner (1951b, p. 20) recognises this by stating that once an economy nears low-full employment, increasing demand for labour needs to be more specific with respect to skill and experience<sup>12</sup>. *He admits that functional finance is not useful in resolving structural unemployment*<sup>13</sup>. A study by Mocan (1999) decomposes unemployment into its cyclical and structural components and investigates the influence on income distribution. The study concluded that, whereas cyclical unemployment has a minimal impact on income distribution, structural unemployment has a significant impact and economic growth does not automatically reduce structural unemployment. Thus, 'a sustained growth in real GNP is not necessarily associated with the well being of the poor, because a sustained GNP growth may coexist with an increase in the structural unemployment rate' (Mocan 1999, p. 132).<sup>14</sup>

Hoque & Inder (1991) found that aggregate policies designed to reduce unemployment would only be effective if it is known that the cause of such unemployment is a lack of demand. They blame mismatches in the labour market caused by structural inefficiencies for the upward trend in structural unemployment. What is said to be needed is 'disaggregated policy to be targeted to the weaker segments of the labour force with a design to match people with already existing jobs by special training programs or a relocation program' (Hoque and Inder 1991, p. 729).<sup>15</sup>

## ELR, TDM and Public Investment

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<sup>11</sup> Sherman and Kolk (1996), however, argue that, in general, during the upswing of the short business cycle, the wage share of national income declines during the mid to high phases of upswing, and that real wages tend to rise (in line with the reserve army theory) near to the upper turning point in the cycle. Thus the lower wage share generates underconsumption and is more important than the high wages aspect of the reserve army theory that relates to higher costs of production. This is, thus, a different scenario than the one discussed here in the text.

<sup>12</sup> It becomes difficult to match jobs with the 'unemployed' (including the ELR workers) and many jobs may go unfilled. Employees may prefer those not in the ELR program and this may enhance inflationary pressures.

<sup>13</sup> This point is reinforced by Forstater (1999, p. 7) who states that 'functional finance, as formulated and by itself, is not capable of attaining and maintaining zero involuntary unemployment'.

<sup>14</sup> Mocan (1999, p. 133) does not discredit the Keynesian effort entirely. Accordingly, 'demand management policies can also be considered to reduce long-run unemployment, especially given the evidence indicating that the unemployment rate depends on its own past, and thus a reduction in current unemployment may help to generate a reduction in long term unemployment'.

<sup>15</sup> Of significant importance, according to Hoque & Inder (1991, p. 729), is the early transition from school to work. This is central in learning 'job search techniques, effective work habits, self-respect, confidence and a reasonable career expectation'.

Wray's ELR policy, contrary to these results, concentrates almost exclusively on the demand side of the economy; and underplays somewhat the role played by structural unemployment. Under the ELR, full employment is achieved by employing anyone who is ready, willing and able to work in the buffer stock. TDM is the avenue by which ELR is funded. Functional finance, for Wray, achieves full employment since the BPSE program employs all excess labour at a minimum wage and pays for it by printing as much money as required to achieve full employment. The private sector benefits from an economy that remains at full employment. This is not to say there will never be downturns in the business cycle, but that such downswings can be minimised by a full employment policy that makes significant inroads into minimising unemployment.

As currently formulated, Wray's ELR may well achieve 'full employment' by soaking up excess labour, but it does not sufficiently address the structural problems of the economy. It also does not directly get people from an ELR program to the private sector. To adequately address these problems, the ELR program would have to ensure that these people are trained and gain experience in order to move from the 'otherwise structural unemployed' sections of the BPSE to the 'otherwise cyclical unemployed' buffer stock and eventually to the private sector.

Wray (1997a, p. 3) does make some suggestion that people could be re-trained whilst in the ELR program and they could also gain considerable skills and experience that would make them attractive to the private sector. Unfortunately only briefly does he discuss these problems; the notion of tackling the structural impediments to labor moving from the BPSE to the private sector is *largely* ignored. Neither does Wray explore the potential (indirect) circular and cumulative influences of demand on investment, innovation and productivity through Kaldor-type arguments about Verdoorn's Law, innovation and the balance of payments constraint (see O'Hara 1999) which might offer a solution to the problem.<sup>16</sup> A new variant of circular and cumulative causation could be formulated which includes the skills of a modern economy associated with knowledge, information, communications and network-formation.

