Binzagr Institute
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THE JOB GUARANTEE AND MODERN MONEY THEORY

Realizing Keynes's Labor Standard

EDITED BY MICHAEL J. MURRAY
& MATHEW FORSTATER

Binzagr Institute for Sustainable Prosperity

"Sustainable prosperity" is a holistic notion encompassing the physical, mental, environmental, financial, educational, and civic wellbeing of all individuals, families, neighborhoods, and regions throughout the world. In this sense, sustainable prosperity requires the development of a multifaceted public policy framework addressing the root causes of global, national, and regional socioeconomic challenges. It must guarantee all individuals a decent quality of life with dignity and the opportunity to be a member of an inclusive, participatory, and just society. Sustainable prosperity means that every decision we make, individually or collectively, must take into account its direct and indirect effects on people, on the planet, and on the economy. Crafting solutions to the complex challenges that confront us in the twenty-first century requires an interdisciplinary approach at the intersection of economics, ecology, and ethics. The Binzagr Institute for Sustainable Prosperity book series seeks proposals from a broad range of fields that encompass and further this philosophy. We welcome authored works or edited manuscripts that investigate socioeconomic inequality based on class, race, ethnicity, and/or gender, and that promote policies to further sustainable prosperity among marginalized groups. We especially encourage proposals that build on the Job Guarantee approach to full employment, financial sovereignty (functional finance), renewable energy, sustainable agriculture, environmental policies, local community development, local capacity building, social ecology, social venture partnerships, and social entrepreneurship.

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Introduction

In 1983, celebrating the centenary of Keynes's birth, Sir John Hicks wrote in *The Economist* that "The Keynes model is not just formally expressed in wage units—it is on a labour standard":

> A labour standard expresses the value of money in terms of labour, just as the gold standard expressed it in terms of gold. But the old gold standard did not just express it, it fixed it, for it had a mechanism for fixing it. Central banks stood ready to exchange money for gold, so long as their gold reserves lasted. When the reserves gave out, the standard would break down; but in normal times, if suitable measures were taken, one could be confident that this would not happen. The weakness of a labour standard is that it has no reserves. There is no bank, no authority, which can guarantee the convertibility of money into labour. So it is only a pseudo-standard . . . the major weakness of the Keynes theory, and of the policies that had been based on it, remained its labour standard. Why should the level of money wages be dependable? (Hicks 1983, 18)

Hicks highlights here what he considers the requirements necessary for a labor standard to function. There must be an authority that stands ready to convert money into labor, and money wages must be dependable. Because he did not see how these requirements would be fulfilled, Hicks viewed the labor standard as a major weakness of Keynesian theory and policy.

The idea of public service employment has been around for many years, decades, even centuries (Kaboub 2009). But it had never been put forward as a proposal that would satisfy the institutional requirements for a

functioning labor standard. In Warren Mosler's *Soft Currency Economics* (1995), the federal government (viewed as a consolidated Treasury and Central Bank) acts as the employer of last resort, converting money into labor at a fixed money wage. The scheme provides full employment and price stability, just as (in theory) the gold standard "fully employed" gold and maintained stable prices by fixing the price of gold in terms of the currency.

Beginning in 1996, a small group of economists began work to expand and elaborate this idea of a Job Guarantee (JG) program designed to satisfy the requirements for a functioning labor standard. Under the Job Guarantee program, government offers community service employment to anyone ready and willing to work who cannot find a job in the private sector or regular public sector, no means tests, no time limits. The program therefore acts as a powerful automatic stabilizer, with JG employment fluctuating counter-cyclically. When the economy is growing, the non-JG demand for labor increases and so the JG program will shrink as non-JG employers hire workers out of the JG program; if the economy should enter a recession, the non-JG demand for labor will fall, but instead of entering the ranks of the unemployed, workers will flow into the JG program. Full employment will always hold, with only the ratio of non-JG to JG employment varying over the business cycle. Instead of some workers alternating between employment and unemployment with the expansion and contraction of the macroeconomy, they will alternate between non-JG employment and JG employment.

JG experience prepares workers for post-JG work, whether in the private sector or in government. Thus, JG workers should learn relevant skills, and training and retraining should be an important component of every JG job. Actually, just remaining employed rather than entering the ranks of the unemployed will serve to maintain the skills and knowledge of workers, as unemployment has been demonstrated to result in the deterioration of skills and knowledge.

JG workers will be engaged in socially useful activities, but they will not duplicate things already being done in the private sector or regular public sector (unless there is a severe shortage of such services). Importantly, JG activities will not compete with the private sector and the public sector will not be permitted to substitute government employees with JG workers.

The JG program provides full employment without the structural rigidities normally associated with high levels of employment and capacity utilization. With the JG, there is always a pool of labor available to be

hired out of the JG program and into private firms. Currently, this kind of flexibility can only be maintained by keeping people unemployed. In other words, in the current system, flexibility comes at an unacceptably high cost. Firms will be much happier to hire out of the JG program rather than out of a pool of unemployed workers.

The Job Guarantee also allows for geographical flexibility, and therefore minimal dislocation for JG workers and their families, neighborhoods and communities. Firms are constrained by competitive pressures in their decisions concerning where to locate, but the same is not true of the public sector, including the JG program. Of course, there are still constraints on location for some public sector activities, and certain types of activities cannot be located just anywhere. However, many activities have no locational restrictions, and decreased costs of transportation and the expansion of information complexes have reduced such restrictions for many others.

There are significant regional and local differences in unemployment rates. Locational flexibility means that JG employment need not cause disruptive dislocation for workers. Rather, employment opportunities can be located where there are unemployed. The local administration of JG programs will facilitate this approach.

The national government pays the basic JG wage-benefits package, but local governments and neighborhood associations administer the program. Local administration has a number of advantages over a centralized bureaucracy. Local communities know what needs should be prioritized, and local traditions will be respected. The program promotes increased interaction with one's neighbors, and in this and other ways it can strengthen community ties. The program therefore promotes mutual aid and reciprocity. Family and neighborhood empowerment follows from a program based on cooperation and local development. Numerous environmental benefits are also possible.

Government budget deficits can be too large, but they can also be too small. A well-designed JG program ensures that the budget deficit is never too large or too small, preventing both unemployment and inflation. As long as there is unemployment, government hires workers, allowing the budget deficit to increase. The deficit will stop increasing when there is no more unemployment, and total spending in the economy is sufficient to purchase the full employment level of output.

The job guarantee is the only means of achieving the right to employment, found in numerous governmental and other documents, including the United Nations' Universal Declaration of Human Rights. Employment is also central to the Millennium Development Goals. Moreover, it is the

key to the attainment of many other important goals, including ample and adequate nutrition, housing and standard of living for all.

The question is not "can we afford full employment?" but, rather, "why should we put up with the tremendous social and economic costs of unemployment, when we can implement a job guarantee program to satisfy the requirements for a functioning labor standard?" To illustrate, Scott McConnell orientates readers with the Job Guarantee and its implementation within Modern Monetary Theory in Scott McConnell authors Chap. 1. Following Modern Money Theory, McConnell examines the role of taxes within a Job Guarantee. The establishment of a strong taxation system is one of the ways that a government drives the value of its currency. McConnell explores various taxation schemes to determine a more effective tax base. This chapter offers an alternative tax that will both drive the value of the currency while pursuing alternative policies to combat environmental pollution and resource use.

The next two chapters elucidate the Job Guarantee as a public policy to maintain full employment and promote macroeconomic stability for countries operating a sovereign currency. In Chap. 2, Murray cites the failures of contemporary New Keynesian policy and the need for an alternative public policy, one that is centered on the needs of Working People. Here, Murray advances a budget-neutral Job Guarantee program. Murray considers this the opposite extreme of a deficit-financed Job Guarantee. Since the macroeconomic outcomes of a deficit-financed JG are well established, Murray investigates the macroeconomic outcomes of a budget-neutral program, and argues that the implementation of the JG will likely not lie at either extreme. By simulating the macroeconomic outcomes of a JG operating at the budget-neutral endpoint, policy makers may use this outcome, in conjunction with the MMT-ELR research, to decide where on the financing spectrum they would like their JG to operate. The foundation of the Job Guarantee continues in Chap. 3; William Mitchell puts attention on how the JG program works as an employment buffer stock, and thereby provides price stabilization. Currently, governments have two broad buffer stock options when it comes to price stabilization: the unemployment buffer stock (NAIRU) and the employment buffer stock (JG). In this chapter, Mitchell juxtaposes the two buffer stock options from the point of inflation control with a discussion of where they fit into the literature on the Phillips curve and considers the macroeconomic efficiency implications of each.

Edward J. Nell pens Chap. 4. Here, Nell centers on modeling the Job Guarantee program within a monetary production framework for

capital-rich and capital-poor countries, and in each case the Job Guarantee program has to be managed differently.

Timothy Sharpe, Martin Watts and James Juniper examine the implementation of the Job Guarantee for the EU in Chap. 5. The authors extend the arguments made by Harvey (2013) and Wray (2013) in the previous edited volume to critically assess the options and implications—macroeconomic and financial—of financing and funding the Job Guarantee for a sovereign currency and non-sovereign currency government.

The next three chapters provide case studies for the implementation of the Job Guarantee program for the developed world, with specific focus on its financing and institutional design. In Chap. 6, Giuseppe Mastromatteo and Lorenzo Esposito address the institutional design of the JG proposal, stressing that it is the key to its political viability. State accountability and efficiency are vital issues that the authors address. In particular, the authors propose to set up a state regulator similar to a central bank, to supervise JG projects along with local controls to ensure the cost-effectiveness of the scheme. The authors also estimate the cost of a JG program for Italy and for the European Union. Chapter 7 is authored by Antti Alaja and Jouko Kajanoja. The authors examine the Paltamo full employment experiment that took place in the small municipality of Paltamo, Finland. In the late 1990s, a new debate started to emerge in the Northeastern Kainuu region of Finland. Regional councils debated on how to respond to high economic and social costs of peripheral long-term unemployment. This debate initially led to a new kind of full employment experiment that took place in Paltamo in 2009–2013. The chapter firstly summarizes the program and, secondly, refers to extensive research on the effects on employability and well-being in Paltamo. Thirdly, it is discussed if the experiment should be seen as new form of social policy, traditional active labor market policy, or as a post-Keynesian Job Guarantee program.

Continuing with case studies, in Chap. 8, Fadhel Kaboub presents estimates for the economic cost of unemployment and the financial cost of a Job Guarantee program in Saudi Arabia. Kaboub stresses implementers of the program must address the institutional features of the Saudi economy, workforce readiness and labor market regulations. The chapter also presents a set of financing mechanisms ranging from a full-scale MMT-style financing to more hybrid versions of private–public partnerships, social venture partnerships and social impact bonds.

The book caps off with Rohan Grey, who begs the question, who owns the intellectual fruits of job guarantee labor? Here, in Chap. 9, Grey begins by

introducing the major relevant intellectual property theory arguments, both in favor and against free and open access to the product of work funded by public funds, before turning to a critique of both sides based on the insights and arguments developed by the MMT/JG approach. Grey then articulates a proposal for a copyleft-inspired, knowledge-oriented JG model, drawing inspiration from historical cultural, educational and scientific job-creation programs, recent open access research initiatives in the USA and Australia, as well as Dean Baker's "Artistic Freedom Voucher" proposal. Finally, it concludes by emphasizing the importance of further exploration of the relationship between law, modern money and the digital economy.

Together, the chapters, while diverse in their individual focus, integrate the common theme: there must be an authority that stands ready to convert money into labor. The Job Guarantee program, operating under the principles of MMT, underpinned by Abba's Lerner's principles of functional finance, provides this authority. As such the Job Guarantee program provides for flexible full employment, promotes macroeconomic stabilization, and enhances social welfare through community-based, public service projects.

Michael J. Murray
Mathew Forstater

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Forstater is the recipient of a number of teaching awards and recognitions, including the UMKC Interdisciplinary PhD Student Council's Outstanding Faculty Award in 2003–2004. Forstater was cofounder of the Center for Full Employment and Price Stability, and he served as Director for its more than 15 years of operation. Forstater has served as an economic advisor in a variety of contexts, including a 2001 International Labour Organization sponsored mission to advise the Ministry of Labour of Argentina. His proposal for an increase in the minimum wage was made into law, and the employment program inspired by the work of CFEPS, known as *Plan Jefes de Hogar* (heads of household employment program), has been recognized by observers as central in reducing both unemployment and poverty in the aftermath of Argentina's economic crisis. Forstater has over two decades of experience in research, teaching, consulting and policy advising in macroeconomic policy, racial economic inequality and sustainable development. His work on "Green Jobs" goes back at least to 1997, with over ten refereed journal articles and monographs on issues of employment and environmental sustainability. Forstater's *Little Book of Big Ideas: Economics* (2007, Chicago Review Press) has been translated into Estonian, Dutch, Swedish, Spanish, French, Turkish and Chinese.

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Kaboub earned his bachelor's degree in economics from the University of Tunis, and his Master's and PhD in Economics from the University of Missouri-Kansas City. Before settling at Denison University in 2008, Kaboub taught at Simon's Rock College of Bard (Massachusetts) and at Drew University (New Jersey) where he also directed the Wall Street Semester Program. Kaboub also held a number of research affiliations with the Levy Economics Institute (NY), the Economic Research Forum (Cairo), the John F. Kennedy School of Government at Harvard University (Massachusetts), and the Center for Full Employment and Price Stability (Missouri).

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William Mitchell holds the Chair in Economics and is the Director of the *Centre of Full Employment and Equity (CofFEE)*, an official research center at the University of Newcastle.

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He has received regular research grant support from the national competitive grants schemes in Australia and has been an Expert Assessor of International Standing for the Australian Research Council.

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He maintains a high commitment to community activities. He has been regularly called to appear as an expert witness in industrial matters in the

relevant state and federal tribunals and at various Federal government enquiries (Senate and House of Representatives). He regularly provides commentary on economic developments in the national radio and press in Australia.

Michael J. Murray is Associate Professor of Economics at Bemidji State University and a Research Scholar with the *Binzagr Institute for Sustainable Prosperity*. He coedits *The American Review of Political Economy (arpejournal.com)* and is the coeditor (with Mathew Forstater) of *The Job Guarantee: Toward True Full Employment* and *Employment Guarantee Schemes: Job Creation and Policy in Developing Countries and Emerging Markets*. Murray's research focuses on public policies targeting the dual problems of unemployment and poverty; he also studies production theory, structural and technological change, and its impacts on employment.

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CHAPTER 1

Goal-Oriented Taxation: A Brief Discussion of the Living-Space Tax

Scott L. B. McConnell

Introduction

In her 1972 Richard T. Ely lecture at the American Economic Association annual meeting, Joan Robinson pointed out the fact that economics is now suffering through a second great crisis. The first, which John Maynard Keynes helped to abolish theoretically, was the persistence of underemployment and underutilization of resources. The second potentially more serious crisis is that of appropriate social planning. Where Keynes showed us how to raise employment through public expenditure, no one bothered to ask: what should this employment be *for*? (Robinson 1972). It is in this sense that this chapter seeks to ask a similar question regarding taxation. Following the recent contributions of Modern Money Theory and its historical antecedent, Chartalism, we may consider the tax system to have a more influential role in economic theory than simply directly "paying" for government spending. Taxes are said to be the cost of civilization, but what

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are they *for*? How do they affect socio-economic and environmental outcomes?

The purpose of this chapter is to develop a theoretical and policy-relevant link that will promote the conservation of energy while driving the value of the domestic currency. This analysis will be couched in the aforementioned Modern Money Theory framework, relying on the "state theory of money" approach to government spending and taxation (Knapp 1924 [1905]). Modern money theory, building on Knapp's approach, argues that the value of the currency is derived from the willingness of the state to accept payments in that currency. This is also related to the ability of a sovereign nation to impose a tax on its citizens and accept the currency in payment of this tax. As will be discussed later, a tax is not the only payment to the state, but for simplicity we will think of all payments to the state as some form of "tax". This tax can obviously take any number of forms. For example, it will be argued that an Ecological Tax Reform, which focuses on using taxation to reduce energy consumption and resource pollution, may be structured around the criteria established by Modern Money Theory.

While most Modern Money Theory policy has focused on employment programs designed to sustain aggregate demand, the policy to be introduced in this chapter will focus on the other side of the "coin", that of discretionary taxation. The question then is this: what federally implemented tax would best serve the multiple criteria of (1) driving the value of the currency; (2) promoting energy conservation; and (3) ameliorating income and wealth disparities inherent in a monetary production economy? These three criteria will guide this research as I explore various taxation schemes. The three taxation schemes to be explored are: (1) Ecological or Environmental Tax Reform (ETR), (2) Land-Value Taxation, and (3) A "square foot" tax on residential and commercial living space. These taxes are all currently in existence in the United States, mostly implemented at the local or state level. The tax to be implemented can continue to be administered at the state or local level, but for reasons to be discussed later, it would be most appropriate to administer the tax at the federal level.

Energy conservation in the United States is of increasing importance for issues relating to resource conservation, pollution emissions and national security. The dependence of the U.S. economy on nonrenewable sources of energy has promoted the creation of a built environment defined by progressively larger residential spaces and an increased dependence on automobile use. The size of new single-family residential homes has risen in the

past decade so that the number of homes over 3000 square feet has grown by one-third during that time. Slightly more than 1 in 4 new homes built in 2011 were larger than 3000 square feet (Bass 2012). Not only is this infrastructure design inefficient from an energy consumption standpoint, but this way of life has been shown to promote a myriad of physical, psychological and social health issues such as obesity, depression and social alienation (Frumkin et al. 2004). Moving the economy toward environmental and social health and sustainability will require at the very least a restructuring of our built environment toward smaller residential and commercial structures ideally located within walking distance of necessary amenities and places of work. The tax system may be designed to promote such a transition.

Money and Taxes

It has been recognized by such distinguished social theorists as Adam Smith, John Maynard Keynes and Abba Lerner that a currency will have value if it is required by the citizens of the sovereign to make payments to the government. One example of this would be to extinguish tax liabilities. The logic of the conventional wisdom is turned on its head: the government does not require the currency to pay for its spending, but rather the citizens require the government currency to make payments to the government or pay their tax liability. Seen from this point of view, taxes do not *directly* finance government spending, but rather serve the purpose of creating demand for the domestic currency (Bell 2000). Do taxes perform other functions? Are they an effective tool to redistribute income and wealth in order to raise Aggregate Demand (Kalecki 1937)? Can they be useful in changing the behavior of economic actors via incentives? Issues regarding the effectiveness of particular taxes to achieve given ends must be explored.

The progressive or regressive impacts of each tax must be considered as well. For instance, the income tax, considered to be a progressive tax, is largely regressive, as it places the responsibility of tax payment on those who depend upon wages for access to the social provisioning process. Those that earn the highest incomes benefit from various tax shelter strategies which reduce their effective tax rate. Also, income earned through capital gains is only taxed at the 15 % rate for investment income. Federal income taxation places a higher proportion of the tax on those that work and earn an income, which ignores wealth disparities. The income tax also does nothing to

reduce energy consumption. The income tax, for the purposes of this chapter, is not an effective tax.

Modern Money Theory embraces two distinct but complementary branches of economic thought, *Chartalism* and *Functional Finance*. *Chartalism* provides the historical foundations of money, where money is seen as a social relationship rather than an exogenous stock of some commodity, such as gold. The money derives its value from the ability of the sovereign government to impose a tax liability on its citizenry (Wray 1998; Wray 2010; Goodhart 2003; Innes 1913). Modern Money Theory proponents also utilize the principles of "*functional finance*", first dictated by Abba Lerner. Lerner teaches us that a sovereign state government's spending, borrowing and taxing should only be done with an eye toward the economic effects each action generates and not by any supposed principles of "sound finance" (Lerner 1943). Modern Money Theory leaves ample discretionary space for fiscal policy designed to direct the economy toward full employment on one hand, and a promotion of social goals such as environmental tax reform on the other. An essential contribution to environmental policy will be the absence of any "revenue-neutral" constraints placed upon environmental taxation schemes. Without revenue neutrality, the tax policy could be adjusted according to the needs of the economy and not the budgetary requirements of the government.

At the basis of all modern policy analysis is some type of an economic measurement of the benefits and costs of the proposed policy. If the policy proposal involves the spending of *money*, and money is the chosen metric to determine the benefits and costs of the policy, then understanding the *nature* of money is essential to understanding the true social costs of the policy. For instance, individuals and firms have operational limitations on the amount of money that is available to them. One must acquire a given amount of money in order to pay for what one needs. Often, however, these same constraints are assumed to exist for a sovereign government. In this case, policy options are limited from a fiscal standpoint. Budget deficits, crowding out and inflation become primary concerns. This is the policy environment in which we find ourselves today. According to MMT, this is not the case. If the government is the monopoly issuer of the currency, the government can purchase anything that is for sale in that currency. This is possible, because money in the MMT framework is not a finite stock of commodities, but rather a complex social relationship that can be represented in the form of debts and credits on balance sheets (Innes 1913; Graeber 2011).

There are two competing views of the history and nature of money, those of the "Metallists" and of the "Chartalists". The Metallists have always theorized that money has arisen as a natural evolutionary instrument in order to reduce transactions cost. This assumes, of course, that markets existed prior to the introduction of money (Menger 1892; Klein and Selgin 2000). Since money is a transactions-cost-reducing mechanism in this model, it must be agreed upon ultimately by the community. The "thing" that is chosen as money must have some intrinsic quality that gives it value. The Metallist theory depends crucially upon this feature of money. The money must be a commodity with intrinsic value, or be directly exchangeable for such a commodity. The government plays the role only of standing behind the quantity and quality of the money.

From this perspective, the gold standard was a natural outcome of the evolution of the market economy. Since money is understood to be a commodity such as gold, then it must be a *stock* of wealth. If money is a stock, then the availability of money depends upon its scarcity, and hence its price. The availability of finance would depend upon affordability, regardless of who wishes to spend. All agents in the economy would face the same financial constraints, including the government. On the other hand, if money is an endogenous flow of credit, as Modern Money Theory and Chartalism suggest, things become much more complicated. This chapter will not focus in detail on the story of the Metallists, assuming this to be all too well known. The purpose here is to discuss Modern Money Theory and establish the policy potential in working toward a broad-based, environmentally plausible, economic model.

Chartalism provides the historical and theoretical foundation to Modern Money Theory (MMT).[1] The Chartalist school gets its name from the word "chartal", which means ticket or token. Money is seen by Chartalists as a token representing an IOU from a creditor to a debtor. Money is inherently a social relationship entered into by creditors and debtors, including the state (Innes 1913). These debts and credits can be represented on balance sheets in the form of IOUs. The debts and the credits are always seeking to find each other (Kelton and Nell 2003; Foley 1987).

Anyone can create money by issuing debt; the trick is to get someone to accept it (Minsky 1982). A debt is generally more widely acceptable when it is more liquid. Various debts have differing degrees of liquidity and, as such, can be envisioned as if on a hierarchy, with the ultimate money at the top of the pyramid being the most liquid and acceptable IOU (Bell 2001). The position at the top of the pyramid would be gold under a gold standard or

government money in a modern fiat system. The debts all represent promises to pay at some point in the future. When the debts are unable to be repaid, a financial crisis may set in. A most important aspect of the Chartalist position is that the ultimate, most liquid form of money is tied to the authority of a nation-state. It does not rely on the institutional evolution toward a single unit of account, but rather by the power held by the nation-state to determine what it is that will serve as currency. A government can never run out of its own IOUs in which it makes payments and is willing to receive payments to itself.

