Green jobs: addressing the critical issues surrounding the environment, workplace and employment

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Abstract: The mission of the International Journal of Environment, Workplace and Employment (IJEWE) is to provide a forum for the discussion and analysis of the effect that achieving ecological sustainability will have on employment/unemployment and the nature of the workplace. Unfortunately, modern capitalism, as it presently exists, fails to provide full employment, a sufficient number of high quality jobs, or ecological sustainability. This paper demonstrates that all three goals can be promoted through the implementation of a Public Service Employment programme based on the principles of functional finance.

Keywords: sustainability; full employment; functional finance; ecological tax reform; public employment.

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1 Introduction

The mission of the *International Journal of Environment, Workplace and Employment* (IJEWE) is to provide a forum for the 'discussion and analysis of the effect that achieving ecological sustainability will have on employment/unemployment and the nature of the workplace.' IJEWE's stated subject coverage includes:

- Reconciling the potential conflict between achieving ecological sustainability and the full employment objective;

- Ecological sustainability and changing forms of employment;
- Ecological sustainability and the changing skills formation of the workforce;
- Ecological sustainability and the changing workplace and workplace relations;
- Ecological sustainability, employment, and ecological tax reform.

For the past eight years, I, along with a number of colleagues, have been involved in a project promoting a full employment policy that I have argued has the potential to address all of these critical issues [1–6]. This may have the effect of making the proposal appear a bit Utopian, but as ecological economists have been arguing for some time, the process of *envisioning a sustainable future* is a necessary first step in formulating and implementing effective policies [7–11].

The paper proceeds as follows. In the first section, the justification for the proposal is outlined: modern capitalism fails to deliver on either full employment or ecological sustainability, and conventional approaches to each of these problems not only are unlikely to succeed, they exacerbate the other problem. The 'bare bones' version of the proposal is laid out in the second section: a Public Service Employment (PSE) programme based on the principles of functional finance. This programme is shown to address both Keynesian and structural unemployment, and unlike traditional Keynesian approaches, addresses the issue of the functionality of unemployment in capitalism. The third section shows how a PSE programme can be designed to promote environmental sustainability. First, PSE activities may be designed to use fewer or no non-renewable natural resources and to not pollute (or pollute less). They may also be located in areas where the least ecological harm may be done. Second, PSE jobs can provide environmental services that will support sustainability. The fourth section addresses how a PSE programme can be designed to promote changes in the workplace throughout the economy. By serving as a 'benchmark' job, PSE employment can be used to pressure firms to offer better wages, benefits, and a higher quality workplace environment. The fifth section outlines ways in which ecological tax reform may be based on the principles of functional finance, and the final section makes some brief concluding remarks.

The purpose of this paper is not to provide a complete explication of every aspect of the proposal. Rather, it is to introduce readers of IJEWE to this proposal, present a summary overview of the ways it dovetails with the mission of the IJEWE, and to provide references to the literature where various aspects of the proposal are elaborated more fully. Finally, it is my hope that this paper will inspire greater discussion and debate about any and all of these ideas among supporters of full employment and ecological sustainability, and to promote more research in these areas.

2 Environment, workplace, and employment in late capitalism: justification for the proposal

The point of departure for the argument of this paper is that unregulated or badly regulated capitalism is both macro-economically unsatisfactory and environmentally unsustainable. On the macro-economic side, the key issue is the problem of involuntary unemployment. In addition, it is not only the quantity but also the quality of jobs that is of concern. Of course, the two are related: significant unemployment means less job

security, which decreases overall job satisfaction, and firms are less likely to make other improvements in the workplace environment when jobs are very scarce.

An additional challenge stems from the fact that not only are traditional policy approaches to both unemployment and ecological destruction unlikely to achieve their goals, even if they were effective, *the achievement of full employment via the conventional approach would likely exacerbate environmental problems and achievement of ecological sustainability via the conventional approach would likely exacerbate the unemployment problem*. Therefore, within the conventional frameworks, full employment and environmental sustainability seem to be incompatible goals.