The question arises as to what ELR workers would do and who would employ them. Wray (1998, pp. 142-3) lists a range of jobs that ELR workers could perform, such as acting as companions to the elderly, classroom assistants, playground monitors, community cleaners, housing restoration workers, day care assistants, library assistants, environmental safety monitors, artists or musicians, and recorders of community histories. In Wray's BPSE program, 'the federal government would simply provide as much funding as necessary to let every state and local government hire as many new employees as they desired' and 'a similar offer could be made to qualifying non-governmental non-profit organizations, such as ... the Student Community Service Program, ... school districts, and Meals on Wheels' (Wray 1998, p. 141).<sup>17</sup> He is emphatic that these BPSE jobs should not compete with those already

<sup>16</sup> Perhaps the reason Wray does not introduce these Kaldorian notions is that he is interested in the creation of social *service* skills, rather than simply jobs for the manufacturing sector. (See below for a discussion of this.) Nevertheless, a circular and cumulative causation framework could be developed for jobs that link to greater skills, knowledge, communication and adaptability in general, including economies of scope or scale (including but going beyond the manufacturing sector to include many services, especially the leading-edge ones).

<sup>17</sup> Despite this specific statement that BPSE would be provided by governments and non-profit organizations, in private correspondence Wray (2000) is emphatic that: 'you attribute to me the idea that the ELR workers will be employed by the

employed; hence the jobs provided are different from those in the normal labour market.

These jobs may well bring a net positive benefit to society, but their usefulness in the private sector may be limited. An ELR worker may well be gaining experience in a job that can never translate into private sector activity. In addition, many jobs that are proposed, such as aged care workers or childcare assistants, may require more training than is appreciated. Proposing that BPSE labor can quickly be trained to carry out these roles ignores the specific skills needed to properly undertake these activities. More importantly, it does not directly address the informational, knowledge, communications and network foundations of the leading sectors of the economy whose skills need to take centre stage in any effective buffer stock program.<sup>18</sup> The cost to society of unemployment is enormous. Wray's proposal is intended to eliminate many of these costs. It may well help a lot of people in the short-term. What is of concern is whether his proposal is the best way to solve the unemployment problem in the long-term. Functional finance requires a solid knowledge, information, communication and perhaps industrial base in order to work.

Wray believes that the TDM and ELR policies are in the spirit of Hyman Minsky's post Keynesian analysis of the dominant institutions of capitalism. But Minsky argues that large importing nations, such as Australia, have less to gain from government deficits than do other nations. The potential benefits of budget deficits (caused by spending) are reduced by a relatively large propensity to import that leads to leakages of profitability, investment and employment (see Minsky 1986, p. 150). Under these conditions a nation needs a much larger stimulus of investment and government spending to sustain full employment. In Minsky's analysis, investment plays a much larger role in the unstable dynamics of capitalism than government consumption expenditure (Minsky 1983, p. 13). He was concerned with the lack of government involvement in investment and research and development. Apart from defense production, governments have recently been largely concerned with maintaining consumption through transfer payments and social spending. A government that is not involved in a significant way in investment, R&D, information and communication sectors - either directly or through relevant training schemes for the unemployed - could thus not adequately solve the employment problems of the day.<sup>19</sup>

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... government. No. ... Mine would be employed mostly by private non-profit organizations.' If the latter, the costs would be reduced somewhat; but Wray needs to be more specific about the relative balance of jobs provided by the public and private sectors, and the relative costs involved.

<sup>18</sup> Wray (1997a, p. 4; 1998, ch. 6) also underplays the administrative and logistical anomalies as well as the true cost to the public sector of running an ELR program. He estimates the net cost of the BPSE program in the US as around \$25-50b net. The estimates fail to include the other costs involved in supervising, training and organising the workers. If the public sector is to act as an employer of last resort it would need not only additional supervisors, trainers and administrators, but a considerably greater number of other logistical support facilities such as buildings and equipment necessary to carry out the various activities. In addition, workers would need to be covered for workers compensation, superannuation and other legal requirements. At the national level, this would constitute the establishment of a mega-public service devoted entirely to implementing, administering and supervising the program. While this may not in principle be a problem because of TDM, it does nevertheless need to be carefully scrutinised. Even if the BPSE system allocates workers not only to the public sector but also to the non-government not-for-profit sector (Wray 1998, p. 141), the present costs are under-specified, and (more importantly) the scheme itself needs to be examined in greater detail than Wray (1998) does. In one place (Wray 2000) even suggests that all the workers would be employed in the non-government not-for-profit sector.