This has important policy implications which are obvious. If the government seeks to increase spending in the economy in order to fulfill economic objectives, then this can be accomplished by simply crediting bank accounts. If the government seeks to reduce taxation in order to fulfill economic objectives, then the taxation may be reduced. The important point is that if the government is using a floating exchange, non-convertible sovereign currency, then the government may operate according to the rules of *Functional Finance*. *Functional Finance* is the idea that the government's spending, taxing and borrowing should all be conducted with an eye only on the effects these actions have on real economic outcomes (Lerner 1943). According to Abba Lerner,

> The central idea is that government fiscal policy, it's spending and taxing, its borrowing and repayment of loans, its issue of new money and its withdrawal of money, shall all be undertaken with an eye only to the results of these actions on the economy and not to any established traditional doctrine about what is sound and what is unsound. (Lerner, Functional Finance and the Federal Debt 1943)

The taxes, therefore, do not "finance" government spending, but rather the government spending allows the population to acquire the means (money, Government IOUs) to pay the tax liability and make other payments to the government. If a democratic government sees fit that the economy should become more environmentally energy-conscious and utilize renewable versus non-renewable energy sources at a rate that is non-depletive, then the tax structure may be set up to encourage the movement toward energy conservation. This is the idea of taxing "bads" not "goods", which is the basis of Ecological Tax Reform and the Georgist "single-tax" theory. The only problem, from a Modern Money Theory perspective, is that the point of taxing "bads", such as high-energy

consumption is to eventually eliminate bad behavior. If all environmentally destructive behavior is eliminated, then the tax payments will decline and a fall in the value of the currency could potentially occur over time. This does not mean that the government requires the tax revenue to spend, but only that the tax payment, or some other significant demand for the currency, must exist in the first instance in order to give the government money value. The tax chosen will have to be effective from an environmental standpoint, but must also remain as an effective mechanism for currency valuation. In the following sections, the chapter will outline the environmental dilemma and further discuss Environmental Tax Reform, the "single-tax" and a comprehensive proposal.

Ecological Imperatives

The form of Capitalism that currently dominates the modern world is in crisis. Not only does it face a deep and probably long-lasting cyclical downturn, but also a deeper fundamental systemic crisis is evident involving both the productive industrial sphere and the natural environment. Hyman Minsky (2008 [1986]) referred to this current form of Capitalism as "money manager capitalism", which is characterized by relatively small government, the use of external finance for investment, and growing concentration of economic power (Wray 2009). That power is centralized in the government and the "megacorp", which is operated with the primary goals of increasing shareholder value and growth (Eichner and Kregel 1975). This is accomplished primarily by market governance and economizing on social and environmental costs. Importantly, for the purposes of this work, any costs that an individual firm is able to avoid through environmental pollution or resource degradation affords the firm higher rates of return and hence, a higher rate of growth relative to its competitors. As capitalism evolved, the costs accrued by nature were easily dismissed via what Kenneth Boulding has called the "cowboy mentality". As the biophysical limits are currently being reached, however, the cowboy mentality cannot be sustained indefinitely (Boulding 1996).

After the first Earth Day in 1970, political pressures mounted for industries to conform to the regulations brought forth by the newly created Environmental Protection Agency, as well as a host of other social pressures. The neoliberal conservative movement fought for the hearts and minds of working America by promising that "free markets" would counter-act the high costs of inflation and unemployment brought forth by

"uncompetitive" wages and burdensome environmental regulatory costs. The combination of this dual threat was grouped under the common heading, "planning". Economic planning, at least in regard to labor and environmental regulation, was deemed the culprit in the stag-flationary period of the mid-1970s. If only prices, especially wages, were allowed to fluctuate, then the society's troubles would be cured. In truth, however, every economy is always planned—"for the simple reason that planning is the use of today's resources to meet tomorrow's need"—so the important question, then, is who is doing the planning and for the benefit of whom? (Wray 2009; Galbraith J. K. 2008).

Currently, the planning of the productive economy is driven by the self-interested behavior of those with an interminable goal for profit and expansion. The environmental and social "externalities" are mere hurdles to clear on the path to earnings growth. The political actions that are being taken in order to mitigate climate change effects, such as Carbon Trading and REDD+, have been largely a public relations "green-washing" campaign designed to create a favorable image for the vested interests, while working to destroy indigenous livelihoods in less "developed" nations. The strict assumptions required for any international carbon market to hold are difficult to imagine in reality (Hahnel 2011). Add to that the effects of carbon offsetting and what is left is an all-encompassing attempt to price and market more and more previously "common" goods.

The well-known tragedy of the commons argument is misguided; it is in reality a tragedy of the deterioration of local social arrangements that would care for the land, water and air (Hardin 1968; Swaney 1990). With proper social arrangements, the tragedy can be averted (Ostrom et al. 1999). The assumption that the climate problem can be solved using the same mentality as what created it in the first place is akin to asking Wall St. to create their own regulatory structure and regulate themselves. As the recent financial crisis has showed, this model does not do well in reality. In the case of the environment, however, the stakes are much higher. We are no longer only concerned with self-imposed confining social arrangements such as our financial infrastructure, but ultimately the survival of our natural world. The Post-Keynesian notion of uncertainty has an increasingly prescient meaning in an environmental context.

Dr. James Hansen recently gave a lecture in Eugene, Oregon, discussing how the climate is reaching important tipping points, such as the melting of the Greenland ice sheet, which will raise sea levels significantly, putting many millions of people at risk (Foster 2010). Global warming and ocean

acidification can be seen as two sides of the same coin and both are caused by excessive greenhouse gas emissions sourced in human economic activity (Pachauri and Reisinger 2007). Ocean acidification is a process where the natural capacity for the ocean to act as a carbon sink has reached its limit and stopped functioning. This has a direct impact on the calcification of shellfish and the creation of coral reefs. Most marine biologists recognize that it is now increasingly likely that the majority of the world's coral reefs will disappear within the next 10–20 years, which is directly attributable to the acidification. The effects this may have on the marine mammal food chain are impossible to determine (National Oceanic and Atmospheric Administration 2010). Global temperatures are at an all-time high, causing increasingly severe weather conditions such as hurricanes, floods and droughts. The year 2010 saw the one of the highest numbers of natural disasters worldwide on record, and this will likely become the new norm.

As the effective functioning of the natural environment continues to decline, it is obvious that the solutions to moving from a destructive to a sustainable economy do not seem to naturally evolve from this "money manager" capitalism concerned with short-term profits. As K. William Kapp warned us in 1950, "the process of production—i.e., the choice of factor inputs and the determination of what is to be produced according to the principle of investment for profit—proceeds without an adequate prior assessment of actual costs and consequences ..." (Kapp 1971). Ecological Economists remind us that the economic process involves "throughput", or the amount of material that passes through the economic system. Throughput is what should be minimized through more efficient means of production. Not efficiency in a utility-maximizing sense, however, rather efficiency from an energy-consumption-waste sense; i.e., by developing the means to operate the productive economy within biophysical limitations (Daly 1991; Georgescu-Roegen 1996).

Of course, it is possible that sustainable forms of energy consumption do exist, but to place blind faith in "techno-centric" solutions without first considering the socio-economic power structure, such as that which exists in the present state of capitalism, is to see only the surface phenomena of the economic social provisioning process. This would also ignore what is known as the "Jevons Paradox", named after William Stanley Jevons, the late-nineteenth-century economist who recognized that the increased efficiency from technological innovation does not necessarily lead to less dependence on a particular input, but sometimes leads to more (Jevons 1865; Foster 2002).

The movement toward new forms of production and social provisioning will require a transitioning period that will challenge society to envision this new economic existence. The efforts in the environmental policy community today are focused primarily on cost-benefit analysis using Congressional Budget Office (CBO) estimates, considering whether the movement toward a new form of production is "affordable" for the economy. This chapter argues that any policy proposal that includes Green Job creation and Ecological Tax Reform is not only affordable but will work toward reducing energy consumption, reducing unemployment and stabilizing the economy (Forstater 2006).

Potential Tax Reforms

We may now turn to a discussion of various means to achieve the transition toward meeting energy conservation and pollution reduction goals set forth by the assessment in the previous chapter. As a reminder, these policy options will be limited to taxation schemes that would function as drivers of the currency. The taxes will be considered under the various criteria for energy consumption, currency valuation and distributional effects. The three taxation schemes presented and discussed will be Ecological Tax Reform, Land Value taxation, and the "Square Foot Tax" on residential and commercial built structures. These taxes will all be considered under the criteria established by Modern Money Theory.

Ecological Tax Reform

A change of the regulatory and tax structure toward a more environmentally friendly framework will necessarily need to be a part of the comprehensive plan for economic sustainability. History has shown us that markets have a difficult time remaining within the biophysical limitations of the natural world. The proponents of Ecological Tax Reform argue that market forces may be steered so that it can be cost-effective to use resources in an equitable and sustainable manner. Taxes, tax credits and subsidies can be designed to penalize environmentally destructive behavior and reward sustainable practices (Forstater 2002). "Ecological Tax Reform", or "Environmental Tax Reform" (ETR) has been in place in Europe since the mid- to late-1990s with mixed reviews.

To sell the idea to the public, the proponents of ETR had to push the idea of the "double dividend" and "neutrality". The double dividend is the

idea that ETR can substitute for taxes on income, where the idea of neutrality is that the government would not lose tax revenue by adopting ETR. This assumes that the revenue coming in from ETR will be sufficient to offset the reduction in income taxes. Unfortunately, this assumes that ETR will continue to provide revenues, meaning there is little if any actual reduction in emissions. Ecological Taxes can be thought of as Pigouvian taxes attempting to address the inefficiency in the market arising from the high social and environmental costs of production. According to this logic, if the productive process is appropriately priced to reflect not only the marginal cost of production but also the marginal social costs of pollution, then the price will increase and the output decrease in order to bring the market into equilibrium (Kerr 2001).

From a heterodox perspective, prices are not indices of scarcity; therefore the price mechanism alone may not be sufficient to eliminate socially and environmentally destructive behavior. The market is always at the desired level of activity, depending upon the effective demand in the system at a given time. The market is a social construction and does not allocate resources solely via the price mechanism. However, the idea that taxes can be levied on undesirable economic behavior may be potentially useful. First of all, the taxes would have to be severe enough to curb the behavior of producers and consumers. It must be noted, however, that taxes alone may not be effective, as the political power of a small number of highly profitable producers may effectively shield them from paying these taxes (Felder and Schleiniger 1999). And if the taxes were levied on the industry as a whole, then relative costs would not change and competition would ensure that these costs would just be passed along to consumers in the form of higher prices. So-called "command and control" policies may be more effective in some instances where hard goals need to be reached, such as global carbon measurements of 350 ppm. The ecological taxes would work best as part of a larger, more comprehensive approach to greening the economy. This approach would most likely include a publicly financed Green Jobs program based on Minsky's Employer of Last Resort model (Forstater 2006).

From the Modern Money Theory perspective, ETR would not provide sufficient demand in the long run to be considered a base-tax to provide value of the sovereign currency. If ETR was enacted as it usually is, by providing a "double-dividend" of environmental preservation and a reduction of earnings taxes, this means that more of the tax base would shift toward taxes on environmentally destructive behavior. This would be a good thing in the short run, as it would encourage investment in cleaner

technologies, but as competitive pressures moved each industry away from dirty production, the tax revenues would decline. According to MMT, as long as there is some demand for the currency as payments to the government, this should not pose a problem, however completely eliminating the tax base is not a good idea. For this reason, ETR should be part of a comprehensive plan, but not relied upon as the base tax.

Another issue when dealing with ETR as it has been presented and promoted: if the ETR is in the form of an energy tax, this will have negative distributional effects as most of these taxes will be on consumption goods. Since workers "spend what they get", they end up paying the tax on 100 % of their income, while Capitalists would pay a much smaller proportion of their income on the tax. Those who are able to save a portion of their income would be avoiding paying the tax on income that is not consumed. This distributional effect would likely have negative consequences for the economy as a whole, as saving would be desirable over consumption and production (Kalecki 1937).

Single Tax

The single-tax movement is associated with the work of late-nineteenth century American political economist Henry George. The single-tax is a tax on Ricardian land rent. The theory flows from the political view of Locke (1947 [1690]) that the products of individual human labor and property are rightfully private property, but the land and natural resources of the earth are social and should be treated as the common heritage of all. The land rent "single-tax" is claimed by the Georgist movement to achieve approximate equality to the access of natural resources for all, so that the competitive gains from enterprise are rightly earned. According to Georgists, it is only because of inefficient public institutions that the political economic choice is between "efficiency and equity". Henry George, in his *Progress and Poverty* (1879), drew two conclusions: one, involuntary taxes violate the principle of self-ownership, and two, because land is not produced by individuals, its rent cannot rightfully be appropriated by individual ownership. When land is scarce, absolute private ownership of the gifts of nature is unjust. Land rent should be shared, through representative government (Feder 1996; Gaffney 1999).

Proponents of land-value taxation argue that it promotes more compact and intensive use of land, as the tax would encourage those who own the land to put it to "best use". The best use from this standpoint is, of course,

the most productive use (Gaffney 1999). Ignoring issues of exploitation and distribution, the land tax would encourage the development of abandoned land, such as that found in the modern U.S. city. Failing to appropriately tax land can be seen as a subsidy in the cases where public expenditure on such items as transportation or a park will cause an increase in the value of the land. In this case, the owner of the land receives an unearned windfall profit in the form of capital gains.

The additional argument made by proponents of the land value tax is that by taxing completely the unearned increases in value, the government would be able to eliminate taxes on improvements and labor, which are seen as distortionary. The tax is seen as being an environmental tax as it would encourage the land to be put to use on the intensive geographical margins of the city and would prohibit sprawl (Vickrey 1999). The theory behind this argument is that the increased tax on urban land would decrease the selling price of vacant land, as the capitalized value of the tax would bring down land prices. Higher priced land on the periphery of town would then be comparatively more expensive, but have lower yearly taxes associated with it. This would decrease the amount of land that is used productively on the periphery and that land would go to its best use, such as farming or hunting land, etc. (Beck 1999). Another aspect of the land value tax that would promote environmental protection would be the incentive for the local government to invest in parks, mass transit and general infrastructure as this would increase the overall value of land rents and generate increased revenue.

The land-value tax in its modern form has been embraced by some neoclassical theorists as being a potentially revenue-neutral tax that can replace the distortionary taxes on labor and capital improvements (Cohen and Coughlin 2005). In its modern form, it is referred to as the "two-rate tax" in the urban planning literature. The difficulties inherent in two-rate taxation stem from the difficulties in assessing land values separate from improvements. Also, by not taxing "improvements", it is left to the discretion of the assessors to determine the relative rates. This means that the system would likely have to be very complex to make the two-rate tax feasible as an ecologically sustainable tax.

Henry George's concern with unearned land value is not something that should be glossed over, however. The goal of recovering the unearned land value as public property is a legitimate one for those concerned with a redistribution of wealth. Research has shown that a large amount of the disparity in wealth is realized in unearned capital gains from land holdings

and financial asset trading. Up to two thirds of capital gains are made in holding real estate, and due to the current tax structure these property taxes do not need to be paid until realization. It was estimated in 1997 that two-thirds of all estimable asset value in the USA is contained in the form of land and buildings (Feder and Hudson 1997).

Most programs for a single-tax on land are pushed as local or state taxes, but under Modern Money Theory the base tax would have to be a Federal Tax. Indeed, it is accepted that a redistributive tax at the federal level is more effective than at the state or local level due to two reasons: (1) the base is broader to which the tax applies, so a greater degree of redistribution is possible; (2) tax avoidance by moving to a different state would be impossible. However, corporations could still move offshore with current trade agreements and capital mobility regulations in place (Wyatt 1994).

The single tax shows promise for a redistribution of publicly-derived wealth that is held in land. This is attractive for both those on the political left and right. The left see it as an opportunity for the appropriation and redistribution of wealth and those on the right can see it as a way to free the market by removing distortionary income taxes on labor and capital.

However, some research has shown that the two-rate tax in practice has had the opposite effects to those desired. Land prices in the two-way tax jurisdiction have not fallen; rather they have increased through time as this proposal has been put in place, which is counter to the "single-tax" argument. This could be due to the tepid implementation of the tax and not using the full land use value (Wyatt 1994). This could also be due to the overestimation of the market potential for solving equity issues by the Georgists. Also, the difficulty in implementation is well-understood. Separating the values of improvements from the increase in the value of the land by public expenditure is difficult to measure.

Square Foot Tax

The last tax to be considered is a tax that is currently in use in both Berkeley, California, and Seattle, WA: the "square foot tax" on building size. Under Modern Money Theory, the idea is that the tax must be a liability that most everyone has to pay in order to derive the greatest purchasing power for the government money. Since all human beings require some form of residential housing, it seems the logical choice is to focus on residential energy consumption. This plan may be extended to include commercial energy

consumption as well, but the implications would be that the tax code would be much more complex as each industry requires differential access to geographic space and production techniques. In focusing primarily on residential housing units, the focus can be directly on energy consumption and the data is readily available with the U.S. Department of Energy.

The data has shown that over the last 20 years there have been marked improvements in the efficiency of home appliances. However, during that same span, homes have grown in size 10.6 % (U.S. Department of Energy 2010). Any savings that may have accrued from energy efficient appliances have been transferred to heating and cooling costs of a bigger home. Homes have grown in size, but lot sizes have stayed the same, leading also to the effect of less yard space. This has peripheral effects that may be related, such as increased childhood obesity rates due to less outdoor activity. People are spending more of their lives inside these large homes with an ever-increasing amount of consumable goods—mostly requiring additional energy. Data from the U.S. Department of Energy shows that over 40 % of all energy consumed in the U.S. is consumed through built structures; this value has remained relatively constant since the late 1970s. Residential structures consume around 21 % of all energy consumed (U.S. Department of Energy 2010). A tax on the energy consumption combined with the square feet of space utilized would be a tax on consumption in general. This could have a mitigating impact through multiplier effects on energy consumption in other sectors, since much of the growth in the size of new housing has been to store much of the increased consumption of durable goods.

This chapter recommends not one of these taxes but a new tax based upon the three taxes outlined above as an appropriate federal tax that drives the value of the currency. The tax suggested here would most generally be considered a federal property tax targeting living space, or a Living Space Tax (LST), where the value of the tax would be based partly upon the value of the property and partly on the square feet of building size, while allowing for an implementation of various tax expenditures for reduced energy consumption. By shifting more of the tax incidence from production and labor to an ecological federal property tax, this would potentially confront all three issues mentioned at the beginning of the piece—(1) drive the currency, (2) encourage less energy consumption, and (3) redistribute wealth and potentially increase effective demand. A tax on structure size and land value would also have a mitigating impact on real estate bubbles, as real estate would be less desirable for speculation. It has been shown that

most economic depressions in U.S. history have had their roots in real estate speculation (Leamer 2007; Feder and Hudson 1997).

This tax proposal would be built around, as a starting point, the most efficient household square-footage per person as a benchmark. According to the following data, obtained from the U.S. Energy Information Administration's Residential Energy Consumption Survey (RECS), structures which consume the least amount of energy per household member, per square foot are homes built in the 1970s and 1980s with 500 to 1500 square feet of living space. Homes that satisfy these characteristics are consuming on average 30.4 million British thermal units (Btu) per household member. For contrast, the most common home built in the 2000s has been around 2500 square feet. Recent U.S. Census data reveals that from 1999 to 2011, home sizes have increased considerably. The percentage of new homes built in 1999 that were less than 1800 square feet was 37 %, so obviously the percentage of new homes built in 1999 that were greater than 1800 square feet was 63 %. By 2011, these numbers had changed dramatically. The number of new homes built in 2011 that were less than 1800 square feet dropped to 32 % and the number of new homes built in 2011 that were greater than 1800 square feet rose to 68 %. The interesting aspect of these changes is that most of the growth in home size occurred at the top end of the spectrum. The percentage of homes larger than 3000 square feet increased from 12 % to 17 % and the percentage of homes greater than 4000 feet increased from 5 % to 9 %. Homes in the 1800 to 2400 category actually declined from a percent distribution of 29 % to 25 % (U.S. Census Bureau 2012). This would seemingly indicate a movement from homes less than 1800 square feet to over 2500 square feet over the course of a decade.

Considering that family size has remained relatively constant at 2.7 people per family, consumption per household member rises to around 40 Btu as a result of this increase in average housing size. This is 33 % more energy consumed per person due to the size differential in the home. Therefore, this chapter argues that the goal should be to provide sufficient incentive to drive home sizes back toward 1500 square feet. The most dramatic increase in energy consumed per person is from 1500 to 2000 square feet.

This data also suggests that there is a difference between owned and rented property, as rented property has a lower per household member energy usage than owned property, by almost 10 Btu on average. This is most likely due to additional energy consuming amenities found in owned versus rented property, such as air conditioning. By providing additional tax

expenditure incentives for owners of property to install energy-efficient appliances, this differential may be reduced, but it would be difficult to forecast by exactly how much.

The tax may be structured in a progressive manner, much like the federal income tax. As a first approximation, I would suggest utilizing the progressive income tax structure, but base it on home value and square footage. The implemented policy would be slightly more sophisticated, but in order to give an example, we can estimate the tax for a married household earning $50,000 per year. The real estate industry during more "safe" times had a general rule of between 3:1 or 4:1 in regard to debt to income ratio. This amount is calculated using gross income, so our example household may purchase a home valued at around $200,000. The benefits of this tax would be most highly achieved if the LST were to replace the most regressive taxes of the federal government, such as the taxes set aside for social security and Medicare, known collectively as "payroll taxes." The proposed LST could be designed to essentially replace payroll taxes (Medicare, Social Security). The IRS guidelines for a self-employed individual are that 13.3 % of earned income is taxed for payroll tax purposes (The Social Security Administration 2012). Going back to our example of a family earning $50,000 per year, their tax amount would be roughly $6650. In order to replace this amount with the new LST, we will need to at least cover this $6650.

The tax should be such that a reduction in home size will become a significant consideration when deciding where to live. The tax would be separated into two portions. The first part of the tax would be a tax on the market value of the home. This would incorporate some of the advantages of taxing the social value of land. The second part of the tax would be on the square footage of home size. This tax would be progressive, not only in the application of the tax to land value, but also additive in the sense that additional homes such as vacation homes would be added on to the square footage of the tax-payer. This would increase the cost of owning multiple homes, as the owners would be taxed in the highest marginal brackets. Real estate investors would pay high marginal rates on the multitude of homes they owned for investment purchases. This in effect would presumably increase the supply of homes and hopefully reduce the price of home-ownership.

The federal income tax could be reduced, as most in the upper income brackets tend to pay very little anyway, and the tax at its core is penalizing a productive activity—that of work. The income tax is progressive in design, but the increasing number of tax expenditures and the differential rate

structure between wage income and capital income has decreased its overall progressivity. I would argue that a progressive property tax with limited tax expenditures would have a greater overall impact on increasing the progressivity of the overall federal tax system. For the only way to properly judge the progressivity of a tax system is to look at the outcomes over a period of time. If the disparity of wealth is greater over some period of time, as has been the case in the United States over the past half-century, then the tax system is not as progressive as it may seem by looking at marginal rates.

Conclusion

From the heterodox point of view, there are various problems with ecological taxation based upon the neoclassical "marginalist" approach. Attempting to accurately define the social costs in a precise manner, so as to correctly "price" the environmentally harmful behavior is fallacious. The heterodox point of view is one in which we would rather be generally right than precisely wrong. The internal inconsistencies of the neoclassical supply and demand model render it useless in attempting to describe the real world; therefore any predictive capability of the model is baseless.[2] Since the model is based upon diminishing marginal returns, the attempt to derive an "efficient" level of pollution in an economic sense is meaningless. This would require (1) that the underlying neoclassical model be a sufficient representation of the real world and (2) that the marginal social cost of some environmentally harmful activity can be calculated. What is required in order to produce desired environmental effects from economic incentives is a more general approach, such as that of the classical political economists.