Even the unemployment problem itself is not so simple. Involuntary unemployment can result from deficiencies in aggregate demand as well as structural and technological change. Keynes [12] demonstrated that capitalism, as a monetary production economy, is inherently demand constrained. The inherently demand-constrained nature of capitalist economies resulting in involuntary unemployment may be referred to as the *effective demand problem*. Even if the effective demand problem could be rectified by government policy, changes in labour supply, capital and labour-displacing technological change, and changes in the composition of final demand impose intersectoral shifts in labour requirements unlikely to be satisfied by market forces without generating unemployment and other macro maladies [13–15]. These structural and technological obstacles to full employment may be referred to as the *structural change problem*.

Just as policies addressing unemployment can further environmental destruction and policies promoting ecological sustainability can exacerbate unemployment, traditional policies dealing with the effective demand problem can exacerbate the structural change problem, and vice-versa. This is because, on the one hand, the structural change problem worsens at higher levels of employment and capacity utilisation, and on the other hand, because the traditional approach to dealing with structural rigidities has been the promotion of economic flexibility through unemployment and excess capacity.

A private sector economy stimulated to full employment via Keynesian demand management will experience bottlenecks in production and other structural rigidities that result in unemployment, inflation, and sluggish growth [13]. In addition, Keynesian analysis does not recognise the *functionality* of unemployment and excess capacity in capitalist economies. Firms plan reserve capacity in order to be able to respond to market changes. This translates into excess capacity at the industry and economy-wide levels. Reserve armies of labour are also reproduced in the course of capital accumulation, and the existence of unemployment holds down wages and disciplines workers, and provides a pool of workers available to firms as the economy expands. Central banks demonstrate their understanding of the functionality of unemployment when they increase interest rates in response to rising levels of employment and capacity utilisation [16]. Solutions to the problem of unemployment must address the issue of functionality.

In addition, even if Keynesian demand management could achieve full employment, it would be environmentally destructive. Because competition compels firms to base their decisions on private cost minimisation, there are considerable obstacles to producing green products, utilising cleaner technologies and developing and implementing alternative energy. Absent a comprehensive environmental programme, expanding the private sector through Keynesian stimulus all but assures increased use of non-renewable resources, more pollution, and more products with short life cycles and that harm the environment. Pumping up the private sector does not address issues regarding the

composition of output and the technological structure of production, so crucial for sustainability [17,p.113,(n8)].

A comprehensive sustainability programme is necessary to shift modern capitalist economies on to a sustainable path. Meeting the biophysical and ecological conditions for a sustainable economy means satisfying certain 'sustainability rules' regarding rates of non-renewable and renewable resource depletion and local and global quantities and qualities of emissions in relation to (local and global) assimilative capacities, and addressing such issues as biodiversity loss, soil erosion, deforestation, and more [9,11,18–19]. Such an initiative will have to address the technological structure of production and the composition of production and consumption. This will be disruptive, in the sense that there will be 'winners' and 'losers' – products, occupations, skills, technologies, firms and industries may become obsolete, new ones will be required, some will become less important, others will become more important. These kinds of structural and technological transformations will exacerbate the structural change problem, already a significant challenge without a major environmental policy programme. Absent an effective full employment programme, such an initiative will likely exacerbate the unemployment problems of capitalist economies.

What is necessary is an approach to unemployment that can address both the effective demand and structural change problems, including the functionality issue, and that is also compatible with environmental sustainability. In other words, the question is whether *flexible, sustainable full employment* is possible. A public service employment programme can be designed that not only promotes both flexibility and sustainability, but that may serve as a vehicle for social policies that can improve the workplace environment as well.

3 Full employment and price stability: the 'bare bones' version of the programme

The Public Service Employment (PSE) programme being proposed here has been referred to as the government as an "employer of last resort" or "job guarantee" programme [17,20]. The federal government offers a PSE job to anyone ready and willing to work for a basic PSE wage-benefits package. Expenditures on the programme would be permitted to increase the size of the federal government's budget deficit, in other words, the budget would be managed according to the principles of "functional finance" [21–22]. This requires a 'modern money' system, that is, a national fiat currency that is not fixed to a commodity or another nation's currency (no gold standard, currency board, or 'pegged' currency).

The PSE programme, by creating an infinitely elastic demand curve for labour, thus acts as a strong counter-cyclical fiscal stabilizer. The deficit expands as the economy turns downward, and contracts during economic expansion. Aggregate demand is thus always maintained at the full employment or near full employment level, with only the proportion of private and regular public-sector employment to PSE employment changing over the business cycle. The programme thereby addresses the effective demand problem.