<sup>19</sup> Kalecki (1971) expressed concern over the extent to which the government could expand public investment to achieve full employment. There are 'political constraints' that prevent the government from replacing the private sector in the investment process. He believed that the private sector would oppose any significant involvement of the government in profitable ventures.

The idea of creating full employment from increasing consumption may solve the problem of unemployment in the short run, but not necessarily in the long-run. Employing resources productively and in line with economic evolution is a better road to full employment. Employing resources unproductively and against normal economic evolution, may make the adjustment to new markets and production line more difficult to achieve. Wray, unfortunately, pays little attention to using these resources 'productively'. Policy makers need to ensure that public employment programs contribute to new innovations and skills in the economy. Public employment programs need to complement the private sector, not be separate from it. The best way to complement the private sector is to ensure that the skills and experience being offered in public employment programs are useful to a modern economy. These skills are not only of an industrial nature, but more specifically are linked with the informational, knowledge, and communications concerns of the fastest growing sectors. Mathew Forstater (1999), a close colleague of Wray's, advances the policy debate by exploring the possibility of full employment in 'the face of ongoing structural and technological change', and utilises Adolf Lowe's instrumentalist method in the process. However, despite the attempt to use demand measures to rectify the skill and structural limits of contemporary capitalism, the emphasis is on labour-intensive BPSE programs (Forstater 1998). How far can this policy resolve the long-term employment needs of a capitalist-market economy? To explore this question we examine the comparable benefits of different forms of government outlays and projects.

Aschauer's (1989) work accords with a policy perspective where certain forms of demand complement and are interdependent with supply conditions. A critical question is the form that government spending takes. He separates government spending into current and capital components. The current component is the proportion of government spending used to pay recurrent expenses on goods and services. The capital component of government spending, on the other hand, includes the accumulation of capital assets such as roads, highways, buildings, energy, and communications facilities. Capital expenditure can provide a benefit to society, not only in the period that the expenditure is spent but also for many years thereafter. Aschauer argues that the decline in government capital expenditure over recent decades is responsible for a large part of the long-term unemployment. Instead of being a substitute, public sector investment compliments private sector investment; on balance, there is no significant degree of 'crowding-out'.<sup>20</sup>

Aschauer believes that when government spending increases two opposing forces operate simultaneously. Higher government investment spending raises the total level of investment above the level chosen by rational agents, which may increase interest rates on an *ex ante* basis. This has the effect of crowding-out private sector investment. However, at the same time, an increase in public sector infrastructure spending raises private sector profitability, thus crowding-in private sector investment. He demonstrates that the latter force is dominant, with the net effect being that a rise in public sector investment raises private sector investment<sup>21</sup>. Aschauer

<sup>20</sup> Aschauer (1990) attempts to develop and implement a simple neoclassical model of fiscal policy. He uses annual data for the period 1949-1985 to test the hypothesis that government non-military investment is more expansionary than government military or consumption spending. He finds that output multipliers for government non-military investment significantly exceed unity while the multipliers for government consumption and military investment lie below unity.

<sup>21</sup> Similar results are found in Kearney, Chowdhury and Fallick (1994) who investigate the interrelationship between public and private investment in Australia. The study finds that the fall in public sector investment in Australia over the past two and

(1997b) demonstrates that public investment is a key determinant of growth in GDP and employment. Thus:

it is important to understand the dynamic interrelationship between productivity, output, and employment as the economy evolves over time as it is to know the effect of public capital on the initial growth rates of these variables ... [T]here is little substantive role for government consumption spending in the determination of output and employment growth. (Aschauer 1997b, pp. 1,15)

With respect to the influence of public sector investment on economic growth, Aschauer (1997a, p. 3) lists three considerations. The first is whether any increase in economic growth from an increase in public sector investment is permanent or transitory. Second, any positive influence of an increase in public sector investment on economic growth will depend on the relative marginal productivity of private versus public capital. More importantly, the third consideration on the influence of public investment will depend on *how the increased spending is financed*.