This chapter approaches taxation in general and environmental taxation in particular as something that the private sector seeks to avoid and will *generally* go to great lengths to do so. The contemporary discussion of tax havens and capital flight in an effort to avoid income taxation has brought this issue to light for the general public (Slemrod 2007). As an additional example of intentional tax avoidance, people routinely utilize the crossing of state borders in an effort to avoid particular taxes. One example of this type of tax-avoidance behavior was brought to light in the analysis of cigarette taxes. In July of 2007, the combined state and local cigarette taxes in Chicago, Illinois, were $3.66 per pack, while neighboring Indiana had a tax of $0.55 per pack. It was shown in this particular study (Merriman 2010) that there is "strong and concrete evidence that a very large segment of the population avoids Chicago's very high cigarette tax." Now, this is not

to say that what is known regarding cigarette tax avoidance behavior is necessarily applicable to a federal progressive property tax on square feet of living space, but it does provide us with evidence that tax avoidance behavior does indeed exist. However, predicting the marginal rates of taxation required in order to equilibrate the market efficiently at the optimal amount of social cost will not be a part of this analysis; we can only assume that the tax rate chosen must be significant enough in order to provide the necessary incentive.

As Joan Robinson asked regarding employment policy, "What should this employment be *for*?" This chapter asks the same question regarding taxation, what are taxes *for*? Could they be for an equitable redistribution of wealth and enhancing the stability of the social and natural environment? The Modern Money Theory approach answers this question in the affirmative. If this proposal is to be effective, however, it could not be a stand-alone solution but would have to be part of a greater comprehensive reworking of the economy—one utilizing democratically determined social and environmental goals, and developing the economic means to achieve these ends. The Employer of Last Resort program would certainly have to be part of this program and could be designed to function as a Green Jobs program: generating public works projects, tackling some of the simple acts of restoration and preservation that the private sector deems unprofitable (Forstater 2002). A comprehensive program would include the Green ELR, the Ecological Base Tax, and certain regulatory controls that would eliminate certain highly destructive activities through "command and control" legislation. This combination of employment, taxation and direct command policy options must be combined in order to achieve the goal of transition to a sustainable economy. Any one policy alone cannot do the job adequately.

The recognition that decisions are made within a monetary production economy and these decisions are largely planned. It is not whether or not planning takes place, but who is doing the planning for the benefit of whom, for the irony is palpable "in the rhetoric of the largest corporations with their advocacy of free market systems when they themselves are centrally planned" (Holt and Spash 2009). "Keynes once reminded us that in the long run we are all dead. It is no longer true. In the long run people are still alive and suffering from the errors of omission of those who declined to look ahead" (J. Galbraith 1959).

Notes

1. The differences between Chartalism and MMT are slight, but can be summed up by saying that not all Chartalists embrace the ideas of Abba Lerner and Functional Finance, which will be discussed later in greater detail.
2. There are various critiques throughout the history of economic thought regarding the "scissors" of economic theory (Harcourt 1972). The demand curve derived from diminishing marginal utility of consumers is unable to be aggregated into a market demand curve, which resembles the smooth negatively sloping curve of the textbook. The supply curve is unable to be aggregated and there is no guarantee that there is necessarily a positive relationship between price and quantity in the supply of goods. This requires the notion of diminishing marginal productivity, resulting in decreasing returns and increasing marginal costs. This has been shown empirically to rarely be the case (Keen 2001).

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CHAPTER 2

Public Policy for Working People

Michael J. Murray

Introduction

Contemporary monetary and fiscal policies have been ineffective at combating long-term unemployment, alleviating chronic poverty, and battling economic and social inequality. Given the ineffectiveness of such policy, this chapter begs the question, is there a better alternative? The chapter opens with New Keynesian fallacies and the need for public policy centered on working people. The hope is that this chapter can provide further justification for the Employer of Last Resort (ELR) approach to full employment by rooting it in the theoretical framework of Classical Keynesian Political Economy (CKPE). This chapter deviates slightly from the existing literature on the ELR by modeling a fully funded, budget-neutral ELR program. Elsewhere Wray (1998) and others have discussed the macroeconomic outcomes of an ELR program operating under the principles of Modern Money Theory (MMT). Here the opposite extreme is analyzed, and the simulation asks … what are the macroeconomic outcomes of a budget-neutral ELR? The implications that stem from simulations of a budget-neutral ELR program are important for any government operating a non-sovereign currency to understand. But the result may also be

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interesting for all countries wishing to operate an ELR. In practice, governments would neither be likely to operate a fully deficit-financed nor budget-neutral ELR program. Rather governments would likely partially fund an ELR program (perhaps for political reasons if anything else). Thus by countering the MMT model with a balanced budget model, public policy officials can understand the macroeconomic outcomes of a budget-neutral ELR, and compare this to the outcomes of a deficit financed ELR, and with estimates at each extreme, public policy officials may get a better idea of what the macroeconomic implications and outcomes would be if the financing of the ELR were operating some place in the middle. Thus the intent of illustrating a budget-neutral ELR is not to argue against financing an ELR under the principles of MMT, but rather, to provide merely the other endpoint on the financing spectrum and to give public policy officials a range of financing options. This also furthers ELR research as it opens up the possibility of an ELR for countries operating a fixed exchange rate or a non-sovereign currency. But before we get here, we need to dispense with the flawed policy approaches of New Keynesian economics. A model that we shall see is neither 'new' nor 'Keynesian,' and an inappropriate basis for public policy focused on working people.

New Keynesian Policy and the Need for an Alternative

New Keynesian (NK) models lie at the heart of contemporary U.S. and European monetary and fiscal policy. In response to the U.S. financial crisis, U.S. monetary authorities enacted a Zero Interest Rate Policy (ZIRP), and in doing so created just shy of three trillion dollars of excess reserves in depository institutions. ZIRP blossomed from standard NK models. These models predict that liquidity injections into the financial markets spontaneously spur capital investment, and in turn elevate aggregate income, output, and overall employment.

However, even prominent NK central bankers admit that ZIRP has largely failed to deliver on its promises (Williamson 2015). The problem lies with the NK notion that ZIRP will *spontaneously* generate economic activity. This—albeit wrong—perception is from a standard NK model that does not have an underlying theory of the behaviors and motivations of investors and consumers. Rather, models in NK theory treat expectations as merely adaptive and market players are treated in a mechanistic, robotic fashion. When it came to ZIRP, NK theory naively assumed bankers would loan out all excess liquidity. In turn, low interest rates will drive capital investors to borrow. From examining banking behavior prior to 2007, Fed

officials could, perhaps reasonably, conclude this outcome. Historically excess reserves in depository institutions remained at zero, or near zero since the Federal Reserve started keeping data. It appears that decision-makers at the Federal Reserve held to this belief when enacting ZIRP. However the actual outcome was unexpected. There was a fundamental change in the behaviors of bankers, capital investors, and consumers alike following the financial crisis. Loans curtailed even after the Federal Reserve flooded banks with liquidity. As an outcome of this behavioral shift, capital investment and employment growth slowed, and the economy stagnated over the course of nine years. Consequently, excess reserves shot up in the trillions. There was simply no profitable place for the money to go except to merely sit on banks' balance sheets. As such, monetary policy has been ineffective at spurring real economic growth.

In terms of U.S. fiscal policy, many of the same proponents of New Keynesian macroeconomics were (and still are) policy advisors for the U.S. President. Some of these people were the same individuals that helped create the Global Financial Crisis and whose policies have been, up to here, unable to strongly combat chronic unemployment stemming from the Great Recession.

The ineffectiveness of U.S. public policy is resulting in an excruciatingly slow, and in some areas of the United States, non-existent, recovery. What went wrong in terms of U.S. public policy? NK models allow for short-term, direct, expansionary fiscal and monetary policy in times of crisis. True, but NK economics lacks any notion of human agency, and therefore lacks a reasonable theory of how expectations and uncertainty factor into consumer and investor behavior and economic decision-making. As such, the policies that stem from NK approaches are shallow, misinformed, and largely fail to live up to their promises.

Further, and perhaps more seriously, NK theory misinterprets macroeconomic unemployment as only a short-run phenomena caused by wage and price rigidity (Yellen 1984; Gordan 1990; Mankiw 1990; Kregel 1998, Rotheim 1998). There is no denying that wage and price rigidity exists, it certainly does. NK theorists cite search costs, explicit labor contracts, (i.e. collective bargaining agreements), implicit labor contracts, and insider-outsider models all create some form of wage rigidity. Furthermore, price rigidity is caused by menu costs and incomplete pricing information. These insights may all be true, and certainly may create wage and price stickiness; but a leap is taken by New Keynesian theory from wage and price rigidity to unemployment. New Keynesians conclude that wage and price rigidity *is the*

cause of short-run unemployment. Furthermore, true to their neoclassical foundation, NK believe that *unemployment is only a short-run phenomenon*. This flawed belief is what creates shallow, misinformed public policy.

This result is unsurprising. New Keynesian theory is predicated upon the old Marshallian theory that all factor markets clear in the long run under perfect competition and perfectly flexible prices in all factor markets. Specifically, in the context of labor markets, New Keynesian analysis is built upon Gary Becker's model of human capital (which itself is a derivation of earlier neoclassical foundations of rational choice and maximizing behavior) (Becker 1993, 398).

> Human capital analysis starts with the assumption that individuals decide on their education, training, medical care, and other additions to knowledge and health by weighing the benefits and costs. Benefits include cultural and other nonmonetary gains along with improvement in earnings and occupations, whereas costs usually depend mainly on the forgone value of the time spent on these investments. (Becker 1993, 392)

Becker's (1965) analysis of household decision-making is at the foundation for the labor-leisure trade-off analysis that is in turn a basis for the efficiency wage models of Yellen (1984). The efficiency wage theory is further a foundation for the sticky-wage models, which have been dominant in the New Keynesian literature (Mankiw 1990; Akerlof and Yellen 1990; Gordon 1990; Akerlof 2002) up to the present. Following Becker's lead, the sticky-wage hypothesis assumes that households engage in the allocation of time to participate in the market, which then generates the upward sloping supply curve for labor in neoclassical models.

Nevertheless, the analysis of labor market activity is only one side of the coin. Firms hire workers, so a theory of the firm must coincide with a theory of labor. From the standpoint of the firm, New Keynesian theory rests upon marginal productivity theory (Romer 1993, 8–10). New Keynesian models assume that firms have full information and are able to engage in maximizing behavior (Gordan 1990, 1135–1137). Wage-rigidities such as unions, search costs, reservation and efficiency wages alter the wage-employment relationship from what it would otherwise be given—free competition. New Keynesian models assume that market forces operate through the institutions of collective bargaining as they would in those that are non-union. Combined, wage and price rigidities allow for the existence of short-run unemployment.

Short-run unemployment is interpreted based upon standard behavioral assumptions of labor market models and allows for the reconstruction of the Phillips curve and the redevelopment of the NAIRU hypothesis. These conclusions are no different than that of the expectations-augmented Phillips curve of Friedman and Phelps (Roberts 1995). New Keynesian analysis provides one rationale for the existence of sticky wages and prices and thus involuntary unemployment. Nevertheless, New Keynesian theory does not alter the traditional Marshallian conclusion: *perfectly flexible wages, prices, and interest rates allow for long-run full employment equilibrium*.

The tenets of neoclassical analysis lie at the foundation of contemporary New Keynesian analysis of labor markets. Thereby, earlier critiques of neoclassical analysis of labor markets and involuntary unemployment also apply to New Keynesian analysis of labor markets. Neoclassical economics, and the New Keynesian derivative, supplies market participants with directives for their economic actions rather than universal principles themselves (Lowe 1942). Marshall's construction of supply and demand is nothing more than a code of behavior that defines and directs the independent economic actions of countless market participants. Deviations from these action directives violate and undermine the theoretical conclusions. Neoclassical economics rests on the need for imperatives of economic behavior rather than offering a theory of how people and markets actually behave.

The conclusion of mainstream thought that unemployment is only a short-term phenomenon caused by wage and price rigidity is only valid under the restrictive assumption of maximizing behavior of market participants. This assumption is wholly unrealistic in a developed economy with complex production processes. Economic incentives can result in a whole range of behaviors and outcomes that are not wholly consistent with the maximizing behaviors accorded by the neoclassical rules of supply and demand. Adolph Lowe (1942) suggests that the "understanding of motives does not by itself constitute a safe basis for postulating any specific course of action as necessary, that is causally exclusive action (Lowe 1942, 436)." In the fabricated world of neoclassical economics, all product and factor markets need to equilibrate to ensure long-run full employment. However, in the practical world, neoclassical economics may only be applicable when there are slow, predictable changes in accordance with very specific rules. Neoclassical economic theory allows freedom of choice, only as long as these choices conform to the rules of supply and demand and only if supply and demand themselves are governed by specific rules regarding behavior. These sets of rules are not depictive of the complex world we live in.

We must abandon neoclassical analysis (and its New Keynesian variant) because the theory is not sufficient to study an evolutionary process. The core of the problem is that neoclassical theory assumes universal laws, whereby economic data such as knowledge, tastes, preferences, behaviors of both producers and consumers, etc. are taken as a given. In an evolutionary environment, it is the category of 'economic data' which is itself an unknown. Economic data (perhaps we may call them economic 'institutions') is an evolutionary process; they are social constructs developed and forged over historical time. The 'data' itself is something to be studied rather than be taken as a given. The economy is socially embedded, which requires broadening the scope of analysis by identifying economic, social, and political institutions that influence decision-making.

Classical Keynesian Political Economy

Classical Keynesian Political Economy offers an alternative model, built on the Classical theory of production and distribution, it centers on the persistence of technological unemployment as addressed in both Ricardo and Marx, and it incorporates Keynesian elements such as a demand driven productive sphere, and the regularity of unemployment caused by insufficient levels of aggregate demand. All these elements are embodied in a system of production that highlights institutional change, Transformational Growth, and structural economic dynamics.

In this alternative presentation, structural forces generate Keynesian and Marxian unemployment. Structural forces include three elements (1) the continual growth of the labor supply; (2) labor-displacing and labor-expelling technological change. These two create adjustments to the structure of production. Further, (3) institutional changes create change to the level and composition of final demand (i.e. think of how a company like Amazon changes both the way we purchase products and the type of products that we consume). In turn, changes in the level and composition of final demand further impact the structure of production and overall economic output.

When capitalist economies are studied through the lens of these structural dynamics, we see that economies do not simply grow, they also transform in response to demand pressures, technological advancements, and other institutional factors. To capture the dynamics of actual capitalist economies, they must be analyzed as dynamic models depicting

Transformational Growth (see Nell 1998), where Keynesian unemployment and structural unemployment will always exist (for example see Pasinetti 1993).

Transformational Growth lends itself well to the structural economic dynamic modeling of Luigi Pasinetti, but also Transformational Growth lies at the heart of other structuralists, such as the traverse analyses of Adolf Lowe in *Path of Economic Growth* (1976) and the earlier traverse studies of J.R. Hicks in *Capital and Growth* (1965) and *Capital and Time* (1973). Transformational Growth studies how markets actually operate and how institutions affect market processes. Markets generate pressure that increases productivity thereby bringing about new innovations, new technologies, and changes in the organizational structure of the business enterprise. Investment is underwritten, labor is hired, and the price system allocates the distribution of the social product. Markets allocate resources and distribute output in a manner that is not harmonious. Production and distribution is disruptive; production and distribution develops through evolutionary phases caused from the "interlocking emergence of new products and new processes, creating new markets, and new industries (Nell 1992, 106)." Competitive market pressures breed innovation. Innovation leads to the expansion of existing industries and the creation of new products and new industries. Transformational Growth is uneven, disruptive, and depicts both qualitative change as well as quantitative growth. Transformative processes result in, and are further caused by, change to the economic 'data' (Forstater and Murray 2009; Nell 1998, 1992; Pasinetti 1993). The ultimate result of transformative processes is that the deviations are larger and longer lasting, and readjustments are slow and incomplete (Lowe 1935, 76).

Transformational Growth embodies the principles of circular cumulative causation. Rather than depicting negative feedbacks, which return the system to equilibrium, transformative processes display positive feedbacks, self-reinforcing, and push the system away from equilibrium in any given direction (Arthur 1990). Endogenous technical progress is at the root of the theory of Transformational Growth. Redefining the economic process in this manner requires a rethinking of the causes of unemployment. Long-term unemployment cannot be assumed away and short-term unemployment cannot be reduced to sticky wages and prices. Unemployment is the consequence of uneven and disruptive economic dynamics. Technological progress, by definition, ensures that expenditures on new capital goods, once produced and utilized, requires for its utilization less labor than the old

capital, which it has replaced (Lowe 1987, 101). Increased mechanization thereby results in technological unemployment. Leaving some unemployed causes actual aggregate purchasing power to be below that of potential purchasing power. This emphasizes Harold Hagemann's (1995) distinction between an increase in purchasing power and an increase in productive power. Technological progress creates an increase in productive power. When labor expulsion occurs, there is still a loss of purchasing power (Hagemann 1995, 42), resulting in 'Keynesian unemployment.' This conclusion highlights Forstater's (2002a) argument, and Pasinetti's (1993, 1981) before him. For contemporary economies that are defined by the process of Transformational Growth, policies to promote the maintenance of full employment must jointly consider unemployment caused by technical and structural change (Marxian unemployment) and Keynesian unemployment. Thus, in the forthcoming pages, this chapter echoes (and hopefully advances) the call for the implementation of the Employer of Last Resort (ELR), or what has become known as the Job Guarantee approach to full employment. Here it is argued that an ELR is the *only* means to provide continual full employment in dynamic economies that exhibit structural change and Transformational Growth. Further, the following section intends to make an incremental advance in ELR literature by not only introducing a Job Guarantee sector into a dynamic economy, but also devising a scheme to pay for the program so that it is budget-neutral. The ELR program and its financing are modeled simultaneously overtime to demonstrate how the program may be successfully implemented. There are also institutional considerations as to why exploring ELR financing in this fashion is desirable, a topic that we shall explore in the next section.

Employer of Last Resort

The Employer of Last Resort (ELR) approach is created to maintain full employment in a dynamic, capitalist economy. The ELR program is designed to offer a federal job to anyone who is willing and able to work. The ELR approach to full employment is to hire off the bottom, hiring the workers who are unable to find private-sector employment. As Minsky argued:

> The policy program is to develop a strategy for full employment that does not lead to instability, inflation, and unemployment. The main instrument of such a policy is *the creation of an infinitely elastic demand for labor* at a floor or

> minimum wage that does not depend upon long- and short run profit expectations of business. Since only government can divorce the offerings of employment from the profitability of hiring workers, in infinitely elastic demand for labor must be created by government. (Minsky 1986, 307)

The ELR is used to supplement the welfare safety net that is already in place. The ELR program is an improvement over current welfare programs because there will be no restrictions on hiring ELR workers. Thus it is designed to capture more of the population suffering from unemployment than what is currently being captured through existing government programs. Further the ELR program is advantageous over current welfare programs as it helps to maintain skill sets that would otherwise diminish if not applied. The ELR program operates in a dynamic economy through providing employment and by offering retraining programs to workers whose education and skills have become obsolete because of technological advancements (Wray 1998, 124–125).

Modeling the Employer of Last Resort in a Surplus Producing Economy

Much focus in discussions of the ELR approach involves both the affordability and feasibility of the program. Concerning affordability the main proponents of the ELR approach take a functional finance perspective, positing "... that any nation that operates it's own currency, and which adopts a floating exchange rate, can implement an ELR program, each nation might formulate the specifics of its program in accordance with it's own political and economic situation (Wray 2000a, 1)."

Financing for the ELR is traditionally based upon the functional finance approach of Abba P. Lerner (1943, 1947). The crux of Lerner's argument is that there can be no financial constraint on a government that operates a sovereign currency. Functional Finance is the core of Modern Money Theory. L. Randall Wray (1998, 2000a, 2000b, 2003) has argued in many places that sovereign currency makes an ELR financially feasible. There is no limitation on a government's ability to finance the deficit.

That said, even under the principles of Functional Finance/Modern Monetary Theory, estimating how much the program would cost, and how to pay for it, has many advantages. First and foremost, not every country that would like to enact an ELR-type program operates a sovereign, floating currency. Thus, if a country wanted to establish an ELR under the

principles of Modern Money Theory it must first implement a sovereign, floating currency—a very large political and economic feat for many countries. Second, regardless of one's perspective on budget deficits, the functional finance perspective or otherwise, devising estimates of the budgetary affects of the ELR program takes a large step to promoting the political feasibility of the program. Further, current U.S. policy establishes that any new legislation must be budget-neutral under the "Statutory Pay As You Go Act of 2010" (PAYGO). PAYGO "requires that any bills increasing mandatory expenditures must be fully offset by revenue increases or cuts in mandatory programs."[1] Essentially PAYGO mandates for a balanced budget approach to fiscal policy for the attainment and maintenance of full employment.

It will always be preferable for an ELR program to be enacted outside PAYGO, or any other budgetary rules, with a sovereign currency under flexible exchange rates; ELR should operate under the traditional rules of functional finance (see L. Randall Wray's writings on this). But if operating ELR under the rules of functional finance is not possible because of political opposition (such as the U.S. requirement of PAYGO), or because of a non-sovereign currency or fixed exchange rate, then the question becomes, can an ELR program be operable under any of other systems? A starting point for addressing this question is devising an ELR program that is budget-neutral and modeling it in a dynamic, surplus producing economy.

ELR in the Fairmodel as a Basis for Surplus Approach

The US-Fairmodel, developed by Ray C. Fair, has become the preferred modeling approach for macroeconometric simulation of the ELR (Fullwiler 2007; Majewski 2004; Majewski and Nell 1999). The US-Fairmodel consists of six sectors: households, firms, financial sector, foreign sector, federal government, and state and local governments. The US-Fairmodel collects data from the NIPA and Flow of Funds (Fair 2011). The US-Fairmodel, while complex, is still just a model and its accuracy is subjected to the defined parameters. However, all econometric models have this limitation.

There have been recent attempts of macroeconometric simulations by heterodox economists, including heterodox applications of the US-Fairmodel. Recently heterodox economics have also begun developing heterodox macroeconometric models for purposes of simulating investment activity under uncertainty (Ono and Oreiro 2006; Richardson and Courvisanos 2008; Courvisanos 1996; Courvisanos and Richardson 2006,

2008), and for modeling and simulating the banking sector (Lavoie and Godley 2006).

The US-Fairmodel has many features that make it consistent within the traditions of Classical-Keynesian Political Economy. The US-Fairmodel comes close to the theory of Transformational Growth in its treatment of interest rates, money supply, private employment, output and inflation (Majewski 2004, 164). The US-Fairmodel is influenced upon expectations, but expectations are not assumed to be rational and market participants are generally forward-looking and base their present decisions on future expected market conditions (Fullwiler 2007; Fair 2004). Fullwiler (2007), Majewski (2004), and Majewski and Nell (1999) have argued that the US-Fairmodel's treatment of production and consumption is further consistent within the CKPE tradition. The US-Fairmodel treats consumption as dependent upon disposable income and influenced by wealth effects. Production is dependent upon the level of expected sales, lagged change in inventories, and influenced by changes in intermediate demand from other producers. The US-Fairmodel's 30 identity equations and 101 behavioral equations are completely integrated within both NIPA and Flow of Funds data (Fullwiler 2007, 99), making it consistent with the surplus approach to production of Classical Political Economy. Savings equals investment in the US-Fairmodel model; however, savings does not fund investment, nor are there any assumptions of full employment. Rather the savings-investment equality is an outcome of NIPA.

The Fairmodel does have some limitations, as all econometric models do. However, even with its limitations, Majewski (2004) and Majewski and Nell (1999) have concluded that the US-Fairmodel has enough consistencies for heterodox analysis, and Transformational Growth specifically, to justify its use in simulating the macroeconomic effects of full employment through an ELR program (Majewski 2004, 167).

Simulations and Results

To simulate the balanced budget multiplier effects of the ELR program so that it conforms to PAYGO regulations requires first bringing in the ELR program into the US-Fairmodel. Previous approaches (Fullwiler 2007, Majewski 2004) have phased in the ELR program over time. No such attempt is made in the current approach. It is assumed that all who are willing and able to work can qualify to work in the ELR program immediately after its introduction.

