Employer of last resort : could it deliver full employment and price stability ?

Malcolm Sawyer

Abstract : Proposals under the headings of employer of last resort (ELR) and job guarantee have been made under which jobs would be available to all at a basic wage. These schemes promise a combination of full employment and price stability. This paper examines whether they would be able to deliver on such a promise. The paper discusses the notion of 'functional finance' which forms an important element of ideas on ELR. The nature and role of money as envisaged in the tax driven money approach which is often associated with the ELR proposals is critically examined. It is argued that whilst the ELR budgetary costs may be relatively small, this would also be the case from any public sector employment program. The question is raised as to whether there would be jobs of a type which could fit in with the ELR proposals, and what the nature of these jobs might be. The paper considers the extent to which ELR would involve underemployment and unemployment by another name. The possible inflationary implications of the ELR are next considered. This has two aspects : first to consider whether inflation would result from unemployment falling below any form of supply-side inflation barrier (such as a NAIRU), and second to consider whether the use of a base wage would bring price stability as claimed. In the subsequent section, the idea that ELR employment would form a buffer stock is critically examined.

Address:
Economics Division
Leeds University Business School
University of Leeds
Leeds LS2 9JT
UK
Email: mcs@lubs.leeds.ac.uk

JEL classification E61 J60

Employer of last resort : could it deliver full employment and price stability ?

Malcolm Sawyer*

University of Leeds

1. Introduction

The idea that the government should stand ready to provide work to all who seek paid employment but cannot otherwise find a job has been advanced by a number of authors in recent years. The term 'employer of last resort' (hereafter ELR) has been used by authors such as Wray (1998a,b), drawing on the analogy with the central bank willing to provide reserves to the banking system, as a label for such an idea. Others have used the term job guarantee (hereafter JG) for a rather similar idea (e.g. Mitchell 2001).[1] The proposals under the heading of ELR and JG are similar and this paper discusses both sets of proposals. However, the term ELR is generally used in this paper as this gives more of the flavor of the proposals than the term JG does : for example in terms of the jobs which would be available under the proposals.

The term 'employer of last resort' encompasses the following ideas:

(i) the government offers employment to anyone who seeks work but would otherwise be without a job[2] :

(ii) the wage for such jobs would be set at a 'base' level (fairly close to the minimum wage where such exists, and somewhat above the pre-existing level of unemployment benefits)[3] ;

(iii) the wage bill for those on an ELR scheme is not to be paid by raising tax revenue, but rather would increase the government budget deficit (or reduce the budget surplus). In the ELR literature, this is often linked with what has been labeled the tax driven money (hereafter TDM) view. High powered money (hereafter HPM) or base money is viewed as created by the state, public expenditure involves (high powered) money creation whilst the payment of taxes involves

money destruction. The government can though issue bonds which would serve to remove 'excess' money.[4]

As indicated in the titles and sub-titles of papers and books on the ELR and JG (e.g. Mosler 1997, Wray 1998a) these schemes promise both full employment and price stability. The central concern of this paper is to examine whether they would be able to deliver on such a promise.

The paper begins by considering the notion of 'functional finance' (Lerner 1943) which forms an important element of ideas on ELR. This is followed by a section which considers the nature and role of money as envisaged in the tax driven money approach which is often associated with the ELR proposals. Section 4 considers the budgetary costs (and deficit implications) of ELR proposals. It is argued that whilst the ELR budgetary costs may be relatively small, this would also be the case from any public sector employment program. The question is raised in the next section as to whether there would be jobs of a type which could fit in with the ELR proposals, and what the nature of these jobs might be. The following section considers the extent to which ELR would involve underemployment and unemployment by another name. The possible inflationary implications of the ELR are next considered. This has two aspects : first to consider whether inflation would result from unemployment falling below any form of supply-side inflation barrier (such as a NAIRU), and second to consider whether the use of a 'base wage' would bring price stability as claimed. In the next section, two notions of unemployment (and corresponding ELR workers) are considered. It is argued that the notion of the unemployed or ELR workers as a buffer stock is misleading. It is also argued that ELR workers would retain many of the characteristics of being an 'industrial reserve army'. The paper is completed by a brief concluding section.

2. Functional finance and ELR

The idea that governments should use the fiscal stance to support a high level of demand (rather than seek to balance the budget) is a long-standing one, which can be put under the heading of functional finance (Lerner 1943). The basic justification for the use of a budget deficit to support high levels of employment is that private sector demand is inadequate to generate such levels of employment.[5] This can alternatively be expressed by saying that private savings would exceed private investment at the level of income which corresponds to this high level of demand. Private savings are S + (M - X) where S is domestic savings, and M (imports) - X (exports) is the trade deficit and equal to the inflow of capital. The required budget deficit G - T is then equal to private savings minus private investment, each corresponding to the high employment level of income. Hence G - T = (S - I) + (M - X). If the right hand side of this equation would be positive at full employment, then the left hand side necessarily would be positive, i.e. a budget deficit would be required to sustain full employment.

An early advocate of the view that budget deficits should be used (as required) to reach and sustain full employment was Kalecki (1944). He discussed "three ways to full employment" in terms of government spending and subsidies to mass consumption (leading to a budget deficit), stimulation of private investment and redistribution (consideration of the foreign trade sector was left for another paper in the same volume of essays). He argued that there were limits on the stimulation of private investment for aggregate demand purposes but that the other methods were capable of securing a level of aggregate demand consistent with full employment. Thus manipulation of aggregate demand can take the form of fiscal policy (via budget deficits) and influencing savings and investment behavior. But Kalecki also argued that "the gap to be covered [to stimulate aggregate demand to reach full employment] may be so large that public investment

will soon become entirely, or at least nearly, useless. In such a case it would be absurd to restrict the government spending program to public investment when a higher standard of living can be achieved by devoting a part of this spending to increasing consumption. The general principle must be that social priorities decide the nature of the government's spending programme" (Kalecki 1944, 368). He also argued that "the proper role of private investment is to provide tools for the production of consumption goods, and not to provide enough work to employ all available labor..... Both public and private investment should be carried out only to the extent to which they are considered useful. If the effective demand thus generated fails to provide full employment, the gap should be filled by increasing consumption and not by piling up unwanted public or private capital equipment" (Kalecki 1944, 371). Whilst the general aim is to achieve full employment, there are different ('three') ways of reaching the general objective, and the balance between the different ways depends on social priorities. Further the achievement of full employment may be hampered by inflationary pressures, though "inflation will only result if effective demand increases so much that a general scarcity of labor or equipment (or both) arises" (Kalecki 1944, 361). [6]

The ELR proposals differ from previous ones such as those made by Kalecki in two respects. First, the ELR provides a mechanism for the continuous achievement of high levels of employment: a person made unemployed today is promised a job immediately. The proposals of Kalecki would be to seek to forecast the levels of government expenditure and taxation (say for the year ahead) required for high levels of employment. But the forecasts may go awry and government plans may not come to full fruition. The use of the term 'employer of last resort' and the analogy with the Central bank as 'lender of last resort' suggests that ELR jobs would be *immediately* available to anyone who would be otherwise unemployed.

Second, the ‘make work’ component of employment is provided at the ‘base wage’. ‘Mainline’ public sector jobs pay wages which correspond to the skills required, and bear some relationship with pay for comparable jobs in the private sector.[7] Further, it is because the output of a ‘mainline’ public sector job is deemed worthwhile by the government that the job is provided. For the ELR jobs, whilst the ‘output’ of the job is (generally) beneficial, the job is provided to mop up unemployment rather than for the benefits of the output. If there were a high level of employment because of high private sector demand, then the ELR jobs would not be provided. But the ‘mainline’ public sector jobs would be provided in general whatever the level of private sector demand.

The ELR proposals have the advantage of providing a fiscal ‘fine tuning’ whereby jobs are always available, though this is subject to doubts raised below on the availability of appropriate jobs. It has the disadvantage that these jobs are provided at the basic wage only. Further jobs are provided in order to ‘mop up’ unemployment, rather than to let “social priorities decide the nature of the government’s spending programme” (Kalecki 1944, 368).

It can be noted that “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 (1951, 192) is ineffective in solving what is commonly referred today as structural and frictional unemployment” (Kadmos and O’Hara 2000, 11). Further, “Abba Lerner considers the difference between structural and cyclical unemployment to be paramount when discussing the relevance of functional finance” (Kadmos and O’Hara 2000, 11).