Aschauer (1998, 1999) investigates the effects of different means of financing government spending on economic growth. He uses two different types of government spending: current and capital expenditure. He also uses two different financing methods: taxation and money. With respect to the influence of economic growth, a higher rate of public investment financed by *money creation* is shown to have a greater influence on economic growth than a higher rate of public investment financed by an increase in taxes. Thus current expenditure is best financed via taxation whereas capital expenditure is best *financed via money creation*; and it is the latter which will have a decisive influence on growth and employment. This seems to support public investment based on the TDM approach.

The best approach to tackling Australia's high unemployment rate is to centre on the impediments to the private sector soaking up the buffer stock of excess labour. It appears in Australia's case there are two main factors resulting in sustained unemployment. The first is that a critical portion of unemployment is structural. And the second is that Australian public and private sector investment has declined substantially over the past two decades.<sup>22</sup> Public and private investment budgets have suffered greatly under economic rationalisation and moves to achieve government surpluses. Australian businesses have been slow to exploit the opportunities that neoliberal policies supposedly create. The lack of direction emanating from the public sector is especially problematical. Halevi and Kriesler (1995) see a continual lack of adequate investment policies from consecutive federal governments as the main reason for Australia's historically high unemployment rate.<sup>23</sup>

The major problem facing the Australian economy is to continually expand and enhance the stock of its industrial, infrastructural, informational, communications, social and knowledge capitals.<sup>24</sup> Thus, while Wray's taxes-drive-money approach

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half decades actually reduced private sector investment. Contrary to crowding-out private sector investment, public sector investment actually crowded-in private sector investment by a ratio of one to one. Therefore, a one percent increase in public sector investments crowds-in private sector investment by an equivalent one percent.

<sup>22</sup> See Argyrous (1998, 1999).

<sup>23</sup> This view has been most recently supported by Argyrous (1999), who states that fiscal consolidation has, through cuts in public sector expenditure, actually slowed the long-run growth of the Australian economy.

<sup>24</sup> Fiscal policy should be aimed squarely at improving Australia's infrastructural, knowledge, communications, informational, social and network capital base. Halevi and Kriesler (1995) believe that the declining importance of raw materials has



seems to have some validity, the employer of last resort policy, as it currently stands, seems problematical in achieving the objective of moving the BPSE labour into the private sector in the long-run if the emphasis is given to consumption spending. However, if the ELR policy is redirected to concentrate on public investment projects, and particularly the knowledge, information, communications and industrial foundations of capitalism, more success is likely in resolving structural impediments to meaningful employment. The key to any public employment program is to ensure mobility between public work programs and the private sector. Social-driven employment programs may still have a place in any public or non-public works program. However, the ELR program, as currently offered, should probably be part of a much broader, public and non-public investment program in extending the skill and training base of the unemployed. The aim of any public employment program is to offer the opportunity to the unemployed to gain the skills, experience and training critical to the needs of a modern economy.

## Conclusion

Wray's taxes-drive-money and employer-of-last-resort approach to government policy is a radical departure from orthodoxy. Money is seen as a 'creature of the state'. Governments can purchase any good or service by printing and exchanging the notes and coins that citizens require to meet their taxation obligations. Since citizens are required to pay their tax obligations in state money, they also accept this money as a form of payment. Governments can ensure that its own currency is demanded and used as the preferred method of payment. Taxes are required not to finance the government deficit, but to provide a demand for currency. The government created a credit system by obliging citizens to pay taxes in the form of state money, thereby assuring that the government could spend their own money that otherwise would be worthless.

Important factors contributing to unemployment in Australia over recent decades are structural unemployment as well as the relative lack of both public and private investment. There appears to be a role for government to help rectify these problems. A new employment strategy should aim at reducing the structural unemployment level while providing public investment that will encourage private sector activity. Wray bases his ELR policy on Lerner's functional finance approach to government spending. However, Lerner admits that his approach cannot adequately solve structural unemployment. To rectify this, Forstater proposes a Lerner-Lowe synthesis that recognises structural and technological unemployment, but only offers labour-intensive jobs for the BPSE workers. Either way, ELR seeks to employ excess labour to do jobs that have limited private sector relevance. Wray intends to fund ELR through TDM. A better option is to use TDM to reduce Australia's high structural