Successfully solving the effective demand problem, though, can exacerbate the structural change problem. High levels of employment and capacity utilisation can result in production bottlenecks and other structural problems, including inflationary pressures. This is why central banks, national governments, and international organisations have

resisted policies promoting full employment and even actively seek to maintain a certain amount of excess capacity and a reserve army of unemployed, for example by raising interest rates. Excess capacity adds to system flexibility, enabling capital accumulation otherwise foregone due to structural rigidity. A reserve army of unemployed helps to hold down wages, discipline workers, and provide a pool of labour from which firms can draw during expansion.

Unlike traditional Keynesian demand management, the PSE approach also addresses the structural change problem and recognises the functionality of unemployment. Offering the jobless employment in the PSE sector permits full employment without the rigidities associated with a private sector operating at or near full employment. PSE activities can be designed so as to avoid structural bottlenecks, and the programme itself maintains something of a 'reserve' of labour ready to enter the private sector, but without the social and economic costs of unemployment.

In addressing the functionality issue, the PSE approach continues to provide a pool of labour from which the private sector can draw. In fact, it may perform this function much better than a reserve of unemployed, since it is now known that unemployment leads to deskilling and even un-employability, while PSE jobs can maintain and even enhance skills and knowledge. In terms of the relative bargaining power of capital and labour (which is how unemployment impacts wages and discipline), a PSE programme can affect both sides of the table. On the one hand, workers will always have the option of taking a PSE job; on the other hand, firms will always have the option of hiring out of the PSE pool. As we will see, a PSE programme can be designed to promote better wages and working conditions.

4 Public employment and environmental sustainability

There are two important ways in which a PSE programme may be designed to promote environmental sustainability. First, since the purpose of PSE activities is not to make profits, they do not have to be organised around private cost-minimising 'efficiency' criteria. Instead, the PSE activities should be designed and evaluated according to alternative 'social', 'macro' or 'environmental' efficiency criteria. The idea is akin to Schumacher's [23] "appropriate technology": a more labour-intensive method of production may make sense even where more capital-intensive methods are available. PSE activities can be designed that use no or fewer natural resources, that do not pollute or pollute less, and they may be located in areas where the least ecological harm may be done. Even if the activities performed no positive environmental tasks, the outcome will be more sustainable than if the private sector were stimulated to full employment.

And yet PSE activities can be designed to perform environmental services. A Green Jobs Corps has the potential to promote ecological sustainability in a variety of ways. Some examples of major areas where contributions can be made include community-based (and some industrial) recycling efforts (including reuse and repair); improved insulation and weather proofing for residential and some commercial structures; vanpooling; rooftop gardening and urban landscaping; increased use of solar energy in the public infrastructure (streetlights, school crossing lights, construction warning signs, billboards); monitoring and enforcement; environmental education; and research support (see [5–6] for expanded discussions of these and other examples and

additional references). These are only some examples of the kind of environmental benefits that can flow from a PSE programme.

While most of these activities do not require highly specialised skills, there are nevertheless considerable potential learning-by-doing effects. The acquired skills may be taken by the participants back into the private sector, further promoting sustainability. In addition, the general increased awareness of environmental and ecological issues of participants and the public resulting from such a programme can over time contribute to changes in consumption patterns, so vital for long-term sustainability in industrialised nations.

5 Public employment and the workplace: the job guarantee as a vehicle for social policy

A PSE approach to full employment and price stability can also serve as the basis for social policy with regard to the workplace. Under such a programme, a wide variety of workplace issues may be addressed that have been difficult to influence through direct legislation.

To understand how this might work, first consider that workers always have the option to take a PSE job. Now imagine what would happen in a country like the USA that lacks universal health care if the PSE wage-benefits package included health insurance. Employers in the private sector would have to match the PSE wage-benefits package line by line, or in some other compensating way. Private firms would be encouraged by market pressures to either offer health coverage or compensate in some alternative way (higher salary, greater opportunities for career advancement, other benefits, or some other attractive offer). Failure to do so would run the risk of losing workers to the PSE programme and an inability to attract workers out of the PSE programme.