Now consider unemployment at any time to be composed of demand-deficient, frictional (search) and structural unemployment (recognizing that in practice it would be difficult to precisely identify each component and that they may overlap). The ELR scheme seeks to remove demand-deficient unemployment through the provision of the required aggregate demand, albeit that this demand is focused on ELR jobs. Frictional unemployment is apparently removed, but only through search now being undertaken by ELR workers rather than those registered as unemployed. There is a sense in which structural unemployment is addressed. Take an example where unemployment in a small geographical area is high through a recent closure of a major employer. The area may lack sufficient effective productive capacity to employ all available workers, and many may possess skills which were relevant to the (now ex-) major employer but not to other employers. Unemployment in this area could be said to be structural. An ELR scheme would seek to provide jobs (at the basic wage) in that area and in that respect remove structural unemployment. Structural unemployment could be seen as arising from a combination of a lack of capacity and inappropriate skill mix : the ELR 'solution' appears to be to provide employment which does not require any capacity or any skill !

3. Finance and money

The roles of finance and money in ELR proposals are well described in the following. "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" (Kadmos and O'Hara 2000, 7). "The critical point is that *ELR will be funded through TDM* [tax driven money]. 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 labor force by

printing as much money as required that will achieve full employment" (Kadmos and O'Hara 2000, 10, emphasis in original).

Thus, it is asserted that government expenditure can be (and is) financed by 'printing money' (the creation of HPM). The difference between the HPM issued by the government to pay for its expenditure less that which is taken back by government in the form of taxation, and the amount of HPM which the private sector wishes to hold, is assumed to be drawn back by the government through the sale of bonds. The tax driven money (TDM) approach envisages that the short-term rate of interest is set by the Central Bank or government, and bonds are sold at a closely related rate of interest. It is further argued that "the interest rate on government bonds can be any rate above zero desired by the central bank" (Wray 1998b, 2) and that "monetary policy would recognize that its role is to establish the short –term interest rate …." (Wray 1988b, 19) This approach is justified on the basis that "in the real world, however, we have not seen a situation in which the Post-Civil War US government has offered dollars to buy goods and services without drawing forth some goods and services which indicates that the nongovernment sector's desire to net hoard (HPM plus bonds) has never been reached" (Wray 2001, 20).

If the rate of interest on bonds can be set at any level above zero, then from the perspective of the financial costs to the government it should be set close to zero. This removes any issue of the explosion of government debt since the condition for the ratio of government debt to GDP to converge and not grow continuously (for a given primary deficit) is that the growth rate of GDP exceeds the (post tax, real) rate of interest on government borrowing. This would clearly be satisfied with a very low rate of interest.

It is clearly right to say that government does not face a financing constraint in the sense that government can always create HPM to pay for its expenditure plans. The government must offer

a sufficient amount of HPM to make it profitable for the supplier to provide the service, but the government can always 'print' sufficient money. It is also the case that the government can sell bonds (and other financial instruments) to the public and thereby drain off some of the HPM which it has created. However, the concerns which are raised about the way in which government deficit is funded (that is the degree to which HPM has been created and the degree to which HPM has been drained off through bonds) arise from the consequences of that funding. For example, a monetarist would surely argue that governments can and do 'print' money to finance a budget deficit, and then argue that the spending by the public which is induced by the increase in the stock of money is inflationary.

To illustrate, suppose the government decides to 'fund' its budget deficit largely by money creation, such that G – T = DMd + DMe + DB where DMd is the private sector (additional) demand for HPM, DMe is the difference between the money issued by the government and the private sector demand for HPM ('excess' money) and DB is the bonds sold by the government. This could arise, for example, if the government decides to sell only a small amount of bonds, or to offer bonds for sale at an interest rate at which there is little demand for bonds. The equation refers to the *ex post* outcome, but one which has been influenced by government's decisions.

In the next period, the private sector has 'surplus' (HPM) money with which to pay taxes. In a closed economy, G – T is, of course, equal to S – I ; hence S = I + DMd + DMe + DB, and savings are held in the form of (direct and indirect) lending to firms (to finance investment), HPM and bonds. But the private sector is holding more HPM than its wishes : how does it respond ? One response would be that the private sector may spend more (than it would otherwise) : the holding of 'excess' money is a temptation to spend (even though such holding is part of savings). "The private sector can only dispense with unwanted cash balances in the

absence of government paper by increasing their consumption levels. This reduced desire to net save would generate a private expansion and reduce the deficit, restoring the portfolio balance at higher private employment levels and a lower JG [job guarantee] pool" (Mitchell and Mosler 2001, 228). An individual with cash balances in excess of what they wish to hold can spend them, but collectively the public can only dispense with 'excess' HPM balances through the payment of taxes, or through increased output (in nominal terms) which raises the demand for nominal HPM balances and removes the 'excess' in that way. Under the ELR proposals, employment would be at the full employment level, so it would appear that real output cannot increase. But it could be argued that if there is expansion in private employment (and hence a contraction in ELR employment) then marketable output would rise.

To illustrate what may happen if the amount of HPM issued by the government exceeds that which individuals wish to hold, consider the extreme case where the maintenance of full employment requires a budget deficit and this is funded by HPM alone, so that $G - T = sY_f - I = DM$. Assume that the increase in HPM leads to an increase in consumer expenditure so that in period 2 savings are $sY_f - cDM$ and hence $G - T = sY_f - I - cDM = (1 - c)\ DM$. The cumulative increase in the stock of money would be $1 + (1-c)$. In period 3, there is a further increase in consumer expenditure, the budget deficit falls but some further HPM is created. Continuing this process the cumulative increase in the stock of money would reach $(1/c)$, and consumer expenditure would be stimulated by $c.(1/c).DM = DM$ over the base case.

The increase in HPM which is involved is not a trivial amount. The ratio of M0/GDP in the UK is less than 4 per cent, and hence a budget deficit of 2 per cent of GDP which is HPM funded would involve a 50 per cent increase in HPM (within a year).

One possible outcome is that the increased private sector demand is inflationary (with unemployment falling below the equivalent of the NAIRU), and that inflation continues until prices have risen sufficiently to reduce holdings of HPM to their initial real level. This would be nothing more than the monetarist story where an injection of HPM leads to inflation. Another possible outcome is that the 'excess' money remains in existence and continues to stimulate private sector demand. In such a case, one is tempted to say that the government should resort to the use of Friedman's helicopter (cf. Friedman, 1956) and drop money from the skies which would have much the same effect as having to set up the ELR scheme !

However, it could be argued that the 'excess' HPM is held as part of savings and hence the public's intention is that it is not spent. But the asset portfolio of the public is unbalanced – that is the public is then holding more HPM money than it would wish to do so (since money is a barren asset yielding no interest) and less private sector assets (which do yield a return) than it would wish. This would seem to be a recipe for asset price inflation, as individuals seek to acquire private sector assets in exchange for HPM.

"To the extent that 'printing money' creates excess liquidity, the *final* equilibrium involves this undesired liquidity having been exchanged for some form of interest-bearing securities. To that extent, the injection of outside money, which at first glance appears to 'fund' the expenditure, in the end is substituted in part (almost certainty in very large part) for government securities, so that the final financing instrument is (in part) securities" (Aspromougos 2000, 149).

Some writings on the ELR suggest that aggregate demand (outside the ELR sector) does influence the rate of inflation. "For example, countercyclical fiscal policy and monetary policy still can be used if desired in an attempt to manipulate private sector demand … to achieve greater price stability" (Wray 1998b, 177). A low rate of interest can be presumed to boost

aggregate demand (though it may be debatable to what extent it would), which in turn would boost the rate of inflation. The size of ELR employment would thereby be reduced but there would be inflationary pressures in the rest of the economy.

There would be no disagreement that government can always 'print' money to pay for its expenditures : more expenditure requires more money to be 'printed'. It is also agreed that *ex post* the budget deficit equals DM + DB, though the precise causation and timing involved in reaching this *ex post* outcome may be a source of debate. The questions are then, first, whether the division between change in HPM and change in bonds matters for subsequent economic events. It is argued here that it does : if DM exceeds what the public wishes to hold, it will spill over into increased spending and/or increased demand for other financial assets. The second question is whether the government (Central Bank) can secure whatever interest rate (on bonds) that it wishes. It is clear that the Central Bank decides upon some form of discount rate (repo rate, Fed funds rate) which influences the general level and structure of interest rates. But to decide upon is not to have discretion to set them at any level, nor to be able to ignore the consequences of setting them at particular levels. The ELR advocates appear to slide from the proposition that the Central Bank decides upon some key lending rate to the proposition that the Central Bank can set the rate of interest on bonds at any level it wishes. The question can be raised as to whether in an economy with a rate of profit of say 10 per cent, and financial assets issued which yield comparable rates of return, it would be possible to sell bonds at say 0.5 per cent.