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forced Australia to look elsewhere than mining. Wray (2000) places emphasis on the importance of 'a strong service sector base'. However, the skills that are required in the new millenium are multifarious, ranging from knowledge and experience in the use of information technologies; to an ability to think and organise flexibly and creatively; to satisfying people's gastronomical needs; to being able to manage resources and human talents; - to varying degrees and intensities (see Monro 2000). The theoretical and empirical foundations of Wray's 'social projects' are relatively underdeveloped. Some of what he discusses seems to be 'social capital'; other parts more 'human capital'; and still others 'community relations capital': but their scope is relatively narrow. The critical thing is that the skills developed in the buffer stock need to cover a wide range of activities and capitals; that they be skills that are relevant to a forward-thinking economy; that they be relatively easily transferable to the private sector; and that the analysis links to the 'multiple capital paradigm' (see O'Hara 1998). (See Toner 2000 for a discussion of the relative importance of different sectors of the economy to employment and productivity.)

unemployment problem and encourage private sector investment and innovation through public sector investment. This would require the building of knowledge, communications, infrastructural, social and corporate network capitals. The taxes-drive-money aspect of the approach thus seems to have more validity in solving economic problems than the ELR as currently formulated. If authorities accept a much broader role for ELR then it has more validity.

This paper has sought to encourage debate on the TDM and ELR approach to government policy. In particular, more research is required on the institutional workings of the money supply aspects of fiscal policy and whether the ELR can be reformulated with the emphasis on public investment and critical information, knowledge, language, technology and infrastructure capitals rather than simply consumption spending and a rather narrow band of 'social' skills. Wray's policy proposals, especially the TDM, have much validity in principle but they need to be scrutinised in specific institutional environments. The orthodox approaches to policy have been challenged by this radical theory. Perhaps this challenge will stand the test of time, or be modified in the light of further analysis. Whatever the case it deserves to be treated seriously and where relevant incorporated into policy processes.

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#### References

- Argyrous, G. 1998, 'Can Expenditure Cuts Eliminate a Budget Deficit? The Australian Experience', in Jerome Levy Institute *Working Paper*, no. 248.
- Argyrous, G. 1999, 'Can the Budget Surplus Last? A Review of the 1999-2000 Commonwealth Budget', *Journal of Economic and Social Policy*, vol. 4, no. 1, pp. 27-44.
- Aschauer, D. A. 1989, 'Does Public Capital Crowd Out Private Capital', *Journal of Monetary Economics*, vol. 24, pp. 171-188.
- Aschauer, D. A. 1990, 'Is Government Spending Stimulative', *Contemporary Policy Issues*, vol. 8, no. 4, pp. 30-46.
- Aschauer, D. A. 1997a, 'Do States Optimise? Public Capital and Economic Growth', in Jerome Levy Institute *Working Paper*, no. 189.
- Aschauer, D. A. 1997b, 'Output and Employment Effects of Public Capital', in Jerome Levy Institute, *Working Paper*, no. 190.
- Aschauer, D. A. 1998, 'Optimal Financing by Money and Taxes of Productive and Unproductive Government Spending: Effects on Government Growth, Inflation and Welfare', in Jerome Levy Institute *Working Paper*, no. 241.
- Aschauer, D. A. 1999, 'Public Infrastructure Capital: How You Finance It is as Important as How Much You Have and How You Use It', *Economic Development and Cultural Change*, October 1999.
- Forstater, M. 1998, 'Institutionalist Approaches to Full-Employment Policies', in *Journal of Economic Issues*, vol. 32, no. 4, pp. 1135-1139.