Simulating a Budget-Neutral ELR Program

The first step in simulations is to introduce the ELR program into the Fairmodel. It is assumed that all who are currently unemployed will take part in the ELR program. While this assumption may be an extreme scenario, by simulating the ELR in the most extreme case and detailing its applicability and effectiveness.

The simulations begin by modifying the US-Fairmodel by setting ELR employment to the initial level of unemployment and then forecasting forward. The level of quarterly ELR employment (in millions) has been forecasted for the periods 2011.3–2020.4[2] and is represented in Fig. 2.1. It should be noted that ELR employment declines after its introduction and levels off. This result is due to the positive effects that ELR employment has on the private sector.

After the introduction of the ELR program into the model economy, the next step is to investigate the ELR's impacts on nominal and real Gross Domestic Product (GDP). The ELR program is shown to contribute positively to quarterly GDP. Figure 2.2 illustrates the growth in real GDP by calculating real GDP after the introduction of less the Base Model (no ELR). The percentage change in real GDP from the Base-model to the ELR-model depicts an average increase of real GDP by 5.8 percent over the forecasted period as shown in Fig. 2.3.

These results are nothing new and are in line with the previous ELR-Fairmodel simulations noted above. What makes this analysis different and unique is its treatment of budget deficits. The ELR program is modeled

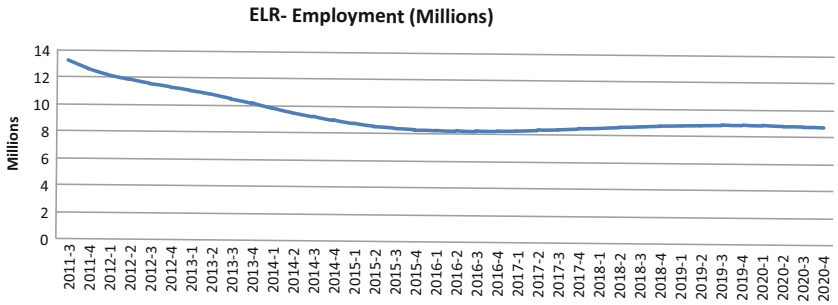

Fig. 2.1 Simulations of Employment in the Employer of Last Resort Program 2011-2020

to be budget-neutral, fully financed out of government revenues. Modeling this could be done in two ways: (1) through a reduction of existing government outlays by the amount of ELR-spending and/or (2) through an increase in tax receipts.

With regards to a reduction in government outlays, besides the obvious choice of unemployment benefits, what other programs should be cut? This

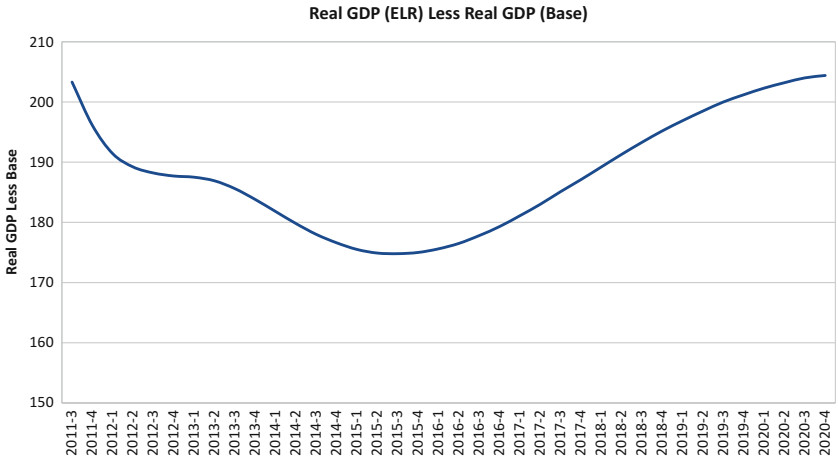

Fig. 2.2 Net increase in real GDP following the introduction of the ELR program

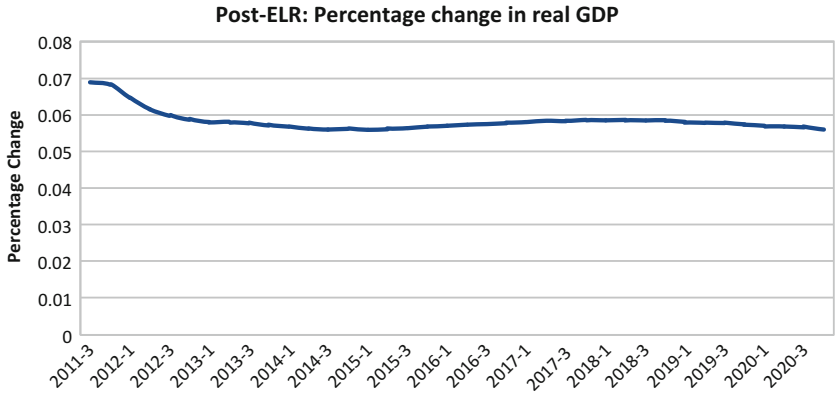

Fig. 2.3 Percent change in real GDP after the introduction of the ELR program

is an ethical decision that would be highly debated. Wray (1998, 125–128) has recognized that the ELR cannot solve all unemployment problems. Unemployment compensation should still be made available to those who are frictionally unemployed or who may be unable to work due to a disability, long-term illness, or other mitigating factors. State-run programs such as Aid to Families with Dependent Children, Medicare, etc. will still need to be in place even with an ELR. The required maintenance of these and many other government programs makes it difficult to cut government expenditures to fund an ELR program. The alternative is to finance ELR spending through an increase in tax revenues. This is the approach taken in the current study.

The cost of ELR program is offset through an equal increase in personal income taxes. For purposes of simulation, it is assumed that ELR spending in a given quarter will be financed by tax revenues of an equal amount in the following quarter. This is not a perfect offset but it comes close.

Unlike previous simulations, this tax hike has an adverse effect on disposable household income. The results of a tax-financed ELR program on disposable household income are presented in Figs. 2.4 and 2.5. Figure 2.4 illustrates the fall in aggregate disposable household income after the introduction of the ELR program. This is due to the financing of ELR out of additional tax revenues. The economy is still growing with an ELR program despite the reduction in disposable household income. What this phenomenon does suggest is that there is a redistribution of income, from households to government, in the form of higher taxes to finance the ELR. Essentially this is a redistribution of income from those who are employed and better off to those who are less well off.[3]

The balanced budget multiplier effect of an ELR program is more pronounced in Fig. 2.5, which details Household Disposable Income as a percentage of GDP. Consumption as a share of GDP is declining and then appears to be tapering off between 60 and 6 percent of GDP. This is occurring for two reasons. One, GDP is growing at a faster rate than consumption, and GDP growth is spurred by public investment into the ELR. Further, the ELR is being financed through tax hikes in the following period that has a negative impact on aggregate consumption. That said, it should be noted that these are not drastically low percentages. In fact, consumption between 60 and 68 percent of GDP is the normal state of affairs. Consumption as a percent of GDP for the United States has been in

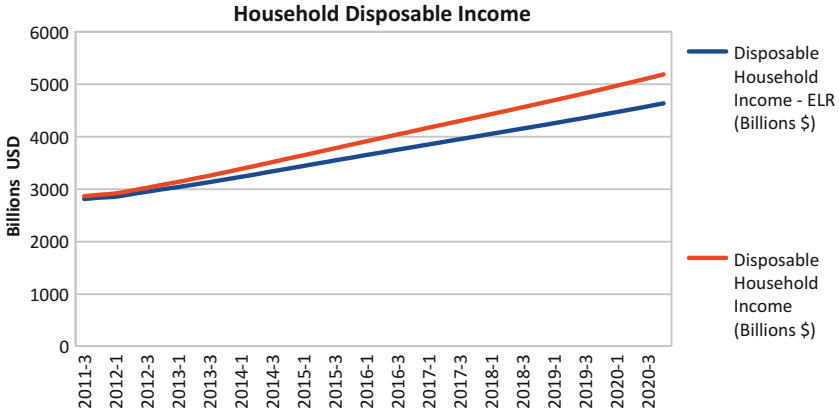

Fig. 2.4 Household disposable income with and without a taxpayer-financed ELR program

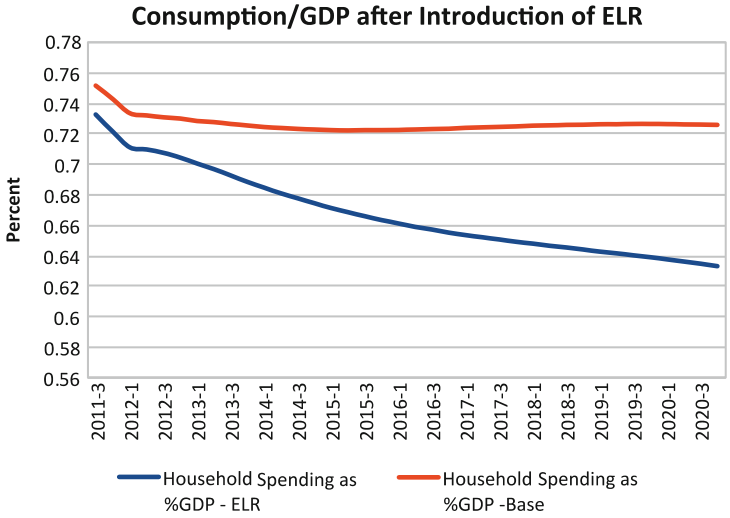

Fig. 2.5 Consumption as a percent of GDP with and without a taxpayer-financed ELR program

the 60th percentile for the past five decades. Only in the period between 2003 and 2007 did consumers contribute to over 70 percent of GDP. This may have also been partly due to the housing bubble and debt crisis that consumers found themselves in.

In terms of the size of the deficit, it is seen that when spending on the ELR program is completely offset by tax increases, the ELR sector actually contributes to deficit reduction. This is seen in Fig. 2.6, which compares deficit forecasts for both the Base model and the ELR model. Studying Fig. 2.7, it is noticed that the deficit-to-GDP ratio for the ELR model is 1.0 percent–1.5 percent below that of the Base model.

Conclusion

The conclusion that the ELR program could actually produce lower deficits is itself unique. This conclusion leads to very interesting implications about the applicability of government job guarantee programs moving forward. It has been previously postulated that if a government were to enact an ELR

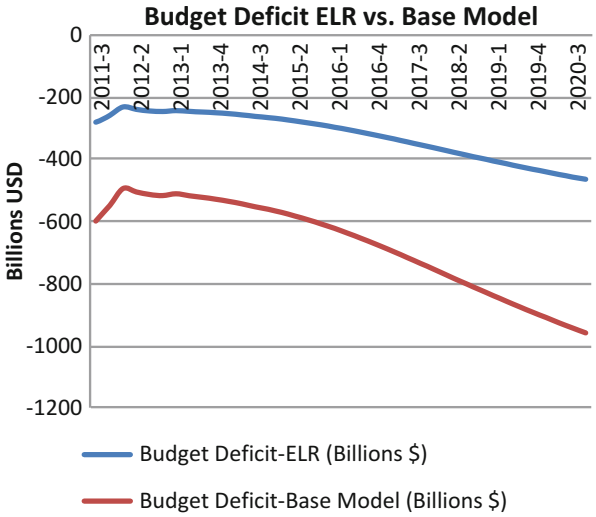

Fig. 2.6 Federal budget deficit with and without a taxpayer-financed ELR program

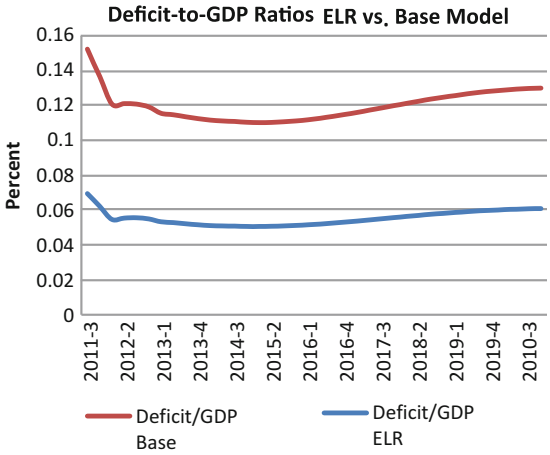

Fig. 2.7 Deficit-to-GDP ratios with and without a taxpayer-financed ELR program

program it must have the ability to run persistent deficits following the principles of Modern Money Theory, which have been laid out in this volume and elsewhere. However, the simulation results illustrated in this chapter suggest that this may not always have to be the case. The ELR program could be designed to be budget-neutral and could still be effective at promoting full employment and economic growth. The consequence of a budget-neutral ELR is simply a partial and tolerable redistribution of wealth. In the simulations, consumption as a share of GDP fell to levels seen from the 1950s to 2003.

A fully financed ELR and an ELR operated squarely on the principles of functional finance/MMT offer two polar extremes toward the financial feasibility of an ELR. But in either case, an ELR can be both affordable, and produce benefits to society that are unmatched by traditional, New Keynesian public policies. For countries that operate a sovereign currency, a partially funded ELR may be desirable (as it may be the only option that is political feasible). Since both a fully financed ELR and an unfinanced ELR are shown to produce positive outcomes, then so must a partially funded ELR. Further these simulations also suggest that governments without a sovereign currency can develop an ELR full employment policy without worrying about getting themselves into a debt crisis.[4]

Notes

1. www.whitehouse.gov/omb/paygo-description/.
2. I have reserved the mathematics of all simulations for the Appendix.
3. Redistribution of income is not necessarily a bad thing. Forstater (2002b) and Murray (2010a) discuss that the costs of unemployment are much greater than the measurable monetary cost, the non-economic social costs must also be included. Further, from an ecological lens, Herman Daly's analysis of a sustainable economy is that of a 'steady-state.' A steady-state economy requires less aggregate consumption and a redistribution of income from the wealthy to the poor in order to maintain an ecological sustainable level of production. Within this context, Forstater (2006) also addresses how an ELR can specifically provide for ecological sustainability.
4. The PAYGO analysis here is part of a larger project with Edward Nell and Ray Majewski for a forthcoming book *Maintaining Full Employment: Public Service Employment and Economic Stabilization*. The current analysis takes a different approach in the modeling and implementation of ELR and therefore deviates from what will be presented in the aforementioned volume. The volume will also simulate the ELR under a number of different restrictions including PAYGO.

Appendix: Modeling ELR in the US-Fairmodel

The modifications to the US-Fairmodel followed previous modifications done by Fullwiler (2007) and Majewski (2004) and Majewski and Nell (1999). Additional modifications were also required in order to simulate a balanced-budget ELR program.

Generate the following variables:

- *GENRJELR=U;*
- *GENRWELR=.95*WF+.05*WG;*
- *GENRYELR=WELR*JELR*520;*
- *GENRCOSTELR=.15*YELR;*
- *GENRELRSPEND=YELR+COSTELR;*
- *GENRLELRSPEND=ELRSPEND−ELRSPEND(−1);*
- *GENRYELRR=YELR/PG;*

Modifications to the FairModel's Identity Equations:

- *IDENTWH=100*((WF*JF*(HN+1.5*HO)+WG*JG*HG+WM*JM*HM+WS*JS*HS−SIGG−SISS)+ΥELR/(JF*(HN+1.5*HO)+JG*HG+JM*HM+JS*HS)+(JELR*520))*
- *IDENTX=CS+CN+CD+IHH+IKF+EX−IM+COG+COS+COSTELR+IKH+IKB+IKG+IHF+IHB−PIEB−CCB;*
- *IDENTXX=PCS*CS+PCN*CN+PCD*CD+PIH*IHH+PIK*IKF+PEX*EX−PIM*IM+PG*COG;+PS*COS+COSTELR+PIK*(IKH+IKB+IKG)+PIH*(IHF+IHB)−PX*(PIEB+CCB)−IBTG−IBTS;*
- *IDENTSH=ΥT+ΥELR+CCH−PCS*CS−PCN*CN−PCD*CD−PIH*IHH−PIK*IKH−TRHR−THG−SIHG+TRGH−THS−SIHS+TRSH+UB+INS;*
- *IDENTSG=THG+IBTG+TFG+TBG+SIHG+SIFG−LELRSPEND−PG*COG−WG*JG*HG−WM*JM*HM−INTG−TRGR−TRGH−TRGS−SUBG−INS−PIK*IKG+SIGG+CCG+TRFG−DG*
- *IDENTGDP=XX+PIV*(V−V(−1))+IBTG+IBTS+WG*JG*HG+ΥELR+WM*JM*HM+WS*JS*HS+WLDG+WLDS+PX*(PIEB+CCB)*
- *IDENTGDPR=Υ+PIEB+CCB+PSI13*(JG*HG+JM*HM+JS*HS)+ΥELR/GDPD+STATP*
- *IDENTJJ=(JF*HF+JG*HG+(JELR*520)+JM*HM+JS*HS)/POP*
- *IDENTPUG=PG*COG+LELRSPEND+WG*JG*HG+WM*JM*HM+WLDG*
- *IDENTYD=WF*JF*(HN+1.5*HO)+WG*JG*HG+WM*JM*HM+WS*JS*HS+RNT+DF+DB+DR+DG+DS+INTF+INTG+INTS+INTZ+TRFH+TRGH+TRSH+UB+ΥELR−SIHG−SIHS−THG−THS−TRHR−ELRSPEND(−1)*

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CHAPTER 3

The Job Guarantee: A Superior Buffer Stock Option for Government Price Stabilisation

William Mitchell

Introduction

A central idea in economics is efficiency, which broadly means getting the best out of the available resources. While the concept of efficiency is ideologically loaded (see Mitchell and Watts 1985), the 'efficiency frontier' in macroeconomics is normally expressed in terms of full employment irrespective of the unresolved debate as to what do we mean by full employment.

At the macroeconomic level, an economy is deemed to be operating at its maximum level if all productive resources are fully engaged. An efficient economy thus must embrace a state of full employment, where everyone who desires to work is able to access a paid employment opportunity. This concern about full employment was embodied in the policy frameworks and definitions of major institutions all around the world in the period following World War II. Since the mid- to late 1970s, the policy arena has been dominated by the so-called 'inflation first' policy strategies where unemployment has become a policy tool rather than a policy target. Accordingly,

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Mitchell and Muysken (2008) argue that the goal of full employment has been replaced with the diminished goal of full employability with massive costs being incurred as a consequence.

In his 1987 Ely Lecture to the American Economics Association, Princeton economist Alan Blinder described the failure to provide productive employment for all those willing and able to work as one of the 'major weaknesses of market capitalism'. He argued that the failure had been 'shamefully debilitating' since the mid-1970s and that the associated costs make "reducing high unemployment a political, economic and moral challenge of the highest order" (Blinder 1989: 139). In 2013, Blinder said there was still an emergency, "five years after the worst ... we have this titanic loss of output ... something we number crunching economists tend to emphasize. But more regular people care more about the misery that the unemployed have to endure." (Blinder 2013: 1). The solution? Blinder said we "can hire people directly into government jobs ... try to induce businesses to hire more ... The point is, we can still do these things" (4). The following year, Blinder wrote that Reaganomics, the precursor to what we now put under the banner of 'fiscal austerity', "marked the beginning of the federal government's conversion from fighting poverty to fighting the poor (and the middle class)" (Blinder 2014). Blinder is no particular champion of the poor and remains locked in the world of mainstream economics. But as a more moderate member of that fraternity he can see the blight of unemployment; the fact that government can do something about it; and that governments have adopted ideological positions to punish the unemployed and the poor rather than reduce their distress.

In this context, governments have two broad *buffer stock* options when it comes to price stabilisation (Mitchell and Muysken 2008). The first uses an unemployment pool to discipline the wage-price setting process. Inflation is stabilised through the disciplinary impact of unemployment of wage demands and the soft product market on price mark-ups. We term this the 'Non-Accelerating Inflation Rate of Unemployment' or NAIRU approach and argue that it is a costly and unreliable way of inflation proofing. It also has significant intergenerational costs, which undermine future productivity growth. The second option exploits the government's monopoly over fiat-currency issuance to introduce an unconditional public sector job offer at a fixed wage, which creates a buffer of jobs and stabilises prices. The *Job Guarantee* (JG) proposal, which was conceived independently by Mitchell (1998) and Mosler (1997–1998), is a specific example of

the employment buffer stock policy approach. We argue that it is the superior buffer stock option for government price stabilisation.

In this paper, we juxtapose these two buffer stock options from the point of inflation control with a discussion of where they fit into the literature on the Phillips curve and consider the macroeconomic efficiency implications of each. The discussion will consider the implications for the fiscal position of the government arising from each option.

We argue that a currency-issuing government ultimately chooses the unemployment rate after the non-government sector spending (and saving) decisions are set in place. Total spending must equal total income if aggregate output is to be sold. Involuntary unemployment is idle labour offered for sale with no buyers at current prices (wages). Unemployment occurs when the private sector, in aggregate, desires to earn the monetary unit of account through the offer of labour but doesn't desire to spend all it earns, other things equal. The state can resolve this spending gap in two quite different ways: (a) by stimulating aggregate spending in the economy directly through public purchases of goods and services and/or labour at market prices or by cutting taxes or providing other incentives for a private spending revival; and/or (b) by using its currency issuance power to provide a fixed-wage job to all those who are unable to find a job elsewhere. The JG is an effective strategy for a fiat-currency issuing government to ensure that work is available at a liveable wage to all who wish to work but who cannot find market sector employment (including regular public sector). The JG differs from a traditional Keynesian pump-priming expansion because it represents the minimum stimulus required to achieve full employment rather than relying on spending at market prices and multipliers. The JG also provides an inherent inflation anchor because it bids for resources at a fixed price, which is in contradistinction to the generalised Keynesian approach where the government competes with the non-government sector for resources at market prices (Mitchell 1998; Mitchell and Juniper 2007). Clearly, and emphatically, a mixture of (a) and (b) is likely to be optimal although (a) alone is not preferred.

The concept of employment buffer stocks as a means of maintaining full employment and price stability is a central aspect of the understanding that Modern Monetary Theory (MMT) brings to macroeconomics. It is tempting to think of the JG as being just a policy option (preference), merely one type of job creation program that is not intrinsic to the body of knowledge that MMT generates. But that interpretation betrays a misunderstanding of the basic mechanics of the JG and its capacity to void the notion of a trade-

off between inflation and unemployment. This paper aims to clear up that misunderstanding.

The paper is laid out as follows: Section on The Government Chooses the Unemployment Rate establishes the notion that mass unemployment arises because the fiscal deficit is too low relative to the spending and saving decisions of the non-government sector. Section on Buffer Stocks and Storage considers the general notion of buffer stocks and storage and how they can be used to maintain price stability. Section on Two Buffer Stock Options Available to Government specifically compares and contrasts the two buffer stock options available to government intent on stabilising prices. Section on Employment Guarantees Versus Income Guarantees compares and contrasts the JG with the Basic Income Guarantee proposal. Section on The Job Guarantee Turns the Phillips Curve on Its Head places the JG within the Phillips Curve literature. Concluding remarks follow.

The Government Chooses the Unemployment Rate

The Full Employment Fiscal Deficit

Full employment occurs when aggregate spending is sufficient to elicit output levels, which at current productivity levels will provide enough jobs (measured in working hours) for all the workers who desire to work. Once the non-government sector has determined its spending (and saving) decisions, the currency-issuing capacity of the national government can always ensure that aggregate spending is at this level, should there be the political will to do so.

From the sectoral balances perspective of the national accounts, we define the non-government sector balance as the sum of the private domestic and current account balance, that is, $(S - I)$ + CAB, where S is household saving, I is private capital formation, and CAB is the sum of the balance of trade and net external income flows. The sectoral balances tell us that the government balance $(G - T)$ is equal to and of opposite sign to the non-government balance. Here G is total government spending and T is taxation revenue net of transfers. Thus, $(G - T) = (S - I) - (X - M)$. National income adjustments ensure this accounting relationship is maintained at all time through their impact on saving, imports, tax receipts, government spending and investment (accelerator models).