4. Costs of ELR proposals

This section reviews the estimates of the costs (in terms of increased budget deficits) which would be associated with the introduction of an ELR scheme. King (2001) notes that "almost all

projections of the government expenditure required to implement ELR imply that its impact on aggregate demand would be small, verging on minimal…. In 1986 Minsky estimated the cost of public sector employment for two million workers at an annual wage of $7,000 with an extra $3,000 in overhead and material costs, at $20 billion, or 0.55 percent of GNP (Minsky 1986, 310-312). Ten years later, the institutional economist Wendell Gordon calculated the costs of employing eight million unemployed workers at $4.75 an hour, to be $81 billion gross, or $41 billion net of savings in dole payments.[8] … Wray's own estimates, for buffer stock employment of slightly more than 8 million, are between $25 and $50 billion net, or more than $100 billion gross (Wray, 1998b, 129). For Australia, Mitchell and Watts (1997) arrived at a net cost of A$7.4 billion to reduce unemployment to a (frictional) 2 percent of the labor force; this was approximately 1.4 percent of GDP at the time but, as Mitchell later observed, it was an overstatement since it ignored 'the multiplier effects from the rising incomes of buffer-stock workers' (Mitchell 1998, 549). The estimates of Mitchell and Watts are based on a 'living wage' of A$400 a week subject to 25 per cent tax rate with 20 per cent 'oncosts' to cover materials, administration etc.. Wooden in discussion of Mitchell and Watts argues that 'their costs largely ignore the capital, organizational and administrative costs that this scheme will require" (Wooden 1997, 446).[9]

Some of these gross estimates are clearly too low in that the only costs which are included are the direct labor costs of the ELR workers. Wray, for example, derives his estimates by multiplying the ELR wage by the number of workers involved, thus assuming that there are no further costs involved such as material costs, costs of capital equipment and costs of supervisory labor. These costs are likely to be substantial and raise the cost estimates significantly (perhaps of the order of doubling them). It should also be stressed that the estimates are based on all ELR jobs paying the

basic wage, and hence the nature of the jobs which are provided under ELR has to be consistent with the payment of the basic wage. Further by excluding the costs of materials and of supervisory labor, the effects of ELR employment on demand in the rest of the economy is overlooked.

A further cause of underestimation of costs arises in so far as recorded unemployment underestimates overall unemployment, and the prospects of ELR jobs would draw people into the labor force. Hence the number of jobs to be created would exceed the current measured level of unemployment. Mitchell (2001), for example, estimates the extent of hidden unemployment in Australia. He found that in the first months of 2001 when recorded unemployment was 6.7 per cent, hidden unemployment was 2.6 per cent (of the labor force) yielding an adjusted unemployment rate of 9.3 per cent. The extent of hidden unemployment varies over time, to some degree in parallel to movements in recorded unemployment, and the extent of hidden unemployment was reported to vary from 2.3 per cent (of the labor force) in 1989 to 4.5 per cent (in 1983 and 1993). These figures would suggest that, for Australia, ELR employment may be of the order of 50 per cent greater than recorded unemployment. In the UK, Barham (2002) reports that of 9,301 thousands (of working age) who were deemed economically inactive in Spring 2001, 3,623 thousands wanted a job, of whom 2,001 thousands were not seeking a job and 1,621 thousands were seeking a job of whom 1,390 were available for work and regarded as unemployed. Thus, those wanting a job were 2.6 times the number regarded as unemployed.

However, Wray argues that “nothing of substance would change in our analysis even if costs were two or three times greater (or half as much) – economically it would not matter, although it might matter politically” (Wray 1998b, 129). The reason it would not matter economically is that what is viewed as the ‘cost’ to the government comes in the form of an increase in the budget

deficit : but since Wray argues that any deficit can be financed (by suitable increase in stock of money) then the size of the deficit is economically unimportant.

The consequences of ELR proposals for budget deficits can, in one sense, be simply estimated. From the well-known national income accounts identity quoted above, the (overall) required budget deficit (G – T) is equal to (S – I) + (M – X), where the two latter terms are calculated at full employment. The aggregate demand 'problem' can be viewed in terms of an excess of (ex ante) savings over investment at full employment ; the government then must run a deficit to mop up those excess savings if full employment is to be assured (the argument can be modified for an open economy). If it is accepted that a budget deficit (i.e. the use of functional finance) is required for aggregate demand consistent with high levels of employment, then there is the question of what form should government expenditure and taxation take.[10] The ELR approach is that a significant part of government expenditure should be provided by ELR jobs (at the basic wage). But why restrict the form of government expenditure in this way ? Full employment demand could also be reached through expansion of other forms of government expenditure or reduction of taxation. The 'cost' would be much the same as with the ELR scheme – a budget deficit sufficient to mop up the excess savings of the private sector which would be generated at full employment. In effect, the 'costs' of any public sector employment generation program designed to achieve full employment is the size of the budget deficit which is required to sustain full employment income. The size of this budget deficit is then determined by net private savings and balance of trade position at full employment, rather than by the composition of public expenditure and taxation. As the net savings and trade position fluctuate during the course of the business cycle, so would the size of the budget deficit required to secure full employment.

However, the use of ‘mainstream’ public sector jobs to boost aggregate demand would add more to national income than ELR jobs do in that the ‘mainstream’ jobs provide a greater output than ELR jobs. Hence full employment income would be higher and, to the extent to which savings are higher, a somewhat larger budget deficit would result.

The attraction of ELR schemes appears to be their ability to guarantee full employment. Variations in ‘mainline’ public sector jobs or in taxation may aim to provide full employment but that cannot be guaranteed through forecasting errors and implementation delays. Such variations require adjustments to public sector programs and to tax schedules which take time to come into effect. It is debatable how far the ELR approach can overcome those difficulties : job creation under the ELR approach still requires administration, provision of capital equipment and materials etc., leading to some delays in the provision of such jobs.

There remains the question as to whether public expenditure should be used for the sole purpose of job creation. The argument here is that the purpose of public expenditure should be to provide social benefit, though, of course, public expenditure also creates employment. The government may have a role to play in the provision of training and of securing effective re-entry into the labor force – that would be seen as public expenditure undertaken to provide social benefit. If a job in the public sector does not provide some social benefit, then it would be more appropriate to stimulate demand elsewhere in the economy or to reduce working time. Work can always be created which is akin to the ‘digging holes and filling them in’ variety. But is there any purpose in doing so ? Does the content of ELR jobs matter ? The proponents of ELR have listed many worthwhile jobs which could be undertaken within ELR (as indicated in the next section), though we question whether such jobs would fit the criteria of an ELR job (readily available, paying ‘basic wage’, unskilled and requiring little capital equipment).

There would seem to be the underlying view that being employed is beneficial for the individual whereas being unemployed is detrimental. Apart from loss of income, this comes largely in the form of loss of self-respect, demotivation and loss of skills associated with unemployment. However, work (especially unskilled) is still irksome especially if it is perceived by the employee to be yielding little benefit in terms of what is produced.

5. Are the jobs available ?

The types of jobs which would be provided by an ELR scheme would have to have some particular characteristics. First, they are jobs which either do not require much skill or which use skills which are widely available in the population (e.g. literacy, ability to drive). Second, the job leads to the production of useful output, but the output is not necessary in that the output is only forthcoming when aggregate demand is low and the ELR jobs are required. Even work on capital projects which has often been used to provide jobs at times of high unemployment) would not fit the ELR requirements. Apart from logistical problems of speeding up or slowing down capital projects depending on the state of aggregate demand, much of the work on capital projects is skilled work for which wages are usually significantly above the minimum wage. Jobs such as those in education, health service, personal social services and care would not be good candidates for ELR jobs. Such jobs may well provide valuable public services, and could be expanded as part of 'mainline' public expenditure. But they do not provide examples of jobs which can be undertaken at the basic wage and only undertaken when there is a low level of demand in the economy, generating requirements for ELR jobs.

Thus it may be observed that there could be jobs created in say care of the elderly. It may further be argued that the government should expand care of the elderly for reasons of the benefits for the elderly and of job creation. However, it would not be acceptable for care of the elderly to

provide ELR jobs, for that would mean that whether care of the elderly is provided would depend on the state of the labor market and on who turns up at the ELR jobs office on a particular day. When aggregate demand is low, care of the elderly would be provided to generate ELR jobs ; when aggregate demand is high, such care would not be provided since ELR jobs would not be required.

The third requirement is that the ELR jobs would not have to require much capital equipment, material inputs or supervisory labor. As aggregate demand in the economy fluctuates, the requirements for ELR jobs will vary. Those ELR jobs have to be provided virtually instantaneously, for if they are not then someone requiring an ELR job would be unemployed (in reality if not in name). If the capital equipment, material inputs and supervisory labor for a job are not immediately forthcoming (or standing idly by), then this job cannot be 'switched on' to meet ELR job requirements. As an aside, it could be noted that an ELR job which did draw on material inputs to a significant degree would generate demand (for those materials) in the non-ELR sector.