- Forstater, M. 1999, 'Public Employment and Economic Flexibility', in Jerome Levy Institute, *Public Policy Brief*, no. 50A.
- Halevi, J. & Kriesler, P. 1995, 'Corporatism in Australia', in Arestis, P. and Marshall, M. (eds), *The Political Economy of Full Employment*, Aldershot: Edward Elgar.
- Hoque, A. & Inder, B. A. 1991, 'Structural Unemployment in Australia', in *Applied Economics*, vol. 23, pp. 723-730.
- Kalecki, M. 1971, *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970*, Cambridge University Press, Cambridge.
- Kearney, C., Chowdhury, K., & Fallick, L. 1994, 'Public Infrastructure and Private Investment in Australia', in M. R. Johnson, P. Kriesler, and A. D. Owen (eds), *Issues in Australian Economics*, Allen & Unwin, Sydney.
- Keynes, J. M. 1936, *The General Theory of Employment, Interest and Money*, London, Macmillan, 1980.
- Knapp, G. F. 1924, *The State Theory of Money*, H.M Lucas and J. Bonar (eds), Macmillan, London.
- Lerner, A. P. 1943, 'Functional Finance and the Federal Debt', in *Social Research*, February, pp. 38-51.
- Lerner, A. P. 1951a, 'High Full Employment and Low Full Employment', from *Economics of Employment*, McGraw Hill, New York, pp. 191-2081
- Lerner, A. P. 1951b, *Economics of Employment*, Greenwood Press, Westport.
- Manacorda, M. & Petrongolo, B. 1999, 'Skill Mismatch and Unemployment in OECD Countries', *Economica*, vol. 66, pp. 181-207.
- Mehrling, P. 2000, 'Modern Money: Fiat or Credit?', in *Journal of Post Keynesian Economics*, vol. 22, no. 3, pp. 397-406.
- Minsky, H. 1986, *Stabilizing an Unstable Economy*, Yale University Press, New Haven.
- Mitchell, W. F. 1988, 'The Buffer Stock Employment Model and the NAIRU: The Path to Full Employment', in *Journal of Economic Issues*, vol. 32, no. 2, pp. 1-9.
- Mocan, H. N. 1999, 'Structural Unemployment, Cyclical Unemployment, and Income Inequality', *Review of Economics and Statistics*, vol. 81, no. 1, pp. 122-134.
- Monro, D. 2000, 'The Knowledge Economy', *Journal of Australian Political Economy*, no. 45, June, pp. 5-17.
- Mosler, W. 1997, 'Full Employment and Price Stability', in *Journal of Post Keynesian Economics*, Winter, vol. 20, no. 2, pp. 167-182.
- O'Hara, P. A. 1998, 'Capital and Inequality in Today's World', in Brown, D., (ed.), *Thorstein Veblen in the Twenty-First Century*, Aldershot, Edward Elgar.
- O'Hara, P. A. 1999, 'Political Economy: Major Contemporary Themes', in O'Hara, P.A. (ed.), *Encyclopedia of Political Economy*, Routledge, London and New York, vol. 2, pp. 861-868.
- O'Hara, P. E. 2000, 'A New Neoliberal 'Balanced Budget' Social Structure of Accumulation for the United States?', in Bougrine, H. (ed.), *The Economics of Public Spending: Debts, Deficits and Economic Performance*, Cheltenham, Edward Elgar.
- Papadimitriou, D. B. 1998, 'Full Employment Policy: Theory and Practice', The Jerome Levy Institute, *Working Paper*, no. 258.

- Parkin, M. & Bade, R. 1990, *Macroeconomics and the Australian Economy*, Allen & Unwin, Sydney.
- Seccareccia, M. 1999, 'What Type of Full Employment? A Critical Evaluation of ELR Policy Proposal', paper presented at the CEA-PEF meetings at the University of Toronto, 30 May 1999.
- Sherman, H. J. & Kolk, D. X. 1996, *Business Cycles and Forecasting*, HarperCollins, New York.
- Toner, P. 2000, 'Manufacturing Industry in the Australian Economy', *Journal of Australian Political Economy*, no. 45, June, pp. 18-45.
- Vickers, D. 1959, *Studies in the Theory of Money 1690-1776*, Chilton Company, Philadelphia.
- Wray, L. R. 1997a, 'Government as Employer of Last Resort: Full Employment Without Inflation', Jerome Levy Economics Institute *Working Paper*, no. 213.
- Wray, L. R. 1997b, 'Deficits, Inflation and Monetary Policy', *Journal of Post Keynesian Economics*, vol. 19, no. 4, pp. 543-571.
- Wray, L. R. 1998, *Understanding Modern Money: The Key to Full Employment and Price Stability*, Edward Elgar, Aldershot, UK.
- Wray, L. R. 2000, *Email from L.R. Wray to G.A.Kadmos and P.A.O'Hara*, dated 5 September.