If non-government spending declines from a given position of full employment, the only way that the spending gap can be filled is via a fiscal

intervention—direct government spending and/or a tax cut (to increase private disposable income and stimulate private spending). It is possible for an expansionary monetary policy to reverse the decline in private spending, but the outcomes are much less certain relative to a fiscal expansion.

We thus can define the full employment fiscal deficit condition as:

$$(G - T)_f = S(Y_f) + M(Y_f) - I(Y_f) - X \tag{3.1}$$

where Y_f is the full employment national income. Note, for simplicity we are abstracting from the net external income flows in what follows.

The sum of the terms $S(Y_f)$ and $M(Y_f)$ represent non-government drains from the aggregate income-spending cycle when the economy is at full employment and the sum of the terms $I(Y_f)$ and X represents non-government spending injections at full employment. If the drains outweigh the injections then for national income to remain stable, there **has** to be a fiscal deficit sufficient to offset that gap in aggregate demand even though the economy is at full employment and the automatic stabiliser component of the fiscal balance is zero. If the fiscal deficit is not sufficient, then national income will fall and the economy will depart from full employment. In common parlance, $(G - T)_f$ is the structural fiscal balance.

Mass Unemployment Occurs Because the Fiscal Deficit Is Too Low

Equation (3.1) leads to the conclusion that mass unemployment occurs when net government spending is too low to accommodate the need to pay taxes and the non-government sector's desire to net save.

MMT brings into focus the fact that a currency-issuing government is not revenue-constrained, which means that it can purchase anything that is for sale in its own currency at any time it wants without recourse to raising 'income' via taxation and/or bond sales. Accordingly, taxation can no longer be construed as funding government spending. This insight allows us to see a crucial dimension of taxation, which is lost in orthodox analysis. Given that the non-government sector requires fiat currency to pay its taxation liabilities, in the first instance, the imposition of taxes (without a concomitant injection of spending) by design creates unemployment (people seeking paid work). The unemployed or idle non-government resources can then be utilised through demand injections via government spending

which amounts to a transfer of real goods and services from the non-government to the government sector.

In terms of Eq. (3.1), the spending injection has to be scaled relative to taxation revenue and the non-government's overall saving position. Conceptualising the relationship between the government and non-government sectors in this way makes it clear that it is government spending that provides the paid work, which eliminates the unemployment created by the taxes.

This analysis also sets the limits on government spending. It is clear that government spending has to be sufficient to allow taxes to be paid and meet the non-government desire to net save (accumulate net financial assets in the currency of issue). Increasing nominal spending growth beyond that limit will generate inflationary pressures. In other words, the risk of fiscal deficits is not insolvency but inflation, another fact not emphasised in orthodox textbooks.

Buffer Stocks and Storage

A buffer stock is a fluctuating quantity of some stored thing that can be used to stabilise prices and/or incomes. Wall Street investor Benjamin Graham was an early contributor to the idea of stabilising prices and standards of living by surplus storage. He documented the ways in which the government might deal with surplus production in the economy. Graham (1937: 18) said "The State may deal with actual or threatened surplus in one of four ways: (a) by preventing it; (b) by destroying it; (c) by 'dumping' it; or (d) by conserving it." He was writing at a time when governments were adopting the 'dumping' strategy via mass unemployment to deal with the excess supply of labour. Graham (1937: 34) thought that, in general, the conservation approach made better sense:

> The first conclusion is that wherever surplus has been conserved primarily for future *use* the plan has been sensible and successful, unless marred by glaring errors of administration. The second conclusion is that when the surplus has been acquired and held primarily for future *sale* the plan has been vulnerable to adverse developments.

In the agricultural context, the Australian government exploited Graham's insight that a commodity can be stored if in surplus production or released from store if in shortage in order to stabilise prices and preserve

incomes when it introduced the Wool Floor Price Scheme in 1970 as a means of stabilising farm incomes. A floor price was established upon consultation with the industry and the Australian Wool Corporation (AWC), a government body, would then maintain that price by buying and selling wool stocks in the auction markets to resolve any excess supply or demand. The consequence was that it amassed large stockpiles of wool in good seasons, a 'buffer stock' of wool, which it kept in large wool stores spread around the nation. In poor seasons, the government would release wool from its stores into the market to keep the price stable in the face of the wool shortage. The government's buffer stock of wool would thus fluctuate up and down according to the vagaries of demand and supply in the wool market, but the price of wool would remain more or less constant. The major controversy for economists of the day was the 'tinkering with the price mechanism' (Throsby 1972: 162).

The Wool Floor Price Scheme generated 'full employment' for wool production and the principles established can underpin the design of a labour buffer stock to eliminate involuntary unemployment. Given that mass unemployment is a macroeconomic problem related to deficient demand, which manifests as a systemic failure to create sufficient jobs at the going wage rate to satisfy the desire for work by labour, it follows that the government can create a buffer stock of jobs to eliminate the unemployment.

The Wool Floor Price Scheme was an example of storage for future sale and was not motivated to help the consumer of wool but the producer. An efficient employment buffer stock scheme would be an example of storage for use where the "reserve is established to meet a future need which experience has taught us is likely to develop" (Graham 1937: 35). Graham also analysed and proposed a solution to the problem of interfering with the relative price structure by accumulating a commodity surplus. In the context of an efficient employment buffer stock scheme, this would mean setting the buffer stock wage below the private market wage structure, unless it was the government's intention to increase the current minimum wage above the lowest available in the labour market. If the buffer wage offer is below the prevailing private market minimum and a buffer stock of working hours constructed to absorb the excess supply at the current market price, then a government can generate full employment without encountering the problems of price tinkering. Further, the issue of what constitutes a reasonable level of wool output in a time of declining demand is not relevant when applied to an excess of available labour.

Graham (1937: 42) also considered that the commodity surplus should "not be pressed for sale until an effective demand develops for it." In the context of an efficient employment buffer stock scheme, this suggests that there be an unconditional public sector job offer for all labour that is surplus to current private demand. As private demand increases, the buffer pool of jobs will diminish.

Two Buffer Stock Options Available to Government

The Choice of Inflation Anchors

In general terms, the two broad buffer stock approaches that a government can use to stabilise prices, are:

- Unemployment buffer stocks—Inflation is controlled using a combination of high interest rates and/or fiscal austerity, which creates a buffer stock of unemployment. The unemployment dampens wage demands and the accompanying subdued sales reduce the capacity of firms to push up prices. This is the dominant approach used by policy makers.
- Employment buffer stocks—The government makes an unconditional offer of employment at a socially acceptable minimum wage to anyone who cannot find a job, thereby creating a buffer stock of jobs. The jobs pool would fluctuate with economic activity. The job offer does not compete with the labour demand elsewhere in the economy and is thus non-inflationary.

Unemployment Buffer Stocks and Price Stability

The modern policy framework is in contradistinction to the practice of governments in the post-World War II period to the mid-1970s, which sought to maintain levels of spending in the economy using a range of fiscal and monetary measures that were sufficient to ensure that there were enough jobs available to satisfy the preferences of labour for work. Continuous fiscal deficits were common during this period and the idea that a government should pursue some preconceived fiscal target irrespective of what that might mean for the level of unemployment was alien. Unemployment rates were consistently at very low levels throughout this period.

In the 1970s, politicians increasingly came under the influence of the Monetarist free market ideology, which asserted that there was no discretionary role for government fiscal policy to regulate total spending to maintain full employment. Mass unemployment was reconstructed as a structural problem arising mostly because individuals are not motivated enough to seek work or are subsidised to halt job search by excessively generous income support measures provided by government. Accordingly, the policy debate became increasingly concentrated on deregulation of financial and labour markets (particularly job protection and trade union involvement), privatisation and reductions in welfare support. Macroeconomic policy became concentrated on using interest rates to control spending supported by a passive fiscal policy biased towards austerity. Governments abandoned full employment as a policy goal (Mitchell and Muysken 2008). Instead, they deliberately manipulated unemployment buffer stocks to suppress price pressures.

The fear of job loss that accompanies periods of high unemployment suppresses price pressures because workers are discouraged from seeking higher wages. Further, firms have reduced ability to push up prices when their sales decline. Taken together, the rising unemployment keeps a lid on inflation. Several nations also introduced extensive labour market deregulation, which spawned new forms of labour underutilisation, which made it harder for workers to secure wage rises. For example, underemployment, the state where a part-time worker desires more hours of work but cannot find them, adds to the underutilised pool of labour, which acts as a wage constraint.

However, neo-liberal policy makers do not characterise their approach in this way. Instead, they claim that full employment follows naturally from the maintenance of price stability, even though this approach to price stability requires the maintenance of an unemployed buffer stock. In other words, they conveniently redefine full employment as being consistent with any unemployment rate where inflation is stable, even if that rate is high and variable. The high unemployment is then characterised as being the 'natural rate' and of structural origin, with the additional assertion that if governments try to reduce it with increased deficit spending, they will only generate accelerating inflation (Friedman 1968; Phelps 1967).

The evidence is not consistent with this view. Big jumps in unemployment always occur during major recessions when no significant changes in the so-called structural influences cited by mainstream economist to explain high unemployment are observed. Also, whenever economic growth picks

up, firms start hiring and unemployment drops. Further, in the pre-GFC period, several nations drove unemployment well below these 'estimated' full employment or natural rate levels, while inflation also fell and remained low. The *ad hoc* response from the mainstream economists was that the 'full employment' level had shifted down but there was no convincing 'structural' explanation for that shift. The only reasonable explanation was that increased total spending created more sales and gave firms an incentive to increase employment.

The tolerance of high levels of unemployment, a relatively recent phenomenon, exemplifies the policy dominance of neo-liberal ideology. The empirical evidence is clear that most OECD economies have not provided enough jobs since the mid-1970s and neo-liberal austerity policies have forced the unemployed to engage in an involuntary fight against inflation.

It is clear that the experience of OECD nations since 1975 suggests that deflationary policies, including fiscal austerity, are effective in bringing inflation down but impose huge unemployment costs on the economy generally, and on certain demographic groups specifically, which are rarely computed or discussed in official circles. These costs include:

- Loss of current output and income;
- Social exclusion and the loss of freedom;
- Skill loss;
- Psychological harm;
- Ill health and reduced life expectancy;
- Loss of motivation;
- The undermining of human relations and family life;
- Racial and gender inequality; and
- Loss of social values and responsibility.

While the unemployed and their families are certainly aware of these massive losses, the rest of society is less aware. For example, we might notice rising crime rates in our neighbourhoods but not associate them with higher unemployment. In part, this is because neo-liberal framing has changed the way we think about unemployment (see Connors and Mitchell 2016; Mitchell 2015). In the past we understood clearly that unemployment arose as a result of a shortage of jobs. In recent decades, we have been conditioned by relentless government campaigns supported by a largely co-opted media to perceive unemployment as an individual problem. The upshot is that we are lulled into accepting the popularised narrative that the

unemployed are lazy; have poor work attitudes; refuse to invest in appropriate skills; are subject to disincentives arising from misguided government welfare support, and all the rest of the arguments that the mainstream use to obfuscate the social and economic problem.

Further, there is evidence that the 'quality' of the unemployed buffer stock (defined in terms of its capacity to discipline price pressures) deteriorates over time. Just as soggy, rotting wool is useless in a wool price stabilisation scheme, the quality of labour resources can deteriorate if unemployed for lengthy periods. The more employable are the unemployed, the greater is the price level discipline of the unemployment buffer stock. There is overwhelming evidence that the skill losses and related circumstances associated with long-term unemployment undermine the quality of the jobless buffer stock and require higher and higher levels of unemployment to be created to maintain the same downward pressure on prices.

For these reasons, it is difficult to argue in cost benefit terms that this approach could possibly be a superior way to maintain price stability. This is especially so when we realise that the currency-issuing government can create a buffer stock of jobs which allow workers to maintain a continuous involvement in paid work, which leads to improved physical and mental health, more stable labour market behaviour, reduced burdens on the criminal justice system, more coherent family histories and useful output, if well managed. It can also provide training ladders associated with the actual skills required in the paid work environment.

The Job Guarantee Approach to Price Stability

Once we understand the options that a currency-issuing government has, it becomes obvious that a better alternative would be to utilise an employment buffer stock approach. The Job Guarantee (JG) is an example of this approach and we argue that is the best way to maintain price stability while avoiding the massive costs of unemployment. Between 1945 and the mid-1970s, western governments realised that with deficit spending supplementing private demand, they could ensure that all workers who wanted to work could find jobs. Although private employment growth was relatively strong during this period, governments were important employers in their own right, and also maintained a buffer of jobs for the least skilled workers: for example, in the major utilities, the railways, local public services and major infrastructure functions of government. By

absorbing workers who lost jobs when private investment declined, government jobs acted as an economic safety valve. Ormerod (1994: 203) noted that the economies that avoided high unemployment in the 1970s maintained a '... sector of the economy which effectively functions as an employer of last resort, which absorbs the shocks which occur from time to time, and more generally makes employment available to the less skilled, the less qualified'. He concluded that societies with a high degree of social cohesion (such as Austria, Japan and Norway) were willing to broaden their concept of costs and benefits of resource usage to ensure that everyone had access to paid employment opportunities.

It is in that context that the JG can be understood. The JG is a simple concept with far reaching consequences. The JG would involve the government making an unconditional job offer to anyone who is willing to work at a socially acceptable minimum wage and who cannot find work elsewhere. The buffer stock of jobs would expand (decline) as private sector employment declined (expanded). To avoid disturbing private sector wage structures and to ensure the JG is consistent with stable inflation, the JG wage rate should be set at the minimum wage level, defined to ensure the worker is never socially excluded. The minimum wage should be an expression of the aspiration of the society of the lowest acceptable material standard of living. Since the JG wage would be open to everyone, it would functionally become the national minimum wage. JG workers would enjoy stable incomes, and their increased spending would boost confidence throughout the economy and underpin a private spending recovery.

The JG would thus provide an absorption function to minimise the real costs currently associated with the flux of the private sector. On the other hand, when aggregate spending growth is such that private firms desire to expand, wage bids above the minimum wage would attract workers back into private employment. The nation always remains fully employed, with only the mix between private and public sector employment fluctuating in response to the spending decisions of the private sector. Mitchell (1998) called this mix the buffer employment stock ratio (BER).

The anti-inflation mechanisms of a JG are easy to understand. If inflationary pressures develop in the private sector as it reaches full capacity, the government can manipulate fiscal and monetary policy settings to constrain private sector spending to prevent the economy overheating. Labour would be transferred from the inflating private sector to the 'fixed wage' JG sector and eventually this would resolve the inflation pressures. In general, there cannot be inflationary pressures arising from a policy that sees the

government offering a fixed wage to any labour that is unwanted by other employers (see Mitchell 1998; Mosler 1997–1998; Mitchell and Muysken 2008).

The JG introduces no relative wage effects and the rising demand *per se* does not necessarily invoke inflationary pressures because by definition it is satisfying a net savings desire. Additionally, in today's demand constrained economies, firms are likely to increase capacity utilisation to meet the higher sales volumes. There are no new problems faced by employers who wish to hire labour to meet the higher sales levels. Any initial rise in demand will stimulate private sector employment growth while reducing JG employment and spending (Mitchell 1998; Mosler 1997–1998).

The JG buffer stock is a qualitatively superior inflation fighting pool to the unemployed buffer stock. Some disagree by arguing that workers may consider the JG to be a better option than unemployment. Without the threat of unemployment, wage bargaining workers then may have less incentive to moderate their wage demands notwithstanding the likely disciplining role of unemployment in skilled labour markets. But JG workers would retain higher levels of skill than those who are forced to succumb to lengthy spells of unemployment, and therefore would constitute a more credible threat to the current private sector employees. When wage pressures mount, an employer would be more likely to exercise resistance if they could hire from the fixed price JG pool.

The JG would maintain 'loose' full employment because the government would be offering jobs to workers who are not currently in demand by the market. The JG would recruit labour 'off the bottom of the market' in contradistinction to general government spending, which involves the government competing with other purchasers for resources including labour at market prices. By not competing with the private market for resources, the JG would avoid the inflationary tendencies of traditional Keynesian pump priming, which attempts to maintain full capacity utilisation by 'hiring off the top', that is, competing for resources at market prices and relying on so-called spending multipliers to generate extra jobs necessary to achieve full employment. The latter approach fails to provide an integrated full employment price anchor policy framework. Further, under a JG, the government would know that the last person who seeks a job on any particular day would define the minimum government spending boost required to ensure there are enough jobs available. It is also true that because it would be impossible to run a JG matching all the skills to jobs the employment buffer stock comprises 'loose' full employment in the sense that there would be some

skills-based underemployment remaining when the pool was large. In better times, as the JG pool shrank, and was predominantly occupied by workers who would typically be the last employed by any private firm (if ever), the gap between 'loose' and 'true' full employment would approach zero.

If the business community or anyone else thought the fiscal deficit associated with the JG at any time was 'too high' or that there were 'too many' workers in the JG pool then there is a simple remedy available. The JG pool and government spending will fall if private spending rises (for example, invest more in productive capacity). In that sense, the size of the JG pool would always be determined by private sector spending.

The JG is a minimum spending approach to full employment. It does not replace conventional use of fiscal policy to achieve social and economic outcomes. The government would supplement the JG wage with a wide range of social wage expenditures, including adequate levels of public education, health and child care. Further, the provision of large-scale public infrastructure remains crucial.

Some JG proponents have referred to it as an 'employer of last resort' scheme for workers in the same way that central banks function as lender of last resort to the banks. However, while the central bank's capacity to provide reserves to the commercial banks should be seen as a true last resort, the JG should be one of the first policies introduced. The JG would be much more than a public sector job creation strategy because it would provide a macroeconomic stability framework designed to deliver full employment *and* price stability based on the buffer stocks principle where job creation is but one component.

The efficacy of the Job Guarantee (JG) as a strategy for sustained full employment has been the subject of ongoing debate between its advocates, who typically align themselves with the principles of Modern Monetary Theory (MMT), and other heterodox economists. The latter group includes Lopez-Gallardo (2000), Aspromourgos (2000), Kadmos and O'Hara (2000), King (2001), Ramsay (2002–2003), Sawyer (2003, 2005) and Seccareccia (2004) who have raised issues, including the stabilisation of inflation, balance of payments constraints, political and intellectual constraints, invisible underemployment and the sustainability of full employment. Their critiques have been considered in detail in Mitchell (1998), Mitchell and Mosler (2002), Mitchell and Wray (2005), Mitchell and Muysken (2008) and we do not rehearse them again here.

The Job Guarantee as an Automatic Stabiliser

One of the major arguments used against the use of discretionary fiscal policy to provide counter-stabilisation over the economic cycle is that fiscal policy decisions are subject to timing lags which can actually result in an intervention being destabilising. This was one of the main arguments that Monetarists used to discredit the use of fiscal policy. The literature, that began with Simons (1936) and gathered pace after Friedman (1960), led to fiscal policy falling out of favour among mainstream economists and a rules-based monetary policy being seen as the primary counter-stabilisation tool. Further, fiscal policy is now increasingly subject to rule constraints, which are designed to limit the discretion of policy makers to run deficits.

The automatic stabilisers built into the fiscal policy settings are not subject to timing lags and operate to attenuate the amplitude in the business cycle by expanding the fiscal deficit during recessions and reducing it during booms without any discretionary policy decisions being required. However, while they lessen the negative impacts of a recession, they do not eliminate them, and if the recession is severe enough, then additional discretionary fiscal measures are necessary to ensure that the output and income losses and the increases in unemployment are kept to a minimum. The imposition of rigid fiscal rules has been implicated in the extended recession that advanced economies endured after the GFC and monetary policy has been shown to be ineffective in stimulating aggregate spending even with near zero interest rates.

Some argue that the Eurozone crisis could be eased if a federal unemployment insurance scheme was introduced to bolster the strength of the automatic stabilisers (see Enderlein et al. 2012; Pisani-Ferry et al. 2012). Mitchell (2015) provides a comprehensive critique of that proposal and argues that the best way to strengthen the automatic stabilisers is to introduce a JG. When aggregate demand falls, more people would enter the JG and national government outlays would automatically rise while the government would not be competing for resources with the non-government sector, as in the typical Keynesian pump-priming case (see Mitchell and Juniper 2007).

The JG would thus become a powerful, additional 'automatic stabiliser' to counter the employment and income losses when non-government spending growth declined. Public sector employment and spending would automatically rise as the non-government cycle turned down. There would be no discretionary decisions to take on behalf of government or timing lags under the 'loose' full employment strategy.

The Job Guarantee and Capacity Constraints

Malinvaud (1980) first developed the idea that an economy with insufficient productive capital investment could ultimately succumb to capacity constrained unemployment, where full capacity was reached well before all the available workers had employment. The issue of capacity constraints is often raised as an objection to the introduction of a JG. It is argued that by making an unconditional offer of a job at a fixed wage to anyone who is seeking employment, the JG could easily run up against capital shortages. Notwithstanding the possibility that the extra output that would be generated if the unemployed were to be reemployed (allowing for frictional unemployment of say 2–3 percent) might exceed the real output gap, it should be acknowledged that the implementation of the JG exploits the spending capacity of a currency-issuing government, which is not constrained by expectations of future aggregate demand. This stands in contradistinction to the spending decisions of private firms that are guided by profitability considerations and constrained by endemic uncertainty. In other words, the JG can easily create its own productive capacity each time it takes on a new worker.

It is also highly likely that the introduction of the JG would place pressure on private employers, particularly in the low skill service sectors, to restructure their workplaces to overcome the discontent that their underemployed workers feel. A full time, secure JG position at wages not significantly different from those offered in low paid, casualised and insecure private service sector jobs would be an attractive option to workers. In this regard, the JG would offer flexibility to workers and become a source for dynamic efficiency. Some workers would prefer part time jobs while others would seek full time JG jobs. To retain their marginal workers, private firms would be motivated to invest in new work processes, which would generate higher productivity and justify higher wages being paid. It would be very easy to design the JG in such a way that workers with particular needs (such as child care, disability support, etc.) can be incorporated in ways that private employers tend to avoid.

The Job Guarantee Is Not Workfare

A popular misconception is that the JG would simply be a version of ‘workfare’ or so-called ‘work for the dole’ schemes. Unlike workfare schemes, the JG would not jettison economic security, social justice and

the traditional objectives of wage setting in order to build an efficient and productive economy. Workfare does not provide secure employment with conditions consistent with norms established in the community with respect to non-wage benefits and the like. Workfare does not ensure stable living incomes are provided to the workers. Workfare is a program, where the State extracts a contribution from the unemployed for their welfare payments. The State, however, takes no responsibility for the failure of the economy to generate enough jobs. In a JG economy, the state would assume this responsibility and provide acceptable rewards to the workers for their work. Most unemployed workers would exit the JG pool as soon as they could. But low skilled workers, with a history of job instability and lengthy spells of unemployment, would benefit from a guaranteed, secure job and might prefer to remain in the JG forever. That option is not typically permitted under workfare schemes.

Existing unemployment benefit schemes could be maintained alongside the JG program, depending on the government's preference and conception of mutual responsibility. But without the continued provision of unemployment benefits, the concept of mutual obligation from the workers' side would become straightforward because the receipt of income by the unemployed worker would be conditional on taking a JG job were they considered able to work. The JG wage could be paid to anyone who turned up at some designated government JG office even if the office had not yet organised work for that person. A person might be permitted a short period of non-work to sort out their affairs before starting a JG job. This period would be covered by full JG pay. It might be argued that in the European context, where unemployment benefits are paid from an insurance fund as some proportion of the worker's last earned wage, that unemployed workers would be disadvantaged if the JG replaced the unemployment insurance schemes. It would depend on the worker's past history and the generosity of the scheme, but both schemes could coexist with no loss of effectiveness of either.