Consider the examples of jobs for the ELR schemes which have been given. Wray (1998b, 142-3) provides examples of possible ELR jobs : companion (to the elderly), public school classroom assistant, safety monitor, neighbor cleanup/highway cleanup engineers, low-income housing restoration engineers, day care assistants for children of ELR workers, library assistant, environmental safety monitors, ELR artist or musician, community or cultural historian. Whilst there would be benefits from the undertaking of these tasks (which may or may not cover the wages of the ELR workers), these are mainly jobs which require some training and which should not be 'turned on and off' depending on the level of demand in the rest of the economy.

“Numerous service jobs could provide immediate benefit to the society, when filled by BSE [buffer stock employment] workers. These include urban renewal projects and the environmental and construction schemes (reforestation and construction schemes, river valley erosion control and the like), personal assistance to pensioners, assistance on community sports schemes, and many more” (Mitchell and Watts, 1997, 442).

“The government must have a range of productive activities, past the planning stage, with which it is in a position to proceed with varying degrees of speed depending on the state of unemployment. These productive activities would involve a mixture of expensive large-scale projects which in many cases might be in concentrated locations (like space exploration or new heavy industries) or pretty well spread out (like the highways upkeep and rejuvenation program or programs for developing the arts and culture” (Gordon 1997, 829). But government capital projects cannot be started, speeded up or delayed at short notice in order to provide ELR jobs. Further, the skills required would in many instances be extensive, and the going wage for such jobs would generally be much above any minimum wage level. We have referred above to Gordon’s estimates of costs for an ELR scheme, but we would suggest that his estimates (based on job creation at minimum wage levels) do not match with the type of jobs he appears to have in mind.

Forstater (1998) speaks of the “selective use of discretionary public employment”, that is worthwhile forms of public employment which can be delayed (or brought forward). These would presumably be mainly capital projects the precise timing of which was not a key element in their provision. Whilst such projects may have a role to play in the provision of worthwhile jobs during a major downturn, here again they would not be able to provide ELR type jobs as and when required.

It could be argued that the requirements listed above for ELR jobs has taken the ELR proposals too literally and that may be so. However, if ELR is interpreted as saying that the government seeks to provide sufficient worthwhile projects to underpin a high level of employment then it differs little from other schemes to provide sufficient aggregate demand. But those other schemes would recognize that capital equipment and managers are required, and pay the 'going wage' for the jobs provided. The ELR proposals are to provide jobs at the basic wage and on a temporary basis , and those two features are key elements in the proposals. The provision of a job which required significant skills where comparable jobs paid significantly above the 'base rate' would fall outside the ELR as it would undermine the principle that there is a basic wage at which ELR jobs are provided, and which in effect forms the numeraire for the economy. It would also mean that there is an undercutting of wages for 'mainline' public sector jobs.

Some of the jobs provided by ELR schemes are substitutes for 'mainline' public sector employment, and as such threaten to undercut the wages of some public sector workers. Some other jobs provided by ELR schemes would yield output which may be seen as in competition with output which is or could be produced by the private sector. This raises the difficulty on the one hand of how far the jobs provided by ELR would create additional employment, and on the other the resistance of private sector firms to the creation of these type of jobs.

The discussion of ELR has generally been conducted at the macroeconomic, economy wide, level, and has not considered the distribution of unemployment. One notable feature of unemployment is the extent to which it varies between localities. The implication for ELR is that the jobs which are provided at the basic wage are likely to be concentrated in some geographical areas (or amongst particularly groups). Insofar as employment within say a city is concentrated in a few parts of the city, this may not present much of a problem in that transport could be

provided to take those living in areas of high unemployment to jobs which are to be undertaken in other localities. As most of the jobs under ELR are likely to be service jobs, in general those jobs have to be performed where the recipient of the service resides. But where the concentration of unemployment is more regional in nature, then problems for the provision of ELR jobs arise. It may also be asked whether the ELR scheme could cope with the closure of a major local employer

ELR jobs would have to be jobs which society (or at least the government) is rather indifferent (at least as to the time at which the jobs are undertaken) as to whether they are undertaken. For simply, if there is unemployment (outside of the ELR sector) the jobs are undertaken, if there is not unemployment then they are not undertaken. This has a temporal and a spatial aspect. If there is unemployment is one area but not in another, then ELR jobs are undertaken in the former but not in the latter. If there is unemployment one year but not the next, then ELR are undertaken in the first year but not in the second.

A job which is created as part of 'mainline' public expenditure has the characteristics of paying the 'going wage' and that the person taking the job has a degree of choice over whether to take that job or another. A job which is created as part of an ELR scheme has the characteristics that it pays the basic wage and that the person taking the job does not have choice. In conclusion, we argue that the ELR proposals require base wage jobs which can be turned on quickly in the face of falls in aggregate demand (for non ELR jobs), and which can be turned off quickly in the face of rises in aggregate demand. Capital projects can to some degree be brought forward to cope with low levels of demand (though not quickly) but cannot generally be delayed once they are underway when demand revives. The volume of jobs fluctuate as aggregate demand varies, and the composition of ELR workers would change as people lose and find other work. It should be

stressed that the price stability arguments of the ELR draws heavily on the notions that ELR jobs are at the basic wage and that ELR workers form a buffer stock. If those arguments are to be accepted, then the ELR jobs have to fit the requirements of the payment of a basic wage and the jobs are be turned on and off as required.

6. ELR, underemployment and unemployment

In this section we consider how far ELR employment would involve significant elements of underemployment, and also the extent to which such employment in effect constitutes unemployment by another name.

"Essentially, the ELR wage determines the wage of the lowest productivity group – the pool of unskilled and semi-skilled workers during periods of normal demand" (Wray 1998a, 542). How does this wage compare with the productivity of the workers involved ? There are some obvious difficulties in measuring the output of ELR workers (akin to the problems of measuring any public sector output). It could be further argued that the overall benefits of ELR work include more than the output involved, and include training received, the maintenance of work habits etc.. Brushing aside the problems of measurement, we consider some of the issues which arise. Label the wage of ELR workers as w, actual productivity of the ELR worker as q, and the potential productivity of the ELR worker (in 'mainstream' employment) as Q (which takes into account the skills of ELR workers which are assumed to be underutilized in the ELR job).

A number of possible outcomes (which are not mutually exclusive) now arise. One clear possibility is that $q < Q$, so that the ELR worker could produce more in another (more appropriate) job than in an ELR job. The lower productivity in the ELR job may arise from a mis-match between the skills and abilities of an ELR worker and the job undertaken. In general, this will be the case since ELR jobs are low skill, low productivity jobs. In such a case,

underemployment replaces unemployment. The lower productivity may arise from lack of any incentives or pressures for the ELR worker to undertake much effort. Some financial penalties for low effort could be put into place. For example: "ELR will require that one show up for work more or less on time; beyond that requirements would have to be made almost on a case-by-case arrangement. … Discipline would be maintained *primarily* by the promise of promotion to more desirable ELR jobs, and eventually, to private sector employment. In the worst case, some workers might be so irresponsible that their employment would be day-by-day, or even hour-by-hour with a cash payment for a specified amount of time spent on the job. …. ELR workers could be fired from their jobs for just cause; there could be conditions placed on re-hiring (for example, the fired worker might have to wait for 3 days – without pay – before re-hiring; the penalty could be increased for subsequent firings)" (Wray, 1998b, 144-5). But it would seem likely that the incentives for high levels of work effort will be rather less in ELR jobs than in 'mainline' employment.

A second possibility is that $w < q$; the ELR employment is here being undertaken on the cheap, with productivity exceeding wages. If the job undertaken by an ELR worker or a similar one is already undertaken in the public sector, then the ELR scheme may lead to a lowering of wages in the public sector. This may depend on the institutional setting but clearly would place some downward pressure on public sector wages.

A third possibility is that $w > q$: ELR workers are paid more than they produce. The question arises as to whether the output of the ELR worker is valued by others : it may be valued by national income accountants but not by the general public. If it is not valued by others, it is as though the ELR worker is producing nothing : they are paid a wage which gives them a claim on the production of others, but reduces what is available for others. If the output is valued, it can

still be asked how $w - q$ compares with b (the level of unemployment benefits). It has been argued that unemployment has an inflationary element in that the unemployed are producing nothing but are able to make claims on the rest of the economy (financed by the payment of unemployment benefits). However, a similar argument applies here, namely that if $w > q$, then the ELR workers are making net claims on the rest of the economy (equal to $w - q$). Furthermore, it could be the case that the net claims made by ELR workers on the rest of the economy are greater than those currently made by the unemployed. This could be viewed as beneficial on equity grounds since those who gain are relatively lowly paid.