Similarly, since the PSE wage will be the *de facto* minimum wage (remember that the real minimum wage in an economic society with a semi-permanent pool of unemployed is zero), increases in the PSE wage could also be used to pressure private firms to offer higher wages (or, again, some other compensating feature of their offer). Consider if child-care were included in the PSE programme. The same principle would also hold for worker health and safety issues, issues regarding administration of work rules (handling grievances), and virtually any and every aspect of the job and workplace. By serving as a 'benchmark' for the rest of the economy, PSE employment may be used to increase the quality of private sector (and even other public sector) jobs.

6 Functional finance and ecological tax reform

A PSE programme based on the principles of functional finance can be effectively combined with ecological tax reform to further promote environmental sustainability. Functional finance is the approach to budgetary policy appropriate for a "modern money" economy [6,24]. Modern money is state fiat (or Chartalist) money that is not on a gold standard or backed by any other commodity, or tied to any other currency (no pegged currencies or currency boards) [25–26]. In other words, modern money operates with flexible exchange rates. As formulated by Lerner [21], functional finance means that government spending, lending, borrowing, taxing, buying, and selling should be judged only by the *effects* such actions have on the economy and society, and not whether they

accord with the tenets of "sound finance." No particular relation between, for example, government spending and tax revenues is "good" or "bad" in and of itself, independently of the impact the fiscal stance has on the economy. Whether a budget deficit is good or bad depends on the economic conditions that hold at the time and the goals of society.

It has been shown that under a modern money system, neither taxes nor bonds finance government spending [27]. Taxation and bond sales do have other purposes, however. The purpose of taxation is "its effects on the *public* of influencing their economic behaviour" [28,p.131, original emphasis]. Bond sales are a means of managing bank reserves and short-term interest rates [21].

There are two broad categories of behaviour that taxes are intended to modify. First, taxes (and the requirement that government currency satisfy tax liabilities) create a demand for state money. This is what is meant by a "taxes-drive-money" system [20]. People accept state currency in exchange for goods and services or as a means of settling debt because they need it to pay taxes or know that it will be accepted by others who need it to pay taxes (or know it will be accepted by others, and so on). The second category of behaviours that taxation seeks to modify includes those deemed undesirable. A tax is levied on unhealthy products or technologies and undesirable behaviours to discourage people from purchasing and using these items or engaging in those activities. This kind of tax is *not* intended to raise revenue, but to influence behaviour. Likewise, tax credits or subsidies are also intended to affect behaviour.

Ecological tax reform (including taxes, tax credits, subsidies, quotas, and similar incentive-based regulations) fits very nicely into the functional finance framework. The distinction made by ecological economists between money as accounting information not subject to the laws of physics and real resources that are subject to biophysical limits is also consistent with the functional finance perspective [29,pp.178ff; some of the more "sound finance" conclusions drawn from this distinction by ecological economists, however, are not consistent with functional finance].

Ecological tax reform begins from the premise that current tax and regulatory structures of most modern nations are not consistent with ecological sustainability. Currently, taxes tend to discourage behaviours that should be encouraged and encourage behaviours that should be discouraged. Taxes on income and employment discourage work and jobs, and low taxes or even subsidies for resource extraction and dirty technologies encourage unsustainable pollution and depletion. In some cases, behaviours may be taxed in the right direction, but the taxes (or tax breaks) are either not strong enough or need to be coupled with complementary policies for a more comprehensive effect. A functional finance approach to ecological tax reform could begin with the elimination of federal payroll and income taxes and the adoption of certain land and building taxes. Taxes, tax credits, subsidies, quotas, licences, low- and no-interest loans, and other tax and regulatory policies can be used to penalise unsustainable behaviours and reward green ones.

This is not the place for a comprehensive outline of ecological tax reform. Many are already in existence and even functional finance and ecological tax reforms have been discussed in greater detail elsewhere [5–6]. The point here is to encourage the development of ecological tax reform along these lines, and to rid the proposals of their 'sound finance' principles. By integrating functional finance and ecological tax reform we can begin to seriously move toward both full employment and ecological sustainability.

7 Conclusion

Modern capitalism fails to provide full employment, enough high quality jobs, or ecological sustainability. A Public Service Employment programme based on the principles of functional finance can be designed that addresses these issues, and this paper has outlined some of the logic behind the proposal. The *International Journal of Environment, Workplace and Employment* is dedicated to exploring the possibilities for an economically and ecologically sustainable society. Future issues will include discussion and debate on these and other policies that can begin to address these critical issues surrounding the environment, workplace, and employment.

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