The Job Guarantee Jobs Are Inclusive to the Most Disadvantaged

Gregg and Layard (2009: 2) recognise that there is a 'mass of low tech maintenance which needs to be done on public housing, schools, hospitals and roads, by ... [the long-term unemployed] ... given 1–2 weeks' training.' Extensive research has been done in a number of countries to identify

suitable JG jobs (see Cook et al. 2008). The jobs have to be accessible to the least skilled workers, who typically bear the greatest burden of unemployment. The jobs should ideally not substitute for existing government or private employment. Within those constraints, JG workers could still contribute in many socially useful activities including urban renewal projects and other environmental and construction schemes (reforestation, sand dune stabilisation, river valley erosion control and the like), personal assistance to pensioners and other community schemes. For example, creative artists could contribute to public education as peripatetic performers. The investment in the JG would thus create a safety net that automatically fluctuates with private sector spending. In that sense, it would avoid the unemployment that is currently associated with the flux and uncertainty of private spending.

The fluctuating nature of the JG jobs pool would have to be reflected in the design of the jobs and the functions they fulfilled. Projects or functions requiring critical mass might face difficulties as the private sector expanded, and it would not be sensible to use only JG employees in functions considered essential. Thus in the creation of JG employment, it can be expected that the stock of standard public sector jobs, which is identified with conventional Keynesian fiscal policy, would expand, reflecting the political decision that these were essential activities. The JG would be integrated into a coherent training framework to allow workers (by their own volition) to choose a variety of training paths while still working in the JG. However, if they chose not to undertake further training, no pressure would be placed upon them.

The JG Would Be Green

Future labour market policy must consider the environmental risk factors associated with economic growth. Possible threshold effects and imprecise data covering the life cycle characteristics of natural capital suggest a risk-averse attitude is wise. Indiscriminate (Keynesian) expansion fails in this regard because it does not address the requirements for risk aversion. It is not increased demand *per se* that is necessary, but increased demand in certain areas of activity. The JG would thus be 'green' because it would provide jobs in environmentally sustainable activities, which are unlikely to be produced by traditional private sector firms (see Lawn 2001; Forstater 2003, and Tcherneva 2009).

Employment Guarantees Versus Income Guarantees

Many progressive commentators advocate the introduction of a Basic Income Guarantee (BIG) as the primary policy weapon against poverty and consider employment guarantees to be coercive. They highlight the fact that if there is a lack of employment alternatives available to citizens then the provision of a BIG, set at some 'liveable' level and payable to all citizens, is the most direct means of addressing income insecurity. Mitchell and Watts (2004) presented a detailed critical comparison of employment guarantees and income guarantees. We summarise their argument here. They concluded that the BIG conception of income insecurity and unemployment is highly problematic. Key BIG advocates (for example, Belgian Phillipe Van Parijs) typically claim that unemployment is caused by wages being above the free market optimum. Trade unions and government minimum wage legislation is blamed for creating this scarcity of jobs. There is no recognition that mass unemployment is always the result of a deficiency of total spending in the economy. Further, BIG proponents adopt the neo-liberal assumption that governments are financially constrained and thus propose to fund the income guarantees by taxing those who enjoy employment because their excessive wages deny the unemployed a chance to work. The unemployed are thus considered to be 'allowing' those in employment to enjoy being employed and as a result should be rewarded for their sacrifice.

The mainstream BIG proponents advocate the introduction within a 'fiscal neutral' environment in order to allay the criticism of the neo-liberals who eschew government deficits. One of the sensitive issues for BIG proponents is thus its perceived 'cost'. Under fiscal neutrality, the maximum sustainable BIG would be modest. Aggregate demand and employment impacts would be small, and even with some redistribution of working hours, high levels of labour underutilisation would persist. Overall, this strategy does not enhance the rights of the most disadvantaged, nor does it provide work for those who desire it.

Persistent unemployment could be avoided if the BIG was sufficient to motivate the unemployed to drop out of the labour force and take the income guarantee. This would require a substantial government stimulus (deficit). But then the implied concept of full employment is bizarre—an artificial withdrawal of the available labour supply, so that some of the unemployed are reclassified as not in the labour force and in receipt of a basic income allotment.

But then a further quandary emerges. The more generous BIG would probably stimulate total spending such that there would be a shortage of labour at 'full employment', resulting from the artificial reduction of the full employment level of employment, which then compounds the inflationary pressure. The alternative is that the excess demand for goods would be increasingly met via imports with consequential effects for the exchange rate and the domestic price level, which would accentuate the inflationary pressure.

In contradistinction, the JG creates a buffer employment capacity in the economy by hiring at a fixed price in exchange for hours of work and does not compete with private sector wages. Employment redistributions between the private sector and the buffer stock can always be achieved to stabilise any wage inflation in the non-JG sector. The JG addresses the problem of unemployment at its root cause, a lack of jobs. The solution is direct: provide as many jobs as are required.

There is an additional and important contrast to be drawn between employment guarantees and income guarantees. The JG is predicated on the view that participation in work remains central to our identity and independence, and persistent unemployment remains the central cause of social exclusion. The benefits of work go well beyond the provision of income. Individuals achieve social standing from work and the social networks that emerge through workplaces provide many of the opportunities that define the quality of life. Further, the JG recognises that work remains intrinsic to human existence. Humans seek to transform nature to live. Certainly, history has evolved to the stage where the organisation of that effort under capitalism is oppressive and the anathema of liberation, despite the wage form making it look as though we have freedom to choose. But we need to separate the specific form of work organisation from the intrinsic meaning of work for people. Most unemployed workers indicate in surveys that they prefer to work rather than be provided with income support.

If the vast majority of workers prefer to work, then the systemic failure to provide a sufficient quantum of jobs imposes harsh costs that can be reduced by the introduction of a JG. In this regard, the JG is a source of freedom from the oppression of unemployment, the capitalist property relations notwithstanding.

The future of paid work is clearly an important debate. The traditional moral views about the virtues of work, which are exploited by the capitalist class, need to be recast. Clearly, social policy can play a part in engendering this debate and help establish transition dynamics. However, it is likely that

a non-capitalist system of work and income generation is needed before the yoke of the work ethic and the stigmatisation of non-work is fully expunged.

In contradistinction, while the introduction of a BIG has superficial appeal, in that it allows individuals to subsist without work, the approach effectively denies these social (non-income) aspects of work. BIG individuals are reduced to being 'consumption' units. The government's responsibilities are limited to providing these workers with enough income to allow them to maintain some basic consumption levels. Payment of a BIG would signify a further withdrawal by the State from its responsibility to manage economic affairs and care for its citizens by ensuring that there were sufficient jobs for all. Young people must be encouraged to develop skills and engage in paid work, rather than be the passive recipients of social security benefit. The failure to ensure there is enough paid work excludes the unemployed from participating in economic, social and cultural life, which has highly detrimental consequences. There are substantial social benefits that arise from the provision of stable work with decent wages, health and retirement benefits.

Further, with job opportunities declining due to technological change, a central question is to determine how society can broaden the definition of productive work and reduce the stigma of not being engaged in traditional work. BIG advocates consider their approach provides for this transition but it is hard to see how the stigma of being unemployed disappears when one is not working and receiving an income guarantee. Clearly, there is a need to embrace a broader concept of work in the first phase of decoupling work and income. However, current social norms are unlikely to digest this new culture of non-work very easily. The patent resentment of the unemployed will only be transferred to the 'surfers on Malibu' (Van Parijs' model BIG recipient)! By way of contrast, the JG would provide a means to establish a new employment paradigm where community development and other non-traditional jobs would become valued. Over time, and within this new JG employment paradigm, public debate and education can help broaden the concept of valuable work until activities which we might construe today as being 'leisure' would be considered to be 'gainful' employment. Ultimately, struggling musicians, artists, surfers, thespians and the like could be working within the JG. In return for the income security, the surfer might be required to conduct water safety awareness for school children; and musicians might be required to rehearse some days a week in school halls and thus impart knowledge about band dynamics and increase the appreciation of music to young school children. Thinking

laterally a bit more, community activism could become a JG job. For example, organising and managing a community garden to provide food for the poor could be considered a paid job. We would see more of this sort of beneficial activity if it were rewarded in this way.

In other words, society can begin to re-define the concept of productive work well beyond the realms of 'gainful work', which in current parlance specifically relates to activities that generate private profits for firms. Over time, productivity would become more of a social, shared, public concept, and only limited by one's imagination. In this way, the JG would be an evolutionary force, which provides income security to those who want it, but also allows us to broaden the very concept of work!

Social attitudes take time to evolve and are best reinforced by changes in the educational system. The social fabric must be rebuilt over time. The change in the mode of production through evolutionary means will not happen overnight, and concepts of community wealth and civic responsibility that have been eroded over time, by the divide and conquer individualism of the neo-liberal era, have to be restored. The traditional moral views about the virtues of work, which are exploited by the capitalist class, need to be recast. Clearly, social policy can play a part in engendering this debate and help establish transition dynamics. However, it is likely that a non-capitalist system of work and income generation is needed before the capitalist work ethic and the stigmatisation of non-work is fully expunged.

The BIG approach creates a dependency on passive welfare payments and hence a stigmatised cohort. It also treats people who are unable to find adequate market based work as 'consumption' entities and is satisfied to meet their basic consumption needs. However, the intrinsic social and capacity building role of participating in paid work is ignored and hence undervalued. It is sometimes said that beyond all the benefits in terms of self-esteem, social inclusion, confidence building, skill augmentation and the like, a priceless benefit of creating full employment through job creation is that the 'children see at least one parent going to work each morning'. In other words, it creates an intergenerational stimulus that the BIG approach can never create.

Unlike the BIG model, the JG model meets these conditions within the constraints of a monetary capitalist system. It is a far better vehicle to rebuild a sense of community and the purposeful nature of work. It is the only real alternative if intergenerational disadvantage is to be avoided. It also provides the framework whereby the concept of work itself can be broadened to include activities that many would currently dismiss as being leisure. The JG

also allows for capacity building by integrating training and skills development into the paid work environment.

The Job Guarantee Turns the Phillips Curve on Its Head

The Phillips curve has been a centrepiece in the debate between Keynesians and Monetarists and beyond ever since it was introduced as the 'missing equation' in the Keynesian macroeconomic system in the late 1950s. The initial discovery by Phillips of a statistical relationship between the rate of money wage inflation and unemployment was soon hijacked by Samuelson and Solow (1960) who recast the 'curve' as a policy menu between inflation and unemployment. As a consequence, full employment (defined in terms of an acceptable level of inflation) was feasible, but at the cost of (modest) inflation: it was up to policy makers and their constituency to make their choice. Keynesians thus believed that there was a stable trade-off whereby unemployment would be kept low as long as governments pursued high levels of effective demand. The cost would be some finite inflation rate and the challenge for policy makers was to determine the optimal trade-off between the twin evils—unemployment and inflation. This approach was clearly based on the recognition that an unemployment buffer stock was being used to maintain price stability.

The Monetarist era emphasised the role of expectations and revived the Classical (pre-Keynesian) notion of a natural unemployment rate (later called the NAIRU. The Monetarists rejected the trade-off notion and instead argued that the long-run Phillips curve was vertical and governments would only generate accelerating inflation if they tried to exploit some short-run trade-off for political purposes. Whether any short-term gains in employment were forthcoming in the NAIRU approach depended on the type of expectations that were assumed. But, the devastating consequence of all the models presented was the rejection of a role for demand management policies to limit unemployment to its frictional component.

While the dispute as to the nature (existence) of the so-called trade-off continues in the mainstream macroeconomics literature and has taken various turns, economists operating within the NAIRU framework argue that the introduction of a JG would be inflationary (for example, Sawyer 2003). They argue that a Job Guarantee removes the threat of unemployment, which is necessary in the NAIRU framework to discipline the wage and price setting process. If that discipline is lost, then accelerating inflation results.

Wray (2011) traced the evolution of the concept of the JG within the burgeoning MMT literature. He noted that once we understood the JG as being a buffer stock mechanism it turns "the Phillips Curve on its head: unemployment and inflation do not represent a trade-off, rather, full employment and price stability go hand in hand".

This takes the JG beyond a meagre job creation program and, instead, constructs it as a macroeconomic stability approach, which delivers efficiency through full employment and price stability through the effective use of employment buffer stocks.

The introduction of employment buffer stocks into the macroeconomic model is thus an evolution within the Phillips curve literature. The conventional disputes about the existence or otherwise of a trade-off between unemployment and inflation deploys a buffer stock of unemployment to control price inflation. With a JG, the employment buffer remains consistent with price stability and the existence of a trade-off between unemployment and inflation becomes moot.

Conclusion

The JG would not be a universal panacea. It would provide safety net employment capacity and an inflation anchor for the economy and in that sense, would represent the minimum policy structure that a responsible government should put in place. Its introduction should not stop a government introducing other spending measures to improve the scope and quality of public infrastructure, to ensure that first class education and health care services are available, and to provide career opportunities for skilled workers.

The value of the JG is that the government always knows that if total spending levels come up against the real capacity of the economy, then they are able to tighten fiscal policy without creating unemployment. In normal times, the JG would be a very small program but essential to those who would otherwise be excluded by private employers.

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CHAPTER 4

The Employer of Last Resort for a 'Capital-Poor' Economy

Edward J. Nell

Unemployment and the ELR in Advanced Economies

The problem of unemployment is widely misunderstood, widely believed to be simply a question of finding ways to help out workers who cannot find jobs. It is much more than that; it's a matter for the whole economy: when workers in advanced economies are unemployed, *so is productive capacity.* Workers are not exercising their skills; capital resources are standing idle, while goods that are needed, sometimes desperately, are not being produced even though both the equipment and the workers are available and ready. Workers' training and skills are being wasted, while productivity capacity—factories, equipment—sits unused even though the interest has to be paid on the funds used to build that capacity. And meanwhile, potential consumers have to do without.

But we can distinguish two kinds of unemployment, corresponding to two kinds of economies, capital-rich and capital-poor. (Many other kinds of

Some diagrams and equations are taken from an unpublished paper by myself and Ray Majewski. Thanks to Mike Murray for suggestions and advice.

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economies can also be identified [cf. Nell, and Nell et al., forthcoming], but these two are very common.) Very roughly, a capital-rich economy is an advanced capitalist economy (ACE), meaning that it has enough capital to offer jobs to all those of its population that want to and are able to work. A capital-poor economy is one that cannot offer employment to all who want to work; it does not have enough capital.

An Employer of Last Resort (ELR) scheme works for advanced capitalist economies (ACEs) by expanding when the private economy contracts and vice versa. This is appropriate because in the ACEs unemployment is 'Keynesian'—that is, it results from insufficient aggregate demand, which the ELR offsets. The capital structure and the infrastructure are sufficient to support an economy that can employ the entire available labor force, but in which, perhaps because of a highly unequal income distribution, or because of a broken banking and financial system, or for many other possible reasons, demand falls short of the full employment level. Production and sales workers are laid off; factories run below capacity; shipping slows down and truckers and dock workers are laid off too. Newly laid off workers and their families have to cut spending and tighten their belts, so consumer spending falls—leading to more layoffs! Facing the possibility of this kind of economic collapse, an ELR program offers a solution: every citizen is entitled to an opportunity to take a public sector (or venture capital!) job, at a basic wage (which becomes the effective minimum wage).[1] As private sector employment falls, ELR employment will rise providing an offset—and also, as the chronically unemployed are brought in and trained, bringing new consumers into the system. This is how it works for the ACEs; we will set out a model and show that it can also easily be adapted to include capital-poor economies.

A Macroeconomic Model for the ELR

We will make use of the following ideas:

- aggregate output (Υ) is a simple linear function of the level of aggregate employment (N), given the presently existing productive facilities. That is, these facilities operate at constant marginal productivity (z) as their degree of utilization varies. The implication—supported by many empirical studies—is that marginal and average variable cost curves have long flat sections. Output then can then be represented by a utilization function: $\Upsilon = zN$.

- household consumer spending depends on after tax household wage income; all after tax household income is spent. Consumption (C) then depends on the wage rate (w), the tax rate on wages (h), and the number of people employed or $C = (1 - h)wN$. The unemployed are able to maintain their consumption with the help of a government transfer program, unemployment insurance. Their spending depends on the number of people unemployed, ($N_f - N$), where N_f is full employment, the percentage of the unemployed eligible for benefits (e), the size of the unemployment benefit (d), and of course taxes. Put together, consumption is $C = (1 - h)wN + (1 - h)\, d\, e\, (N_f - N)$ or $C = (1 - h)(d\, e\, N_f + (w - d\, e)N)$.
- investment spending (I) depends largely on long-run factors, and as a first approximation can be taken as autonomous. In a more advanced analysis, the chief factor influencing investment—growth of productive capacity—can be shown to be the expected growth of consumption. But as we shall see, in capital-poor economies, when the ELR leads to expansion of household consumer demand, the investment coefficients (capital-output ratios) will determine the effect of increased consumption on investment, and on increased employment in the capital goods sector. This will be a very significantly *different* pattern of working of the ELR system.
- Government spending (G) depends largely on long-run factors, and as a first approximation can also be taken as autonomous.
- income consists of wages and profits; expenditure (E) consists of spending on consumption, investment and government. So $E = C + I + G$

The model here *abstracts* very significantly from reality. Many important features of the economy are left out or smoothed over. But we can also easily see how to relax these abstractions. Output could be disaggregated, for example, into investment and consumption goods. Increasing or diminishing returns could be explored. Workers could be assumed to save; other categories of income can be added; besides workers, firms and the government, we may wish to add other categories of agents. And so on.

Equally important—in contrast to much economic theorizing—nothing has been *idealized*. No agents are assumed to have superhuman powers, or supernatural foresight; no processes are assumed to work in unimaginably perfect ways; no adjustments are instantaneous.

The equilibrium level of output will be:

$$Y = \frac{z\left(I + G + (1-h)edN_f\right)}{z - t}$$

Equilibrium employment will be:

$$N = \frac{I + G + (1-h)edN_f}{z - t}$$

Where t is the slope of the consumption function or:

$$t = (1-h)(w - de)$$

Figure 4.1, illustrates this equilibrium.

An ELR will change this model in two ways. First, the government will fund and produce a set of services through the ELR. These need to be represented in government spending and on the utilization function. Second, the ELR will pay wages to those in its employ. These wages will be spent on household consumption; the effects of the ELR have to be incorporated into the consumption function.

The ELR is intended to employ all of those unable to find work in what we shall call 'the private sector' (private industry and non-ELR government employment). But it is not intended to completely replace unemployment insurance. Insurance remains useful supporting people recently unemployed

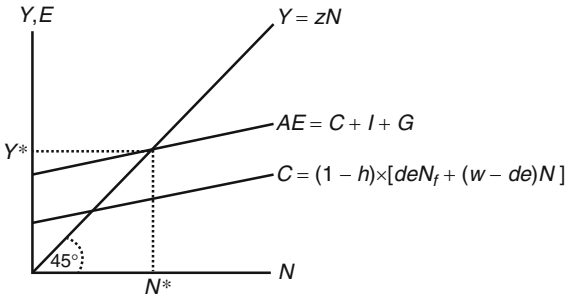

Fig. 4.1 Level of output and employment

with good prospects of finding a job, while they conduct a full time search for employment. At its simplest, ELR will employ the unemployed not currently receiving unemployment benefits or $(1 - e)\,(N_f - N_{\text{pr}})$. Hiring and equipping such workers will require government spending, which becomes a function:

$$G = g + (1 - e)m \times w_{\text{elr}}\left(N_f - N_{\text{pr}}\right)$$

Where g is autonomous government spending, w_{elr} is the average wage rate for workers in the ELR and $m > 1$ is a markup representing the public investment necessary to put these workers to work. Public investment spending induced by the ELR is:

$$l_{\text{elr}} = (m - 1)(1 - e)w_{\text{elr}}\left(N_f - N_{\text{pr}}\right)$$

In graphing government spending we will change the X axis. In this and in the other ELR diagrams it will represent private employment N_{pr} rather than total employment N (see Fig. 4.2).

The difference between the ELR and transfer programs like unemployment insurance is that ELR employees work, producing a set of government goods and services while receiving an income and, in some cases, job training. These goods and services have a value that we need to represent in output. The productivity of ELR workers (u) is likely to be less than that

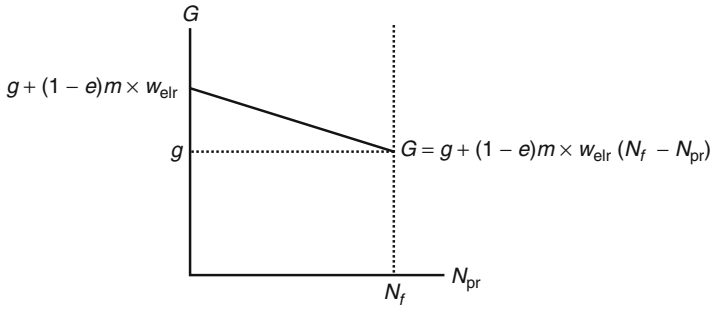

Fig. 4.2 Government spending and employment

of the private sector ($u < z$). Overall labor productivity will be the weighted average of the private sector and the ELR and can be represented by:

$$Y = \left[z\frac{N_{\text{pr}}}{N} + u(1-e)\frac{\left(N_f - N_{\text{pr}}\right)}{N} \right] N$$

Or,

$$Y = u(1-e)N_f - (z - u(1-e))N_{\text{pr}}$$

The output of the ELR itself is:

$$Y_{\text{elr}} = u(1-e)\left(N_f - N_{\text{pr}}\right)$$

Let us look at this graphically in Fig. 4.3, once again with private employment on the X axis, and compare the utilization function with and without the ELR. When private employment is zero, the economy still has an output $Y = u(1-e)N_f$ produced by the ELR using the full labor force not currently receiving unemployment benefits. When private employment equals full employment, total output is that of the private economy. No one works for the ELR. If we compare the private sector output total to output with an ELR, we already see a stabilizing feature. For any given change in private employment, total output varies less with an ELR than if there was only a private sector.[2]

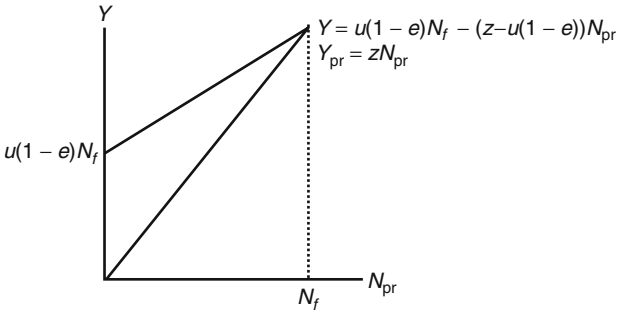

Fig. 4.3 Output and employment

The effect of the ELR on consumption can be treated in a similar way. Wages in the private and non-ELR public sectors (w_{pr}) will have to be at least as good and, in general, higher than those in the ELR (w_{elr}). The overall wage rate will be the weighted average of the private and the ELR rate. Unemployment benefits also support consumption. The ELR Consumption function (C_{elr}) equates to:

$$C_{\text{elr}} = (1-h)\left[\frac{de\left(N_f - N_{\text{pr}}\right)}{N} + \frac{w_{\text{pr}} N_{\text{pr}}}{N} + w_{\text{elr}}(1-e)\frac{N_f - N_{\text{pr}}}{N}\right] \quad (N)$$

Or,

$$C_{\text{elr}} = (1-h)[(de + (1-e)w_{\text{elr}})]N_f + \left(w_{\text{pr}} - de - (1-e)w_{\text{elr}}\right)\left(N_{\text{pr}}\right).$$

The ELR Consumption function is graphed below in Fig. 4.4.

The ELR consumption function is very much like one with unemployment insurance, only with a higher intercept and a shallower slope. With both unemployment insurance and the ELR maintaining consumption, it varies little with private employment. When a worker loses a job, if she wishes to and is eligible, she goes on unemployment. If she is unable to find a job or is ineligible for unemployment she can always get a job with the ELR. This job is generally lower paying so consumption is hurt, but not as much as if she were truly unemployed. To see the total effect let us put in investment and government spending in Fig. 4.5.