There are two other respects in which ELR employment may be akin to disguised unemployment. First, in some formulations of the ELR, ELR workers are given time and help in searching for other work. "A less extreme change would allow newly unemployed workers the option of engaging in full-time job search in the ELR program for a specific period of time, for example, for a period of six weeks" (Wray 1998b, 127). A footnote to this sentence adds, "In contrast to the current unemployment compensation system …., ELR can require that the six weeks will be spent doing specific full-time search activities (reporting to an office to make phone calls, prepare a 'cv', attend job interviews, obtain job search training, and so on)" (Wray 1998b, 150). The unemployed also search for work (and are often given 'encouragement' to do so), and there would be little difference between search by an ELR worker and an unemployed person.

Second, there is likely to be an element of 'frictional' unemployment within the ELR scheme: the ability of the managers of ELR to provide work instantaneously may be doubted, and there are likely to be delays between a person losing a job (in the non-ELR sector) and being provided with a job within the ELR sector. Some who are registered as being on an ELR scheme may not in practice be provided with a job.

Unemployment is subject to considerable turnover, and the stock of the unemployed is subject to continual change. The extent of the turnover varies over time and across countries, and we use here some illustrative figures. In the case of the USA, in the year 2000 45 per cent of the unemployed had been without work for less than 5 weeks, 31.9 per cent for between 5 and 14 weeks, 11.8 per cent for between 15 and 26 weeks and the remaining 11.4 per cent for 27 weeks or more. The corresponding figures for 1992 were 35.1 per cent, 29.4 per cent, 15.1 per cent and 20.3 per cent. [11] For the UK in April 2001, the figures were : unemployed for less than 4 weeks 17.7 per cent of total ; 4 to 8 weeks 12.3 per cent, 8 to13 weeks 12.6 per cent and 13 to 26 weeks 20.4 per cent (and the cumulative proportion of those who had been unemployed for26 weeks or less was 63.0 per cent. In the case of the UK there has been a marked shift in the duration of unemployment statistics (as a result of policy measures aimed at reducing long term unemployed) and the proportion of the unemployed who have been so for more than 12 months fell from 36.3 per cent in 1996 to 12.2 per cent in 2001.[12] From the available data for the UK we have estimated that around 50 per cent of those entering unemployment have a completed duration for their spell of unemployment of less than 6 weeks (when they leave unemployment).

To illustrate the significance of these figures, let us suppose that the same pattern would be repeated under an ELR scheme. One implication is that to the extent to which ELR provides some job-specific training, then much of that training would be of little benefit to the ELR worker or to future employers. Of course, the ELR job might provide some general training that could be transferred to other jobs. If say 50 per cent leave ELR work within 2 months, then any job-specific training would be put to little use. Another implication is that if the ELR scheme permitted job search (say for 2 months) then a substantial proportion of the ELR workers would

be engaging in job search (the figures above would suggest well over 50 per cent in the USA and 30 per cent in the UK).

Workers and jobs are, of course, both heterogeneous. This raises the question of how far ELR jobs would or could be matched with workers. Poor matching would reduce the effective productivity of the workers involved. It also raises the question of under what circumstances someone could refuse an ELR job (and still receive the ELR payment). Could a job be declined on grounds of access and transport difficulties, of unsuitability or of ethical objections (say to a military job) ? It could also be said that some people may be deemed unsuitable for some ELR jobs – an extreme case, perhaps, but people caring for children would have to be checked for their suitability to work with children.

An ELR scheme would involve jobs in or for the public sector which have some similarities with jobs already undertaken by public sector workers. There would, though, not be direct substitution of ELR jobs for 'mainline' public sector jobs in that there would have to be a net creation of jobs. However, there clearly would be issues arising in so far as workers on ELR jobs perform similar tasks to worker on 'mainline' public sector jobs but at considerably lower wages.

The relationship between ELR employment and the laws governing employment contract appears not to have been discussed within the ELR literature. We would assume that an ELR job would be covered by employment law. However, one intention of the ELR scheme is that ELR employment is akin to a buffer stock, and this would imply that an ELR worker can be readily 'bid away' from the buffer stock into 'mainline' employment. This implies that the ELR worker could leave at, literally, a moment's notice : that is, there would be no obligation for an ELR worker to have to provide the employer with any notification that they were moving on. Indeed in the nature of the ELR proposals it would be detrimental if notice had to be given.

It is also the case that the ELR proposals are to provide some work for those who would otherwise be unemployed : but it is any job rather than a specified job. Thus the employment contract governing ELR workers would presumably be of the form that anything could be required of the ELR worker.

The ELR proposals have been discussed as though all paid employment was on a full-time basis, and no consideration appears to have been given to the implications that much employment is on a part-time basis.[13] It has not , for example, been specified whether part-time work would be provided through an ELR scheme, and if so on what basis. Yet if part-time work was not provided, then those losing a part-time job would find themselves without any income. It could also be argued that a person currently working part-time in the private sector should be eligible for an ELR job on the basis that such a person may be currently underemployed (and seeking to work on a full-time basis). The consideration of part-time work is not central to an ELR scheme, but does introduce further questions concerning the availability of jobs for an ELR scheme, the heterogeneity of workers and the cost of an ELR scheme.

Mitchell and Watts (1997, p.443) indicate that "the unemployment benefits scheme would be abolished." In the absence of any 'safety net', the stringency of the application of rules governing which jobs have to be accepted would substantially affect the nature of an ELR program. But the 'buffer stock' notion of the ELR scheme would be much undermined if individuals could choose which ELR jobs to do and which not to do (without penalty).

Unless the ELR scheme worked perfectly in the sense that jobs were always available at a moment's notice, then some form of unemployment benefit scheme would still be required. This could, of course, take the form of requiring the unemployed to turn up at a designated place, receive the ELR wage (and then go home or sit at the ELR office).

The possible abolition of unemployment benefits (and in effect replacement by an ELR scheme) raises the issue of who would be required to undertake ELR employment (or otherwise receive no income) and who would, in effect be exempt (and receive forms of income support from the State). It would be presumed, for example, that those deemed incapacitated would receive some form of income support (invalidity benefit and the like), and not be required to take an ELR job.

7. ELR, the NAIRU and inflation

Any proposals to secure high levels of employment runs into the charge that they would be inflationary, and the ELR proposals are no exception. There are two types of reason why the ELR proposals may be seen as inflationary. First, the creation of ELR jobs involves deficit spending and the creation of HPM, which can be seen as generating inflation.[14] The arguments concerning money and deficits have been examined above, and are not further discussed here.

Second, the level of unemployment achieved could be below a supply-side determined inflation barrier : for example the NAIRU (non accelerating inflation rate of unemployment). In this discussion we will use the term NAIRU, though it should be interpreted as the general notion that there may be supply-side constraints on the achievement of full employment. Thus, it could be argued that the ELR would lead to accelerating inflation, since unemployment would fall well below the NAIRU level.

The main response from the advocates of ELR has been to compare those employed on the ELR to a 'buffer stock' from which employers can draw when labor is required (as further discussed in the next section). Thus the stock of unemployed under present policies and the stock of ELR employees are viewed as analogous. In both cases they form an available pool of labor, and in both cases employers would have to pay more than those in the pool receive (more than unemployment benefits in the case of unemployed, 'base wage' in case of ELR employees). The

ELR scheme is viewed as preferable to unemployed on benefits in that the ELR scheme involves people being in work, retaining attachment to the work force etc..

The analysis of how the introduction of an ELR scheme could impact on the level of employment in the private sector can depend on how inflation barriers to full employment are conceptualized. The NAIRU (non accelerating inflation rate of unemployment) is the best known expression of an inflation barrier, but there are different conceptualizations of the NAIRU, three of which are mentioned here. The first is that the level of the NAIRU reflects various imperfections in the labor market and the second is that the NAIRU is the level of unemployment which disciplines workers sufficiently to hold real wages in check. A third is that the NAIRU corresponds to a lack of productive capacity to provide non-inflationary full employment.

Considering the first mentioned conceptualization of the NAIRU, it could be argued that the institutional arrangements, laws governing the labor market and 'imperfections' of the labor market would be unaffected by the introduction of an ELR scheme. But the argument is made that the ELR workers are a more effective supply of labor to the private sector than unemployed workers are. "The buffer stock employees are more attractive [to potential employers] than when they were unemployed, not least because they will have basic work skills, like punctuality, intact" (Mitchell 1998, 551).

The second conceptualization of the NAIRU can be examined through Figure 1 in which the p-curve reflects the price, wage and employment decisions of firms and the w-curve the wage determination process (drawn from Sawyer, 1999 Figure 1). When the w-curve is based on efficiency wage considerations (and the drive by firms to extract effort from workers), then the position of the w-curve depends on the level of unemployment benefits. Workers' effort is viewed as depending on actual real wages relative to an alternative income which is based on the

unemployment rate and unemployment benefits. with the introduction of an ELR scheme, the alternative income would be based on the wages paid to ELR workers and the proportion of workers in ELR employment. Under the assumption that a job with an ELR wage is perceived as better than unemployment on benefits, then the alternative income is higher, and in effect the w-curve shifts upwards following the introduction of an ELR/JG scheme. In general this would be seen to lead to a lower level of private sector employment.[15]

A similar conclusion is reached by Kriesler and Halevi (2001) when they state the following. "In the advent of inflation, without the [ELR] scheme, people dropping from employment to unemployment reduce inflationary pressure both by reducing demand and by reducing the militancy of the labor force (like the reserve army). With a 'buffer' scheme, people will drop from employment to 'buffer' employment. Since the loss in wages and status, etc. is much reduced, this means that more people will have to change state in such a scheme. NAIBER (the "Non-accelerating inflation buffer employment share, (which) is the ratio of buffer stock employment to total employment that is required to stabilize inflation" (Mitchell 1998 547n) must be higher than NAIRU. This means that there is a clear opportunity cost of the scheme. Namely, that x per cent of the labor force, where x percent = NAIBER – NAIRU, will now be in 'buffer' employment whereas previously they were 'fully' employed." (pp.77-8).

Figure 1 near here

On the third conceptualization, an ELR scheme would have little impact, simply because it would not contribute to the productive capacity of the private sector. The NAIRU is generally interpreted as an inflation barrier to high levels of employment arising from constraints and imperfections in the labor market. I have argued elsewhere (Sawyer, 2002) that the constraints arise from lack of productive capacity (and that aggregate demand has a key role to play). When

consideration is given not only to the scale of aggregate productive capacity but also to its geographical distribution, then it is argued that this view of the NAIRU is a formulation of a structuralist view of inflation. “It is thus evident that a prerequisite of full employment is a proper relation between existing equipment and available labor. The volume of equipment must be adequate to employ the available labor and still allow for reserve capacities. If the maximum capacity of equipment is inadequate to absorb the available labor, as will be the case in backward countries, the immediate achievement of full employment is clearly hopeless. If the reserve capacities are non-existent or insufficient, the attempt to secure full employment in the short run may easily lead to inflationary tendencies in large sections of the economy, because the structure of equipment does not necessarily match the structure of demand” (Kalecki 1944, 361-2).

We have to consider a number of different possible scenarios. Consider first the case where the NAIRU is unaffected by the introduction of the ELR : that is not to say that the NAIRU is a constant over time or place but rather that the ELR does not itself lead to a change in the NAIRU. The NAIRU would need to be relabeled, as full employment would be ensured by the ELR (subject to caveats expressed elsewhere in this paper) : following Mitchell (1998) and Mitchell and Mosler (2001) this can be called the NAIBER, the non-accelerating inflation buffer employment ratio. We use the term private employment to describe employment outside of the ELR scheme : this is a shorthand term as such employment includes private sector and public sector employment. It is that employment which is generated by aggregate demand but is not than directly attributable to the ELR scheme. Whatever the level of private employment is, the ELR employment would be the balancing item to yield full employment. When actual private employment is at the NAIBER, the ELR employment would seem to be equal to the NAIRU (though ELR employment may draw people into the work force, and the extent of ELR

employment may then be greater than the measured NAIRU using current measures of unemployment).

As aggregate demand fluctuates so will the level of private employment, and (if the NAIRU approach is relevant) then inflation would also fluctuate. High levels of aggregate demand (such that private employment leaves the buffer stock employment below the NAIBER) would be inflationary, and presumably would be dealt with in the way in which demand inflation is currently approached, that is by deflating aggregate demand for private employment. "Countercyclical fiscal and monetary policy still can be used if desired in an attempt to manipulate private sector demand (and the size of the ELR pool) to achieve greater price stability" (Wray 1998b, 177).

However, the presence of ELR adds to (private) aggregate demand in two ways : the wages paid to ELR workers are spent and the demand for materials and the support staff add to the level of aggregate demand. This additional aggregate demand would raise demand above the NAIRU level, thereby giving an inflationary push.

Now consider whether the NAIRU may change under the impact of the ELR scheme. The argument is put that the ELR workers are a more effective supply of labor (to the non ELR sector) than unemployed workers are. In this way the ELR would mean that the NAIBER is lower than the NAIRU. This assumes that the NAIRU is in effect a labor market phenomenon, depending on the skills and work attitudes of those not in 'mainline' employment.

The difference in size between the NAIBER and the NAIRU would depend on the precise nature of the ELR scheme and the nature of the unemployment benefit system which it replaced. For example, an ELR scheme which required constant attendance at ELR employment with little scope for job search, little opportunity for training, and demoralizing low skill jobs replacing an

unemployment benefit scheme which provided help with job search and encouraged training, may well lead to a worsening of the situation such that the NAIBER is greater than the NAIRU.

A third possibility is that there is no NAIRU, so that the achievement of full employment (with or without ELR) does not involve inflationary pressures. The achievement of full employment is then simply (!) a matter of sufficient aggregate demand.

8. Unemployment as a buffer stock : ELR workers as industrial reserve army.

Unemployment can be envisaged in many ways, and various analogies be drawn. In the neoclassical literature, unemployment may be treated as a choice, akin to taking of leisure. The industrial reserve army is a well-known phrase used to 'describe' unemployment. In the discussions on the unemployment and workers in a ELR scheme have been described as a buffer stock. "In a sense, ELR allows government to "make a market in labor" by establishing a "buffer stock of labor" as it stands ready to "buy" unemployed labor at a fixed price or to "sell" (provide it non-ELR employers) at a mark-up. As is the case in all buffer stock schemes, that commodity used as a buffer stock is always fully employed. It also always has a very stable price…" (Wray 1998a, 542). It may be debatable as to whether wheat held in a grain store as a buffer stock can be described as 'fully employed'.

In the usual buffer stock approach, in any time period there is a difference between the flow demand and the flow supply, and the difference is absorbed by a change in the buffer stock. In that context, buffer stock schemes have suffered from the problems of holding sufficient stock to accommodate fluctuations in demand (and indeed supply) and setting a price which is compatible with a broad balance between demand and supply over the course of the cycle (for otherwise stocks tend to cumulate or decumulate). In the case of labor, unemployment could be viewed as the difference between the flow demand for labor and the flow supply, and hence could be seen

as a buffer flow. However, the terminology is confused in that unemployment can be treated as a stock into which there are inflows and outflows. But whatever the terminology, the ELR scheme is viewed as seeking to absorb the difference between (private) demand for labor and the supply of labor.

In the usual buffer stock approach, in any time period there is a difference between the flow demand and the flow supply, and the difference is absorbed by a change in the buffer stock. In that context, buffer stock schemes have suffered from the problems of holding sufficient stock to accommodate fluctuations in demand (and indeed supply) and setting a price which is compatible with a broad balance between demand and supply over the course of the cycle (for otherwise stocks tend to cumulate or decumulate). In the case of labor, unemployment could be viewed as the difference between the flow demand for labor and the flow supply, and hence could be seen as a buffer flow. However, the terminology is confused in that unemployment can be treated as a stock into which there are inflows and outflows. But whatever the terminology, the ELR scheme is viewed as seeking to absorb the difference between (private) demand for labor and the supply of labor.

The concept of a buffer stock is generally applied to a homogenous product with a uniform price. Labor is far from homogenous, and the ELR would set a price floor for all types of labor, but one which would only directly effect the price of unskilled labor. The ELR scheme and the unemployment benefits are comparable in setting a numeraire and for the operation of a buffer stock. The term ‘buffer stock’ of ELR employment may though give a false impression of the stability of ELR employment (and of unemployment). The stock of unemployment is in constant flux both in terms of quantity and composition.

The ‘buffer stock’ nature of ELR employment is seen to generate price stability. “Price stability would be maintained by paying these ‘buffer stock’ employees the award minimum” (Mitchell and Watts 1997, 441). But “from time to time, there will be pressure for an upward revision of the BPSW [basic public sector wage]. As the overall price level will not be held constant, and as there may be substantial forces in modern capitalist economies that generate trend increases of the price level, it is possible for the ‘real’ (inflation-adjusted) BPSW to fall over time – generating a need for an adjustment. In addition, there will be obvious pressures by labor to raise the BPSW – just as there are pressures currently to increase the minimum wage. When the government raises the BPSW, this in effect devalues the currency by redefining the amount of services that must be provided to the government to obtain the means of paying taxes. …. Again, other wages (and prices) will also adjust upwards to reflect the devaluation – but there is no reason to suppose that this will be ‘inflationary’. Rather than ‘causing inflation’, the devaluation will merely take account of inflation that results from factors that have little to do with the ELR policy” (Wray 1998a, 136).