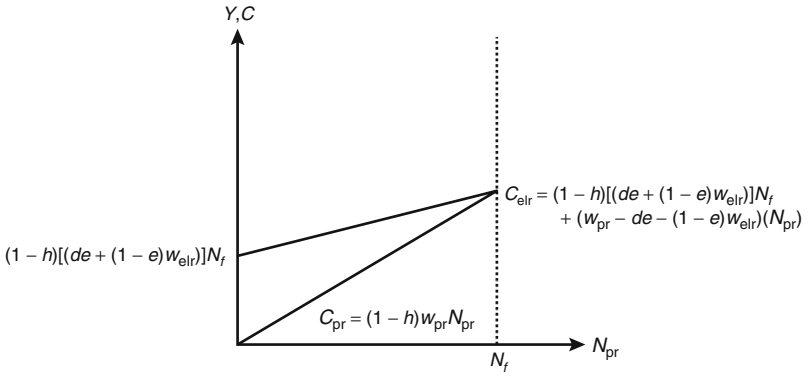

Fig. 4.4 Consumption and employment

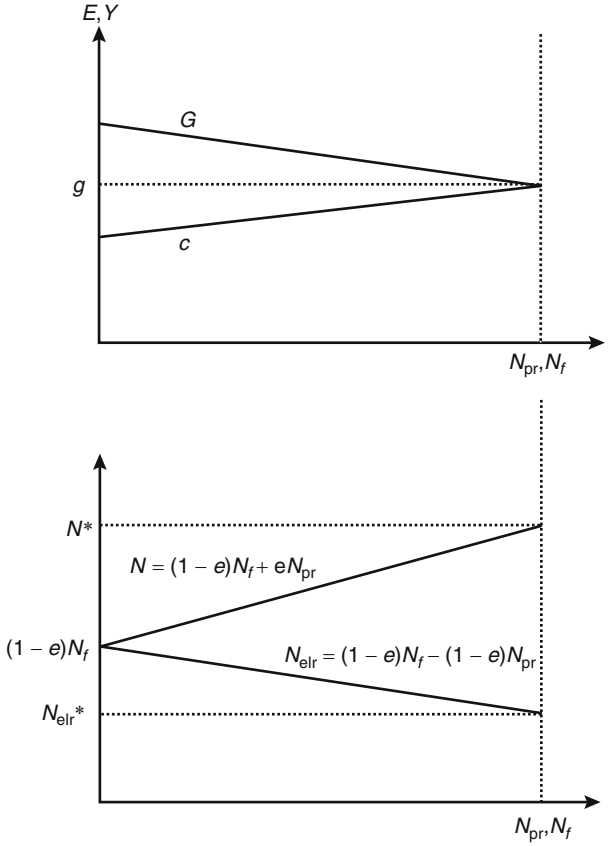

Fig. 4.5 Effects of investment and government spending

This is evidently a multiplier model and it can be greatly expanded to cover many policy issues.

An ELR for the DEUCEs

An obvious extension of this kind of project is to explore the possibilities an ELR program might offer to economies that have not yet built up much business and industry or infrastructure; we might call them 'developing

economies under capitalist enterprise', DEUCEs, as opposed to ACEs, where, by contrast, there is a shortage of jobs in the sense described because there are not enough factories, offices and sales outlets. That is, in these economies there is not enough real capital to offer jobs to the whole potential labor force. (Not enough machinery and equipment to operate, offices in which to work, sales counters to man, trucks to drive, etc. Not enough infrastructure and public investment either.) To offer regular productive employment there has to be something productive (in some sense) to do, and an established place and equipment to do it. And in many developing economies, there are not enough such places for all the potential workers. In the terminology of last century's development economics, unemployment tends to be 'Marxian' rather than 'Keynesian' in these economies.

So the problem of unemployment here is fundamentally different. To understand this, consider what is meant by 'employment': to be employed means having a regular job, as opposed, for example, to selling trinkets (or drugs or worse) on a street corner—the 'informal economy'. A real 'job' has to be part of a legal, taxed and regulated structure, a system that supports itself, i.e. capital. It has to fit into the market in two ways—on the one hand, it has to select and pay for inputs (whatever it is that is being worked upon) and energy, and it has to see that the tools and equipment used in the work are properly maintained and replaced; on the other hand, it has to sell output of work and earn enough to support the worker and cover the other payments. In the ACEs there is enough real capital—factories, farms, equipment, organizations—to offer such system-based, self-supporting jobs to the available labor force. If demand is strong enough everyone capable of working can have a real job. Unemployment in the ACEs is therefore largely a Keynesian problem of inadequate effective demand.

By contrast, in the DEUCEs a major problem is the shortage of various forms of real capital (i.e. machinery and equipment and technology, not finance). In particular, it is likely that there will be too few properly equipped factories and shops and service businesses to offer regular jobs to the urban population. Moreover, the businesses that exist may be poorly organized and administered. In addition there may not be enough arable land to provide a living for the rural population and what there is may be cultivated inefficiently. Even worse, a sector of large farms or plantations may be run with modern technology, and these may undercut the small, inefficient (but sometimes environmentally friendly) traditional farms.

If this is the case, the effect is likely to drive population off the land to the cities, creating pools of unemployed workers in the cities.

The Keynesian demand problem may be found in these countries, but it is only part of the story. For even if there were strong demand, jobs could not be offered because of the shortage of *capital*. The unemployed are a 'reserve army'. This is the Marxian problem of unemployment.

The point can be seen by considering how an ELR might affect a capital-shortage economy if it operated in the normal manner. Suppose the ELR offered training and literacy programs and provided jobs in cleaning up the environment and improving sanitation and public health. The programs would be useful, and indeed might improve productivity in the long run, but their immediate effect would be to add to consumer demand. More shirts and trousers would be demanded, more shoes and cell phones. But such additional demand could, in fact, be a problem if the capital of the capital-poor economy is already fully utilized, for in the face of general capital shortage there would be no way for supply to respond. There is no more capacity in textiles, or in local shoe-making, or in the cell-phone assembly factory. Two consequences would be likely: for locally made goods the result would be to drive up prices relative to money wages. For international goods, imports would increase, creating a balance of payments problem, possibly causing a fall in the currency, raising the cost of imports.[3] That is, the ELR, by increasing employment, would create additional demand for goods, but in the absence of capital to provide jobs producing those goods, there would be no corresponding rise in output or in the demand for labor. But there could be a spillover into import demand, possibly raising the cost of imports. Thus the effect could be to drive down real wages, reducing normal household consumption more or less in proportion to the additional demand created by the ELR, and in the process possibly weakening the country's international position.

So, countercyclical demand creation might not be what is called for and in any case, very likely would not work at all. It seems the ELR will have to play a very different role in such economies. Rather than creating employment to offset contractions, it will have to create capital to fill in the prevailing shortages. (Stabilizing wages might still be important, however.) But the main contributions it can make will be, first, to create a pool of trained labor and, second, to help to provide capital to give permanent employment to that labor, for example, in public sector and/or worker-managed firms.

Only a sketch of the main features to be added to the model can be offered here, mostly involving investment. The main point is that there is a shortage of productive capacity; this is different from, but causally connected to the fact that in colloquial terms, there are 'more people than jobs'. In a developing, capital-shortage country, the ELR cannot simply offer a job to anyone capable of working; that would put too great a strain on the existing capacity, driving up prices—especially in the consumer sector. The principle is the same—every citizen, everyone included in the society, has a right to be offered a job—but not everyone can have one all at the same time until adequate growth has taken place. It may not be possible to offer a job to everyone who wants one at a given time, not because there isn't plenty of work to be done, but because of the danger of driving up prices. However, the system can establish a queue, and take in and train job-seekers successively.

Establishing an ELR designed first to train workers and then set them up in new enterprises will have as its initial effect the introducing of a new set of families into the working urban upper or middle class consumer market. This expansion of the consumer market will put pressure on production facilities to bring forth additional supply; existing capacity can be worked harder and this may suffice for a time, but at some point new capacity will have to be built. New capacity in the consumer goods sector, however, means that *the capital goods sector* has to supply new equipment; moreover, energy and transportation will have to take on new commitments. What are the capacity limitations here? Can new consumer goods capacity be built? New food-processing facilities, new textile and clothing production, new housing, additional communications and media offerings, more shipping and more shopping facilities. . .? Building all these takes time and money, of course, but in real terms it has to draw on presently existing capital goods production capacity. Does enough of that EXIST? Which is to say, how much pressure can we put on *present productive capacity in capital goods* to add more capacity in consumer goods? Maybe not much if we want to grow rapidly.

The implication is that the initial size of the ELR must not be too large; it will have to be *within the power of the capital goods sector to supply the equipment to expand the consumer sector's capacity.* And, of course, the building of that new capacity will increase employment in capital goods and construction sectors, putting further pressure on the capacity in consumer goods sectors. The important point here is that setting up an ELR program stimulates *investment* in the consumer goods sector, and that, in

turn, increases activity in the capital goods sector—BUT here is the real catch: if we want to grow rapidly, that is, to increase capacity in consumer goods so we can add workers in an ELR program, we have to increase the capacity of the *capital goods sector* itself—but that requires further investment in that sector too! If the capital goods sector is fully engaged in trying to supply equipment, etc. to the consumer goods sector, it will not have any capacity open to build equipment for itself in order to increase its size, so as to have greater capacity to service the needs of the consumer sector for capital equipment! [4]

Here are some simple analytics showing how this works. We will refer to a two-sector model from time to time (Nell 1998; Nell and Errouaki 2013) to illustrate, but first let us look at the sequence of interactions. There are two stages here. An ELR program is put in place and employs a number of previously unemployed workers. So there is an increase in the wage bill leading to a rise in consumer spending; this is a multiplier process of the sort we just examined. But in a capital poor economy, it may not be possible to carry it out unless there is investment—that is the second stage.

Let's examine each in turn. This is a multiplier process. Employment is increased, which raises consumer spending, leading to another rise in employment and more spending, so more employment again, as indicated in the equations earlier. Next, consider the fact that a rise in consumer spending needs to be met by a rise in consumer goods output—but for output to rise *there must be productive capacity available*. It is usually possible to overstress existing capacity and run it at abnormally high intensity so the multiplier process can take place—at least for a while. But this can only be temporary. The additional consumer goods output will require additional investment to build the additional capacity needed.

A multiplier expansion of consumption demand (C) leads to an expansion of investment (I), an accelerator process. The amount of investment called for will depend on the capital-output coefficient for the consumer goods sector. But this is not the end of the story. I_c is an output of capital goods that must be produced and installed by the capital goods sector. To produce this additional output of capital goods requires a prior construction of additional I-building capacity, I_k. The amount of additional capital goods called for will depend on the capital goods sector's capital-output coefficient. I_c and I_k, in turn, have to be produced by increased employment again, and the

resulting addition to the wage bill will add further to C! But an addition to C calls for more production, and therefore for a still further increase in capacity, thus calling again for more I, which again means drawing on more I-building capacity, ... We have here a set of sequences—increases in employment, increases in consumption, increases in investment to produce consumer goods capacity, increases in investment to produce capital goods capacity—all of which converge. This replaces the Investment function in the model.

Implications of the ELR for Capital-Poor Economies

Once established, the ELR can be used to train laborers (often newly arrived from the countryside) in appropriate and needed skills. This training should be aimed at raising the level of skills, and ultimately of productivity in the country's industries, to the world level. The ELR will therefore have to work closely with the major industries—and with agriculture, too—to make sure that the training it offers is appropriate. It will also have to encourage industries to upgrade their technology; so it will also have to function as a management consultant and supplier of technical advice, even of technology. In effect, the ELR will be designed to *re-train and upgrade* the existing labor force as well as provide training and remedial education to the unemployed.

The effect of retraining workers and sending them back to industry and agriculture will be to increase productivity in both consumer and capital goods sectors. This will raise growth and also make it possible to enlarge the ELR program. At this point, the ELR can enter the venture capital business; it could not only offer training programs, but it might also provide various kinds of services and new products, many of which might draw on or make use of advanced technologies. (These could be in addition to, or might even largely displace, the more conventional ELR offering of socially useful but largely non-marketable goods and services.) If these new goods and services seem to be marketable, either to the public or to local businesses and governments, it could spin them off as worker-controlled enterprises, thereby helping to create new sectors. Many of these, of course, could be expected to fail. But even a few successes may be more than enough to justify the program.

So the ELR should be phased in and developed gradually, creating and stabilizing a steady growth of demand for basic consumer goods, including

especially consumer durables. A pace should be chosen that will allow for the construction of appropriate capacity and for the corresponding expansion of Government services and social infrastructure—where some of the latter can be built with the help of the ELR workforce. (And the industries establishing this new capacity can be aided by Government low-interest loans and can be provided with workers trained in the ELR, thus shifting them into private sector employment, and making room in ELR programs for unemployed new arrivals from the countryside.)

The size of the ELR in these conditions will be limited by the capacity of the consumer goods industries, while the speed with which it can be expanded will be limited by the capacity of the capital goods industries, including here, the capacity of the capital goods sector to expand itself. (See Lowe 1976) In addition, the balance of payments may very likely act as an additional constraint—(but see below). Both of these may be augmented by increases in productivity resulting from the ELR, but such increases are not easily predicted and are sometimes hard to maintain. It has not been possible to do more here than outline the way an ELR might function; nevertheless, several points stand out.

A first step in developing policy proposals will be to provide good models of the role of the ELR in leading the growth of demand, and to identify the chief sorts of bottlenecks and problems that may develop. A second step should explore the likely barriers that may emerge in the capital goods sector—drawing for example on the work of Adolph Lowe, and the studies of the 'traverse' that followed. What kinds of new products and new technologies could be advanced? What opportunities for venture capital projects? How well could worker-controlled enterprises function in the competitive environment? It would be important to develop adequate statistics, along with economic and social analysis, to assess the various dimensions along which an ELR and its training programs might have an impact.

A third step would be to develop a trading strategy that would avoid the trap by which an increase of imports sets off a currency crisis, leading to a rebalancing by way of austerity, thereby undoing all the benefits that the ELR provided. An important possible step towards this might be taken by joining a 'capacity exchange', a trading platform running an artificial currency offered at zero interest to any private corporation, state, local government or well-established institution that has something of value to offer in trade[5]. The idea is to bring together a large number of potential trading partners from all parts of the world, each with something to offer and each

wanting some other goods or services. The artificial currency can be used to buy and sell, or to 'make change' in essentially barter deals, carrying over value into the next deal. The fact that the trades are made in the artificial currency—which is designed so that it cannot become an object of speculation—means that no hedging is required, no FOREX expenses are incurred and no interest needs be paid. And no balance of payments issues arise—the job of the staff of the Exchange is to see that any balances being carried over are manageable—and that they are *company* balances, not *country* balances. Of course, there will be Exchange fees—but there would be bank fees anyway. This, however, is an altogether different though complementary set of issues. The ELR should be supplemented by a 'capacity exchange' trading platform strategy, so that an overflow of demand into imports can be managed without creating a balance of payments crisis.

The ELR could thus become the guide and provide the stimulus for a market-based balanced expansion of productive capacity in capital-constrained economies. This could become *extremely important* as new technologies, especially robotics, are likely to change the character of labor markets in the coming years, cutting out many traditional jobs, even whole sectors. Having a program in place that retrains workers and establishes new programs of public service could be crucial if robotics and artificial intelligence suddenly expand and destroy traditional jobs on an unprecedented scale. Planning and government management will have to be chiefly devoted to establishing the right programs of training, of introducing new or improved technologies and products, and expanding the program at the right pace. But once the ELR is creating new markets, and at the same time training new workers and putting them into place with venture capital, the growth of the economy will be given a foundation

Notes

1. ELR workers can be offered to venture capitalists for a period in return for a promise that some percent of them will be given permanent jobs if and when the ventures succeed, (cf. Nell and Majewski, Nell in Kinsella, 2010).
2. As we shall see below, once demand is put in, this may not be stabilizing.
3. But see below: there is a way for developing economies—and advanced ones—to avoid many or even most of the problems associated with balance of payments difficulties and currency crises.

4. This was a major point made by Adolph Lowe—to increase the rate of growth of output it would be necessary to increase the rate of growth of capital, but to do that, first the capacity of capital goods production had to increase. But that meant that the output of capital goods for the consumer sector had to *decrease* in order to free capacity to increase capital goods production for the capital goods sector itself.
5. The author is Economic Advisor to such an Exchange, RECIPCO, which runs the ECO Capacity Exchange, offering Members the ECO, an artificial, limited use trading currency—usable only on the Exchange (although Members can trade it freely among themselves), when they provide good backing, namely tradable goods or services. The advantages are zero interest on trading loans and no problems with foreign exchange plus assistance in working out trades from the staff of the Exchange. See RECIPCO, E.J. Nell, LECTURE, Gresham College, London.

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CHAPTER 5

The Job Guarantee and Eurozone Stabilisation

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Introduction

Deficient demand and low inflation continue to blight the member economies of the European Monetary Union (EMU). The high and persistent rates of joblessness, particularly among youth, pose a serious threat to the Union's economic and social integrity.

The unique architecture of the EMU means that addressing high unemployment is particularly challenging for policymakers. Specifically, (1) monetary policy is set uniformly for the whole Eurozone by the European Central Bank (ECB), and thus is not sensitive to the prevailing macroeconomic circumstances of each member country; similarly, (2) nominal exchange rate adjustments are not possible at the individual country level; (3) national fiscal policy is constrained by fiscal rules outlined within the so-called 'Six-Pack', the 'Two-Pack', and the Treaty on Stability, Coordination and Governance; and, (4) the EMU has no permanent fiscal transfer mechanism among members or a centralised fiscal capacity to help withstand country-specific or systemic

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macroeconomic shocks. This fiscal framework, underpinned by the principles of sound finance, is inconsistent with the pursuit of countercyclical fiscal policy. Instead, economically distressed member countries (e.g. Greece) have been subject to Troika bailout conditions which have imposed harsh(er) austerity measures.

Thus EMU membership is associated with a debilitating loss of policy freedom. Given the flawed architecture, Mitchell (2015) and Watts et al. (2014) argue that a necessary but not sufficient condition to end the Eurozone crisis is to restore full fiscal-monetary sovereignty and flexible exchange rates to member economies, which requires exiting the Euro. Yet, despite the severity of the crisis, European policymakers still appear committed to the 'Euro-project', as evidenced by the 'resolution' of the Greek debt crisis in mid-2015, which did not involve Greece leaving the EMU.[1]

Key Eurozone policymakers, Van Rompuy et al. (2012) and Juncker et al. (2015b), recognise that the absence of an automatic fiscal stabilisation mechanism represents an important deficiency of the existing architecture, and that such a mechanism is needed to advance a 'deep and genuine' EMU. Thus alternative policy solutions within the EMU framework are needed, motivating the exploration of a Job Guarantee (JG), which offers a basic wage to any individual ready, able and willing to work, as a policy option to address high rates of joblessness and deteriorating deficit/debt dynamics, and to function more broadly as a permanent stabilisation mechanism within the EMU.

The next section of this chapter briefly outlines how the problematic EMU architecture has contributed to the current economic malaise and offers the context for our support of a JG within the EMU. Alternative Policy Options examines three broad policy options suggested by Mitchell (2015), and notes that two of them appear unlikely in the current political environment. A fiscal strategy based on Overt Monetary Financing (OMF) is explored. In the next section, the JG is presented as a feasible policy option by focusing on the implications of direct job creation for macroeconomic stability. In the penultimate section, we explore the outcomes for the deficit and debt dynamics associated with implementing the JG in Greece. Concluding remarks complete the chapter.

Policy Context

Introduction

More than seven years have passed since the onset of the Global Financial Crisis (GFC). While output growth amongst many sovereign Western economies (e.g. USA, UK) is beginning to strengthen, the Eurozone malaise continues. High rates of joblessness and adverse deficit/debt dynamics, particularly among the so-called periphery Eurozone economies (e.g. Greece, Spain, Portugal and Ireland), have created a major challenge for policymakers.

Eurostat (2015a) report that the Eurozone unemployment rate has been above 10 per cent since 2009 and was approximately 11 per cent in July 2015. Greece and Spain had the highest unemployment rates in the Eurozone (25.6 per cent, April 2015; and 22.5 per cent June 2015, respectively). More than half of the Eurozone jobless had not worked for a year, and so are considered long term unemployed (LTU). Also over 15 per cent had been unemployed for more than four years (The Economist 2015). Increased long-term unemployment leads to skill atrophy and intensifies structural issues.

Further, Eurostat (2015a) estimated that approximately 3.2 million young persons (under 25) were unemployed in June. The youth unemployment rate was 22.5 per cent, as opposed to 16.6 per cent in 2007 (Eurostat 2015a; Juncker et al. 2015a). Youth unemployment rates were highest in Greece (53.2 per cent in April), Spain (49.2 per cent in June), Italy (44.2 per cent in June), and Croatia (43.1 per cent in Q2 2015) (Eurostat 2015a). High youth unemployment generates significant long term economic and social costs including reduced productivity and innovative capacity, and increased income inequality, social exclusion and poverty.

Fiscal Policy Constraints

Notwithstanding poor labour market conditions, OECD (2015) forecasts that economic growth in the Eurozone will rise to 2.25 per cent by the end of 2016. Growth will ostensibly be 'supported by lower oil prices, the euro depreciation, improved financial conditions, additional stimulus from further monetary expansion and a pause in fiscal adjustment' (OECD 2015), which acknowledges that the fiscal adjustment process has undermined growth within the Eurozone. The unemployment rate is forecast to decline

to 10.25 per cent by the end of 2016 which could, in part, reflect reduced participation.

OECD (2015) argue that '[r]einvigorating private and public investment is crucial to lift the economy to a higher growth trajectory', but caution that the 'recovery is still weak and uncertain' and 'risks surrounding renewed financial turmoil remain significant'. Why firms would consider increasing private sector investment is unclear.

Also, EMU member governments have limited capacity to increase public sector investment, or implement fiscal stimulus measures more broadly due to the problematic architecture of the EMU, including the loss of currency sovereignty and the adoption of a highly restrictive fiscal governance framework. Under the Stability and Growth Pact (SGP), 'Member States' budgetary balance should converge towards the country-specific medium-term objective (MTO). The general government deficit must not exceed 3 percent of GDP and the public debt ratio must not exceed 60 percent (or at least diminish sufficiently towards the 60 percent threshold)' (European Commission 2013). Breaches by Member State(s) can trigger the Excessive Deficit Procedure (EDP)—the so-called corrective arm—which imposes financial sanctions.

Juncker et al. (2015a: 3) note that since 1997 'most Eurozone countries (all except Estonia and Luxembourg) were once or even repeatedly subject to an excessive deficit procedure.' Germany and France entered excessive deficit procedures in 2003. The credibility of the SGP was undermined when the rules were reformed—and some would argue 'weakened'—in 2005 (Juncker et al. 2015a).

EU fiscal governance has been strengthened further since the advent of the GFC. The 'Sixpack' (December 2011), aims to enforce greater budgetary discipline by improving compliance to SGP reforms, but also focuses on detection and correction of macroeconomic imbalances (e.g. high current account deficits, unsustainable external indebtedness and housing 'bubbles'). Two additional regulations ('Twopack'), which only apply to Eurozone member states, include assessing draft budgetary plans, correcting excessive deficits, and strengthening surveillance of Member States which face threats to financial stability (see European Commission 2013).

An extension of the Stability and Growth Pact (SGP) regulations, known as the 'Fiscal Compact', was signed by all European Union members (except the Czech Republic and the UK) in March 2012, and became binding on those members who had completed the ratification process on

1 January 2013. Members are required to ensure convergence towards the country-specific medium-term objective (MTO), as defined in the SGP, with a lower limit of a structural deficit (ignoring cyclical effects and one-off measures) of 0.5 per cent of GDP; (1.0 per cent of GDP for Member States with a debt ratio significantly below 60 per cent of GDP) (European Commission 2013). These new measures should also be enshrined within national law.