“Thus ELR could provide something similar to ‘unemployment compensation’, but would differ from the current program in three significant ways. First, coverage could be universal (for example, all newly unemployed would qualify, regardless of the reason for unemployment); second, the job search would be more closely monitored and assisted … ; and third, the ‘unemployment compensation would be equalized” (Wray 1998b, 127).

These differences between benefits paid to the unemployed and a wage paid for employment in an ELR scheme may be significant and point to some advantages for the ELR over unemployment benefits. However, whether these would constitute advantages depend on the design of the ELR and of the current unemployment benefits scheme. In a range of countries,

agencies closely monitor the unemployed and assist in job search. However, the point to be made here is a conceptual similarity between unemployment compensation and ELR : both provide a buffer stock for the labor market, and both provide a 'floor' for wages. It may be that a worker in the ELR scheme would 'deteriorate' less than one in an unemployment compensation scheme, and in that sense the ELR may provide a 'better' buffer stock arrangement than unemployment compensation. It may be that the ELR provides a 'clearer' floor to wages than does unemployment compensation. However, the way in which conceptually unemployment benefits provide a numeraire for the economy can be seen in some models of the NAIRU; for example, Sawyer (2002) provides a model of the NAIRU in which wages are set relative to the level of unemployment benefits, and prices are set relative to wages. The level of unemployment benefits becomes in effect the numeraire of the economy (wages are set relative to unemployment benefits, prices are set relative to wages).

In present circumstances, a government hires workers at wages which are set by government (though influenced by private sector prices). There are then multiple prices at which a government hires labor, and it may get the relative prices wrong (in the sense that labor of type A is readily available at the wage *a* but labor of type B is not so available at wage *b*). If a government hired on the basis of a fixed base wage (*b*) for unskilled labor and then set all other wages that it paid at multiples of *b*, depending on some skill factor multiplier, would that differ from an ELR system with respect to price stability ? The government may find that its 'multipliers' have to be adjusted but provided it maintained the base wage, then it would not contribute to inflation.

Thus contrary to the claim in the title of Wray (1998a), the ELR scheme does not give stable prices. It may be no more inflationary than the current arrangements, but also no less inflationary.

If the ELR could achieve stable prices by providing a fixed nominal anchor, then so could the present arrangements through the device of fixing unemployment compensation levels (or the minimum wage).

Unemployment, viewed as an 'industrial reserve army', which "during the periods of stagnation and average prosperity weighs down the active army of workers: during periods of over-production and feverish activity, it puts a curb on their pretensions" (Marx, 1867, 1976), serves to discipline workers. Kalecki (1943) argued that even though it was realized that a high level of employment required a high level of aggregate demand, and the government now had the techniques to secure a high level of demand, nevertheless substantial political obstacles to the achievement of full employment remained. In sum, Kalecki argued that full employment is unlikely to be sustainable because of the loss of "discipline in the factories" and "political stability". He continued by arguing that capitalism could only secure full employment with "fundamental reforms". More recently, the models of authors such as Shapiro and Stiglitz (1984) and Bowles and Boyer (1988) suggest that the achievement of full employment is precluded because of the effects on worker effort and thereby on labor productivity. Specifically, Shapiro and Stiglitz postulate that effort and labor productivity would fall to zero under conditions of full employment as the cost of job loss falls to zero.

When unemployment is viewed in this way, the ELR proposals would retain a cost of job loss in that wages and working conditions in the ELR sector would be relatively low. The ELR proposals would do nothing to change the role of the cost of job loss. This would imply that the cost of job loss would have to remain unchanged to achieve particular levels of work effort and inflationary pressures. The cost of job loss arises from a combination of the difference between current earnings and unemployment benefits and the expected duration of unemployment. Under

ELR proposals the cost of job loss would be the difference between non-ELR earnings and ELR earnings and the expected duration of ELR employment. Insofar as ELR earnings were perceived as higher than the current levels of unemployment benefits (after adjustment for work related costs), then the expected duration of ELR employment would have to be higher than the expected duration of unemployment under prevailing circumstances to generate the same costs of job loss.

9. Conclusion

One of the barriers to the achievement of a high level of employment is undoubtedly a lack of sufficient aggregate demand. The provision of sufficient aggregate demand is a necessary though not sufficient condition for the achievement of high levels of employment. As I have argued elsewhere (Sawyer, 1995, Arestis and Sawyer, 1998) there are other barriers to high employment, notably lack of productive capacity, inflation barriers, and balance of trade constraints, as well as political and intellectual constraints. The ELR addresses only the issue of insufficient aggregate demand, and not the other limitations. Further, it attacks the insufficiency of aggregate demand in a very particular way. There are other ways of tackling the aggregate demand problem, including increases in 'mainline' public expenditure, reduced taxation, stimulus for investment and of consumption. It has been argued here that these other measures form the basis of securing high levels of aggregate demand. There are well-known difficulties with the fine tuning of aggregate demand, and the measures mentioned may be viewed more in terms of 'coarse tuning' the economy. The ELR proposals could also be viewed in terms of fine tuning to secure high levels of employment, though doubts have been raised above as to whether it would constitute full employment (rather than underemployment and some unemployment under another name). "Full employment and stable prices are the promised outcome. Best of all, according to the 'taxes drive money' view, it is not going to cost us anything" (Mehrling 2000, 400). This paper has argued

that it does not offer price stability, though it may offer high levels of employment without any greater inflationary pressures than would prevail otherwise. It has also been argued that it may offer work for all, but this would involve significant underemployment and unemployment under another name.

Endnotes

***** This paper was written while I was Distinguished Visiting Fellow at La Trobe University, Melbourne, Australia : I am grateful to the University for its hospitality and provision of facilities. I am grateful to Philip Arestis, Peter Kriesler, John King and Mark Setterfield for comments on this paper and discussions on its general subject matter. I am also grateful to two anonymous referees for detailed comments and suggestions on an earlier draft.

1 The recent literature includes (in chronological order) Gordon(1997), Mitchell and Watts (1997), Mosler (1997), Forstater (1998), Mitchell (1998), Wray (1998a, 1998b), Mitchell (2000).

2 Social welfare provision would continue for groups who are deemed to be unable to work or for whom paid work is seen as inappropriate. It is unclear as to whether groups such as pensioners would be able to secure work if they wished.

3 Unemployment benefits would themselves disappear with an ELR scheme, as noted below.

4 Three sets of commentators on the ELR proposals write as follows. “Deficits financed by money creation should thus be the norm since balanced budgets (and more so surpluses) will generally retard economic activity …” (Kadmos and O’Hara 2000, 2).

“At the theoretical level, the concentration on the nature of money and modern monetary systems is due to the financing of the policy proposals being resolved by reference to the allegedly more

or less effortless capacity of government to create economic activity by issuing fiat money …" (Aspromourgos 2000, 143).

"The ELR modern government is supposed to fix the price of labor *w*, absorb all the labor supplied at that price L^q, financing the spending by printing money M¸ and absorb any excess money by issuing bonds, *not* by raising taxes" (Mehrling 2000, 401).

5 The term high level of employment is used here in part to avoid the issue of what constitutes full employment. Some advocates of the use of functional finance (as to some degree Lerner as noted below) would argue that demand-deficient unemployment can be eliminated through budget deficits but frictional and structural unemployment cannot. In the ELR proposals, the intention would be for absolute full employment in that a job (of sorts) would be provided for all who wished to engage in paid employment.

6 There are also the well-known political constraints on the achievement of full employment which Kalecki (1943) forcibly outlined.

7 The usual assumption is that government provides these jobs. But Kadmos and O'Hara (2000) report (14, fn. 17) that "Despite this specific statement that BPSE [basic public sector employment] would be provided by government and non-profit organizations, in private correspondence Wray … is emphatic that 'you attribute to me the idea that the ELR workers will be employed by the … government. No … Mine would be employed mostly by private non-profit organizations'".

8 See comment above on Gordon's argument for the creation of often sophisticated jobs and his assumption of payment at the minimum wage.

9 As King notes, Kitson, Michie and Sutherland, (1997b) provide estimates for a million jobs of around £7 billion or about 2.5 percent of tax revenues. However these jobs consisted of 750

thousand ‘mainline’ public sector jobs paying the average wages of such jobs, and 250 thousand jobs indirectly created (see also Kitson, Michie and Sutherland, 1997a).

10 Noting here again as mentioned above that functional finance deals only with demand-deficient unemployment.

11 Source: U.S. Bureau of Labor Statistics (http://data.bls.gov/servlet/SurveyOutput/Servlet) accessed 15th May 2002.

12 Calculated from tables in McDonough, M. and Machin, A. (2001).

13 The only mention I have found is “there is no reason why some individuals might not be allowed to work part-time. However, we assume throughout that employment is full-time to simplify calculations” (Wray, 1998, p. 126).

14 This is reporting views of others, not views which I share.

15 In the Figure, real wages would appear to be high. However, as argued in Sawyer (2002), the p-curve could well be upward sloping reflecting declining costs, and then real wages would decline following an upward shift in the w-curve.

References

Arestis, P. and Sawyer, M. "Keynesian policies for the new millennium." *Economic Journal*, 108 no. 1(January 1998): 181-195.

Aspromourgos, T. "Is an employer-of-last-resort policy sustainable ? a review article." *Review of Political Economy*, 12 no. 2 (2000): 141-155.

Barham, C. "Economic inactivity and the labor market." *Labor Market Trends*, February 2002: 69-77.

Bowles, S. and Boyer, R. "Labor discipline and aggregate demand: a macroeconomic model." *American Economic Review*, 78 no. 2 (May 1998) : 395-400.

Forstater, M. "Flexible full employment: structural implications of discretionary public sector employment." *Journal of Economic Issues*, 32 no. 2 (June 1998) : 557-563.

Friedman, M. "The quantity theory of money: a restatement.", in M. Friedman (ed.) *Studies in the Quantity Theory of Money*, Chicago: University of Chicago Press, 1956.

Gordon, W. "Job assurance – the job guarantee revisited.", *Journal of Economic Issues*, 31 no. 3 (September 1997): 826-33.

Kadmos, G. and O'Hara, P. "The taxes-drive-money and employer of last resort approach to government policy.", *Journal of Economic and Social Policy*, 5 no. 1, (2000): 1-23

Kalecki, M. "Political aspects of full employment.", *Political Quarterly*, 14, (1943): 322-31. reprinted in M. Kalecki, *Capitalism: Business Cycles and Full Employment Collected Works* vol. 1 (ed) J. Osiatyński, Oxford, Clarendon Press : 347-56 to which the page references refer).

Kalecki, M. "Three ways to full employment." in Oxford University Institute of Statistics, *The Economics of Full Employment*, Oxford: Blackwell, 1944: 39-58, reprinted in M. Kalecki,

Capitalism: Business Cycles and Full Employment Collected Works vol. 1 (ed) J. Osiatyński, Oxford, Clarendon Press : 357-376 to which the page references refer).

King, J.E. "The last resort ? some critical reflections on ELR.", *Journal of Economic and Social Policy*, 5 no. 2, (2001) :72-76.

Kitson, M., Michie, J. and Sutherland, H. "The fiscal and distributional implications of job generation.", *Cambridge Journal of Economics*, 21, no. 1, (1997a) : 103-120

Kitson, M., Michie, J. and Sutherland, H. " 'A price well worth paying ?' the benefit of a full-employment strategy." in J. Michie and J. Grieve Smith (eds), *Employment and Economic Performance: Jobs, Inflation and Growth*, Oxford: Oxford University Press, (1997b) : 234-53.

Kriesler, P. and Halevi, J. "Political aspects of 'buffer stock employment.', in E. Carlson and W.F. Mitchell (eds), *Achieving Full Employment*, *The Economic and Labor Relations Review*, supplement to vol. 12 (2001)

Lerner, A. "Functional finance and the Federal debt.", *Social Research*, (February 1943) : 38-51.

Lerner, A. *Economics of Employment*. Westport: Greenwood Press, 1951

McDonough, M. and Machin, A. "Analysis of the claimant count by age and duration including clerical claims." *Labor Market Trends* , 109, no. 7 (2001)

Marx, K. *Capital*, vol. 1. (translated by Ben Fowkes), Harmondsworth: Penguin Books, 1976 (first published 1867).

Mehrling, P. "Modern money: fiat or credit ?.", *Journal of Post Keynesian Economics*, 22 no. 3, (2000), 397-406

Minsky, H.P. *Stabilizing an Unstable Economy*. New Haven: Yale University Press, 1986

Mitchell, W.F. “The Buffer Stock Employment model and the path to full employment.” *Journal of Economic Issues*, 32 no. 2, (June 1998) : 547-555.

Mitchell, W. F. “The Job Guarantee in a small open economy”, in E. Carlson and W. F. Mitchell (eds), *The Path to Full Employment*, Economic and Labor Relations Review, (2000) : 89-116

Mitchell, W.F. and Mosler, W. “ Unemployment and fiscal policy.” in W.F. Mitchell and E. Carlson (eds.) *Unemployment: the Tip of the Iceberg*, Centre for Applied Economic Research, University of New South Wales, 2001

Mitchell, W. F. and Watts, M. “The path to full employment.”, *Australian Economic Review*, 31 no. 4, (1997) : 436-444

Mosler, W. “Full employment and price stability.”, *Journal of Post Keynesian Economics*, 20 no. 2, (1997) : 167-182.

Sawyer, M *Unemployment, Imperfect Competition and Macroeconomics : Essays in the Post Keynesian Tradition* . Aldershot: Edward Elgar, 1995.

Sawyer, M. “The NAIRU : a critical appraisal.” *International Papers in Political Economy*, 7, no. 2 (1999).

Sawyer, M, “The NAIRU, aggregate demand and investment.”, *Metroeconomica*, 53, no.1, (January 2002) :66-94

Shapiro, C. and Stiglitz, J.E. “Involuntary unemployment as a worker discipline device.” *American Economic Review*, vol. 74, no. 3 (June 1984) : 433-444.

Wooden, M. “The path to full employment ? ‘they’re dreamin’”, *Australian Economic Review*, 30 no. 4, (1997) : 445-7.

Wray, L.R. “Zero unemployment and stable prices.” *Journal of Economic Issues*, 32 no. 2 (June 1998a) : 539-545.

Wray, L.R. *Understanding Modern Money*, *The Key to Full Employment and Price Stability*. Cheltenham: Edward Elgar, 1998b.

Wray, L. R. “Understanding Modern Money” : paper presented at Workshop at Coffee, December 2001: accessed through web site of Coffee.

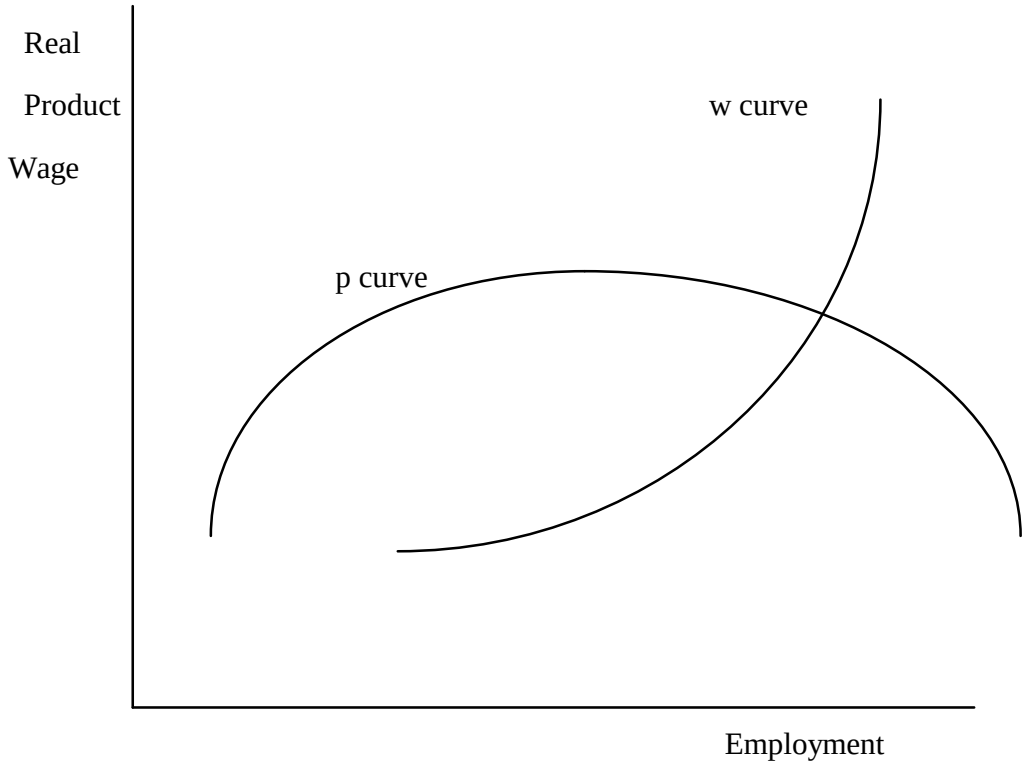

Figure 1: p- and w-curves