The debt convergence ('debt brake') rule requires that the gap between actual debt ratio and the 60 per cent of GDP target be reduced by 5 per cent annually, averaged over three years (European Council 2012). Members may temporarily deviate from their respective adjustment paths towards their MTOs in exceptional circumstances, such as a severe economic downturn, but medium-term fiscal sustainability, however defined, must not be endangered. Repeated breaches of the requirements may lead to a penalty of up to 0.1 per cent of GDP (European Council 2012).

Thus fiscal policy must perform a 'double function' in the Eurozone, 'guaranteeing that public debt is sustainable and ensuring that fiscal automatic stabilisers can operate to cushion country-specific economic shocks' (Juncker et al. 2015b: 14). But, policymakers fail to recognise that that these functions are not necessarily compatible (see below).

Fiscal deficits in the Eurozone peaked at 6.2 per cent of GDP in 2010 (Juncker et al. 2015a). With the support of the OECD and IMF, Member States had reacted to the deepening crisis with temporary stimulus packages, including injections into national banking systems to safeguard financial stability (e.g. Ireland) (Sharpe and Watts 2012). Government debt continues to increase, however, exceeding 92 per cent of GDP across the Eurozone in July 2015. Among the Member States, Greece (168.8 per cent), Italy (135.1 per cent) and Portugal (129.6 per cent) have the highest government debt to GDP ratios, far exceeding the Maastricht reference values (Eurostat 2015b). Amid high unemployment and low growth, pro-cyclical fiscal policy has been adopted in the attempt to reduce government deficit and debt ratios, and satisfy country-specific MTOs.

Monetary Policy

With limited fiscal capacity since the advent of the GFC, the policy response has been largely confined to monetary policy measures and ongoing structural reforms which are unlikely to address high and persistent unemployment. First, disentangling the degree of cyclical and structural

unemployment is problematic due to hysteresis effects. Thus estimates of structural unemployment and the corresponding emphasis on structural policies are likely to be overstated (see, for example, OECD 2009). Draghi (2014) recognises the path dependence stressing that '[w]ithout higher aggregate demand, we risk higher structural unemployment', but he remains a strong advocate of structural reforms. Second, with limited fiscal capacity, stimulating aggregate demand requires effective monetary policy. But monetary transmission continues to be weak, particularly in the periphery and stressed markets.

Monetary easing had been recommended to accompany the discredited 'expansionary fiscal contraction' strategy in order to soften any contractionary effects (see Sharpe and Watts 2012). Conventional monetary policy has now been exhausted, with the ECB reducing its Main Refinancing Operation (fixed) rate effectively to the zero nominal bound (0.05 per cent) in September 2014.[2]

Consequently, the Bank has adopted 'unconventional' monetary measures, including Long-term Refinancing Operations, the Securities Market Programme and Outright Monetary Transactions. While these measures have helped ease liquidity conditions and stabilise bond market spreads, they appear to have had little effect on the real economy as credit growth remains modest and unemployment is high.[3]

In January 2015, the ECB announced that it would buy €60bn per month of public and private sector assets, namely sovereign bonds and investment-rated corporate bonds, until September 2016. Special conditions would be imposed on the bonds of countries under reform programmes (notably Greece). This Quantitative Easing (QE) programme may be extended, depending on the inflation outcome (Watt 2015). However, despite some evidence to the contrary (Weale and Wieladek 2014), we believe that QE will only have a limited quantitative impact on rates of growth in investment, output, and employment and may contribute to unsustainable rates of inflation in asset-prices, and could be less effective in the Eurozone than in the USA and UK (see Muellbauer 2014).

Internal Devaluation

Since nominal exchange rate adjustments are not possible at the individual country level, internal devaluations (price and wage cuts) have been recommended to boost external competitiveness, particularly among

periphery Eurozone economies (IMF 2013). Demand from outside the Eurozone has contributed to some improvement in export performance, particularly for Germany, Spain and Portugal (IMF 2013).

However, the decline in current account deficits among the periphery since the advent of the crisis has been largely driven by a collapse in imports due to depressed domestic demand rather than increased competitiveness (Mitchell 2013; see Papadimitriou et al. 2014 in respect of Greece). Meanwhile core Eurozone economies, particularly Germany, have done little to reduce their current account surpluses by stimulating domestic demand and may face sanctions via the disciplinary arm of the Macroeconomic Imbalance Procedure. Further, internal devaluations geared to export competitiveness exacerbate private debt burdens, undermining the restoration of private sector balance sheets which is required for sustained consumption growth.[4]

Conclusion

Unable to withstand a systemic demand shock, the Eurozone periphery is trapped in a vicious cycle of fiscal austerity and internal devaluation. The outcome is depressed domestic demand and high unemployment which, via the automatic stabilisers, inevitably worsens the debt dynamics. Rising government deficit and debt ratios are interpreted as insufficient fiscal austerity and the vicious cycle continues.

Breaking out of this policy impasse requires the development of a centralised macroeconomic stabilisation mechanism, and/or the relaxation of fiscal constraints to enable initiatives to be undertaken by individual member countries. Unless there are such policy initiatives within the EMU, it is likely that Greece and possibly other vulnerable member countries will either remain in a state of stagnation or could possibly exit the EMU, which could generate ongoing contagion effects.

Alternative Policy Options

In his book *Eurozone Dystopia*, Mitchell (2015: 14) considers three alternative policy options designed to achieve a return to full employment in the EMU: (1) establishing a true federation, with a European level fiscal capacity to ensure that total spending in the Eurozone is sufficient to generate enough jobs to satisfy the desire of workers; (2) using OMF to achieve full employment. This means that the ECB would use its currency issuing

capacity to underwrite the fiscal deficits of the Member States, which overcomes restrictions that private bond markets place on their spending; and (3) pursuing the exit option because it accords with the historical and cultural realities of Europe (see also Watts et al. 2014).

There is no evidence that a European level fiscal capacity will be established to ensure that there is sufficient total spending (i.e. option 1). Further, there is no immediate likelihood of member countries exiting the Eurozone, so our focus in this section is option 2, OMF.

Bossone and Wood (2013), for example, recommend applying OMF policy in Italy. They suggest that legislation could be enacted to enable the Ministry of Finance (not the independent central bank) to either create new local legal tender currency or issue special non-transferable new government bonds. There would then be three ways to directly finance expansionary fiscal policy, namely through (1) the newly created currency; (2) Euros, which have been acquired in exchange for the new currency; and, (3) the exchange of the government bonds for Euros from the national central bank and/or the ECB. Under these conditions they claim that OMF would not breach Article 123 and would not give rise to problems of debt sustainability 'since the government securities will not be redeemed or sold to the market, will not pay interests, and will not give rise to government liabilities' (Bossone and Wood 2013).

Watt (2015) notes that the prevailing economic environment in the Eurozone of low (or negative) real interest rates on government bonds, combined with economic stagnation and particularly weak investment (public and private) would be conducive to higher public investment.[5] However, he notes that, against the background of the fiscal rules outlined above, only Germany, Luxembourg and Estonia have some latitude with respect to expansionary fiscal policy. While temporary deviations from 'fiscal trajectories' are permitted if spending is related to public investment (and structural reforms), only national co-funding of various EU projects is eligible (Watt 2015). Further, there is no clear sign that the European Commission will instigate a 'substantial and lasting fiscal boost' (Watt 2015: 8). Thus the necessary (sustained) expansionary fiscal policy can only be achieved through major changes to the fiscal rules, such as 'to exempt credit-financed public investment', which would require changes to European and national legislation (Watt 2015: 9).

Watt (2015: 2) recommends that conditional OMF be applied to public investment in which 'bonds newly issued by the European Investment Bank [EIB] are purchased, on secondary markets, by the ECB, and the financial

resources are made available to national governments to finance investment projects.' He claims that his proposal is compatible with the constraints set by the EMU. The program would be justified on the basis of 'the risk of deflation and/or longer-term stagnation and the break-up of the currency union' (Watt 2015: 21).

The European Council would establish the scheme, with a time scale of say 5 years, and the investment projects would need to meet certain minimal European guidelines. The volume of bonds issued by the EIB and sold to the ECB would decline over the five years. A trigger mechanism would be activated if the resulting economic recovery caused inflation or nominal output to rise above a pre-defined threshold. Then the ECB would withdraw from further bond purchases, but the EIB would continue issuing bonds according to the schedule to avoid shocks to the financing process. However inflation would probably continue.[6]

In principle, Eurozone member governments are indebted to the ECB, but this is fictitious and takes the form of a permanent increase in the monetary base (Watt 2015: 22). However, the level of debt will increase if the ECB withdraws from the financing process, but the debt ratio is likely to decline (see below). Public investment may well promote private investment. Watt (2015) proposes a program of €750bn over 5 years, and outlines a number of criteria which could be used to determine the allocation of funds to member countries.[7]

As an approach to achieving and sustaining full employment, we view a public investment programme as complementary to, rather than a substitute for, a Job Guarantee (Juniper et al. 2014–2015). The main problem with so called 'pump-priming' strategies is that unemployment is unevenly distributed and very persistent so that inflationary bottlenecks come into play before full employment levels of output are reached. In addition, the reliance on 'trickle down' mechanisms has been rebutted by numerous studies, so the programme is unlikely to impact on a major segment of the adult population whose standard of living and life chances have been severely undermined in the member countries.

Van Rompuy et al.'s (2012: 5) blueprint seeks to '[improve] the resilience of EMU through the creation of a shock-absorption function at the central level'. However, there is no indication that this will occur at the instigation of the European Commission, so it is important that a Job Guarantee is enacted across all member countries, which would strengthen the resilience of the EMU when confronted with both country-level and systemic economic shocks.

The Job Guarantee and Macroeconomic Stability

The ongoing crisis has highlighted the deficiencies of the EMU architecture, notably the lack of policy sovereignty and the absence of (centralised) stabilisation mechanisms. Juncker et al. (2015b: 14) notice that 'all mature Monetary Unions have put in place a common macroeconomic stabilisation function to better deal with shocks that cannot be managed at the national level alone.' With the European Council now looking to develop a 'deep and genuine' EMU, we present the Job Guarantee (JG) as a policy option which can provide an effective automatic stabilisation mechanism at both the national and Eurozone level. A JG is also appropriate for countries with their own sovereign currencies, which are also subject to fluctuations in economic activity and unemployment.

The JG or Employer of Last Resort programme builds on the seminal contributions of Abba Lerner and Hyman Minsky, with recent contributions by Mitchell (1998, 2000), Forstater (1998), Wray (1998), Watts and Mitchell (2000), and Mitchell and Mosler (2002) among others. Our advocacy of a JG and expansionary fiscal policy in general is underpinned by the principles of Modern Monetary Theory and the Circuitrist theory of financing and funding. The failure to distinguish between financing and funding leads to the government budget constraint being wrongly interpreted as an argument for fiscal policy to be consistent with the principles of sound finance (Parguez and Seccareccia 2000; Sharpe et al. 2015). The adoption of such policies arise, in practice, not from well-founded macroeconomic arguments, but solely from voluntary deficit and/or debt restrictions being imposed via the SGP requirements for the non-sovereign EMU members and via domestic political processes in sovereign countries.

A JG offers a job at a fixed money wage to any individual ready, willing and able to work, thereby creating an infinitely elastic labour demand at that wage. The money wage represents a 'liveable wage' and can be supplemented with a benefits package.[8] The programme is financed by the federal government, but the type of job is determined by the local government who are informed about unmet social needs. This level of decentralisation also helps to reduce policy lags.[9]

The purpose of a JG is to address macroeconomic inefficiency and mitigate the 'indignity and insecurity of underemployment, poverty and social exclusion' (Quirk et al. 2006: 2), along with the 'amelioration of many social ills associated with chronic unemployment (health problems,

spousal abuse and family break-up, drug abuse, crime), [while enhancing] skills due to training on the job' (Wray 2012). The implementation of a JG would ensure that unemployment and poverty rates satisfy Europe 2020 targets.[10]

While specific policies for a Eurozone stabilisation function are still to be developed, Juncker et al. (2015b) argue that the design of such a mechanism rests on four guiding principles. Here we assess how the features of the JG align with each principle.

First, Juncker et al. (2015b: 15) argue that a Eurozone stabilisation function 'should not be an instrument for crisis management', which is the role of the European Stability Mechanism (ESM).[11] Instead, its role should be to improve the overall economic resilience of EMU and individual Eurozone countries and thus help prevent crises, so that future interventions by the ESM were less likely. In this vein, the JG should be viewed as a permanent and automatic mechanism which is embedded in the EMU architecture.

The JG generates a 'buffer stock' of (job-ready) workers from which employers can recruit. The size of the buffer stock is driven by the 'normal' economic flux of non-JG sector activity; the buffer stock expands (declines) when the non-Job Guarantee (private/public) sector activity declines (expands) (Mitchell 1998; Fullwiler 2005). Thus implementation of the JG gives rise to macroeconomic stability since guaranteed employment and stable wage income anchors consumer and business confidence, and facilitates the restoration of household balance sheets and access to credit following a macroeconomic shock. This, in turn, promotes a stable foundation for a recovery in private sector consumption and investment and lessens the severity of a downturn. By establishing a 'floor' to economic and social costs arising from reduced economic activity, the JG would strengthen the resilience of the EMU when confronted with both country-level and systemic economic shocks, as well as contagion effects from financial instability. The automatic nature of the JG would also help to reduce lead-lag times which are often associated with policy-making.

Full employment is unsustainable without an effective price stability mechanism. The JG promotes price stability in three ways; (1) the government simply purchases unwanted labour which has no market price, and so, does not compete with the non-JG sector for workers; (2) the JG and associated training programs reduce hiring and on-the-job training costs, and lessen skill atrophy (see below). Thus, employers are more likely to resist inflationary wage demands from the existing workforce since the JG

represents a pool of 'job ready' workers from which employers can recruit.[12] (3) If inflation exceeds the announced target, tighter macroeconomic policy would lead to workers transferring from the inflating non-JG sector to the fixed price JG sector with the associated wage-differentials imposing a sanction in the form of income losses. But, in contrast to an unemployment buffer stock, the indignity and insecurity of (chronic) unemployment and associated social and economic issues are avoided.

Second, a Eurozone stabilisation function 'should not lead to permanent transfers between countries or to transfers in one direction only . . . It should also not be conceived as a way to equalise incomes between Member States' (Juncker et al. 2015b: 15). While this issue partly relates to programme financing, the JG is not a fiscal transfer mechanism. Payment of JG wages represents government expenditure and would be perfectly calibrated to the size of the 'buffer stock' (notwithstanding administration expenses). The JG wage should be higher than the level of unemployment benefit, which promotes the incentive to work and also stimulates economic activity.[13] Thus, the JG would be associated with a reduction in unemployment transfer payments. Indeed, the introduction of the JG clarifies the conception of mutual obligation, so the government may choose to eliminate such transfer payments (Mitchell 2013).

The JG does not seek to equalise incomes but rather establishes an acceptable minimum standard of nominal wages, benefits and working conditions. We recognise that setting such work standards could create significant political tensions (see also Tymoigne 2013).

Third, a Eurozone stabilisation function 'should neither undermine the incentives for sound fiscal policy-making at the national level, nor the incentives to address national structural weaknesses' (Juncker et al. 2015b: 15). In general, fiscal consolidations geared to meeting predetermined fiscal targets are not a sensible objective of macroeconomic policy. Notwithstanding the important distinction between sovereign and non-sovereign currency governments, the fiscal balance is largely endogenous so such adjustments/consolidations, in the presence of weak non-government sector demand, generate significant fiscal drag and via automatic stabilisers will worsen the deficit and debt dynamics. In any case, the initial demand shock and increased capacity utilisation associated with the implementation of the JG, combined with the automatic budget stabilisers, is likely to be associated with improved fiscal outcomes. In essence, the JG provides a 'floor' for the aggregate income losses associated

with macroeconomic shocks, and so, helps to stabilise or even improve the debt dynamics. We expand on this point in the Greek case study.

As an automatic stabilisation mechanism, the JG does not preclude discretionary fiscal policy. Government could still pursue (non-JG related) expenditure cuts or tax increases, and would be inclined to do so if inflationary pressures emerge. Similarly, the JG does not rule out the adoption of complementary fiscal stimulus policies, such as public investment spending, to address national structural weaknesses.

In addition, structural labour market policies and the JG are complementary policies since training and education programmes are most effective when employment is available to apply skills and knowledge. Thus, the JG should include a training and education component to improve the productivity and flexibility of JG workers (Tymoigne 2013). So, in general, the JG will (1) help to maintain morale, work habit and other non-job specific skills, which contrasts with the current unemployed; (2) ease the 'hysteretic inertia' embodied in the long-term unemployed by facilitating the redeployment of workers to new non-JG sector job opportunities; and (3) raise the skill intensity of the workforce (Mitchell 1998).[14]

Fourth, a Eurozone stabilisation function 'should be developed within the framework of the European Union. This would guarantee that it is consistent with the existing EU fiscal framework and with procedures for the coordination of economic policies. It should be open and transparent vis-à-vis all EU Member States' (Juncker et al. 2015b: 15). Open and transparent discussion and analysis of JG programme successes and challenges should be included in the each Member State's 'National Job Plan', which is included as part of their annual 'National Reform Programme'. National statistical agencies and Eurostat should publish all relevant economic and labour market indications, including government expenditure on the program, the level of JG employment, the Buffer Employment Ratio (i.e. the ratio of JG employment to total employment), and the JG wage.

Implications: Greek Case Study

Background

In this section, we draw on the theoretical and institutional insights from the earlier sections of paper and some of the estimates associated with the introduction of a limited JG in Greece in 2012 (Antonopoulos et al. 2014a,

b, 2015), to explore the outcomes for GDP and the deficit and debt ratios associated following the adoption of a partial JG.

Between 2008 and 2012, there was a decline in the working age population of over 200,000, which would be expected, given the poor state of the labour market and the consequent emigration of some workers. However, the overall labour force participation rate (LFP) rose about 1 percentage point despite a fall in the male participation rate, which implies the operation of an added worker effect at a time of falling employment opportunities, an increased share of part-time employment,[15,16] and declining wages. Another adverse labour market development was the rising share (21 to 26 per cent) of the shrinking stock of employment being accounted for by own account workers, who are self-employed and work on their own (Antonopoulos et al. 2014b: 4–5).[17]

Over this period, the unemployment rate rose from 7.9 per cent to 24.7 per cent, with the female unemployment rate rising to 28.4 per cent and the male rate to 21.8 per cent. Antonopoulos et al. (2014b: 4) report an unemployment rate of 27.8 per cent in October 2013, of which 71 per cent had been unemployed for over 12 months (LTU) and 17 per cent of the unemployed had been without work for 4 years. By 2014 LTU had risen to 75.4 per cent (Antonopoulos et al. 2015). Since the crisis commenced in 2008, 75 per cent of the growth of unemployment has followed the imposition of austerity measures by the Troika in 2010 (Antonopoulos et al. 2014a: 8).

GDP at current prices has declined by nearly 20 per cent since 2008 and gross (public and private) capital formation has collapsed from a peak of 26.6 per cent of current GDP in 2007 to 13.2 per cent in 2012 (Eurostat 2015c).

Quoting ECB Executive Board Member, Yves Mersch, Papadimitriou et al. (2014: 3) note that, with the deleveraging by both the public and private sectors, the external sector had to go into surplus, which was best achieved via higher exports, through an internal devaluation, rather than a reduction in imports from a collapse in GDP. The authors find that nominal and real wages fell 23 per cent and 27.8 per cent, respectively, from their peak (Q1 2010 to Q1 2013). In particular, there was a legislated decrease in the monthly minimum wage from €751 per month to €586 for those aged 25 and over, and to €511 for younger workers. However, the improvement in the current account has largely occurred through falling imports, driven in part by the 21 per cent fall in consumption spending, rather than rising exports (Antonopoulos et al. 2014b). This strategy has been counterproductive in

the light of the catastrophic decline in economic activity and the rise in labour underutilisation. A radical policy initiative is required with the restoration of employment opportunities for a significant share of the previously active working age population being the priority.

Implementation of a Job Guarantee

In principle, a JG is supposed to achieve a target rate of unemployment, which is associated with full employment. However the performance of the Greek labour market has been very poor over the last decade with the minimum rate of unemployment being 7.9 per cent in 2008. The collapse of private investment spending points to a major structural problem for the Greek economy in that major stimulus measures may confront capacity constraints and cause inflation. Also there is an urgent need to develop the skills of job seekers, many of whom have had long durations of unemployment. This form of training is best undertaken on the job, which underlines the relevance of a JG (Mitchell and Watts 2013).

Consequently, rather than use an arbitrary full employment rate of unemployment, such as 2 per cent, an intermediate target of restoring the 2008 rate of unemployment through a JG has been adopted as the basis for computing the resulting impacts on deficit and debt ratios. Also, we assume that there are sufficient additional work hours to also restore the part-time share of employment to the 2008 figure of 5.7 per cent from the 2012 figure of 7.8 per cent, assuming that a part-time job on average entails half the work hours of a full-time job. We retain the marginally higher LFP of 2012, given the decline in wages over the intervening four years and the high rate of underemployment. A total of 826.7 thousand additional jobs are required (see Table 5.1).

Antonopoulos et al. (2014a, b) consider eight scenarios based on 4 levels of initial (JG) employment, lying between 200,000 and 550,000, and the current level of the minimum wage of €586 per month and the higher previous minimum wage of €751 per month. It is assumed that the program was imposed in 2012, so that the associated fiscal outlays and receipts can be added to the actual outlays and receipts for that year.

Table 5.2 shows the JG cost structure developed by Antonopoulos et al. (2014a, b). They differentiate between the all-inclusive costs of a JG program and the program costs to which their chosen multiplier can be applied. The difference between these costs consists of employers' and employees' insurance contributions plus administration costs.

Table 5.1 Labour market outcomes (2008 and 2012) and 2012 target outcomes

	WAP[a]	*INACTIVE*[a]	*LF*[a]	*LFP*[b]	*EMP*[a]	*PT SHARE*[b]	*PT EMP*[a]	*UR*[b]	*U*[a]	*ΔEMP*[a]	*ΔFTE*[a]
2008	7365.8	2455.8	4910.0	66.66	4522.9	5.70	257.8	7.88	387.1		
2012	7156.4	2328.0	4828.4	67.47	3636.0	7.80	283.6	24.70	1192.4		
2012[c]	7156.4	2328.0	4828.4	67.47	4447.7	5.70	253.5	7.88	380.7	811.7	15.0

Source: Eurostat (2015d)
[a]Denotes measure in '000s
[b]Denotes measure expressed as a percentage
[c]Denotes the target 2012 Labour Market outcome based on same unemployment rate and part-time share of employment that prevailed in 2008

Table 5.2 Job guarantee cost structure: 200,000 jobs (unit: €million)

200,000 JG jobs	*Case A: Minimum wage = €586*	*Case B: Minimum wage = €751*
All-inclusive cost of JG program	2988	3829
Wage Component		
JG total wage cost	1793	2297
Employers' contributions	386	495
Gross wage	1406	1802
Employees contributions	232	297
Net wage	1174	1505
Non-wage component		
Intermediate demand	1135	1455
Domestic	895	1147
Imported	241	308
Administrative costs	60	77
Program costs of JG program	2310	2960

Notes: Table reproduced from Antonopoulos et al. (2014a: 53, Table 5.2)

Their modelling framework combines 2010 input-output tables for Greece, which are the bases of the multiplier estimate of 2.32, with micro techniques that generate the required data for their 4 employment scenarios (Antonopoulos et al. 2014a, Chap. 4).[18] However, an examination of recent Greek GDP shares of expenditure implies a marginal propensity to consume out of GDP (c*) of 70 per cent, and a marginal propensity to import of 30 per cent or so. This would yield a multiplier of approximately 1.67 (1/0.6), rather than 2.32. Thus our assumptions generate more conservative estimates.

Thus, for each €100 spent on the JG program, €167 would be added to GDP which means that for every 445 JG jobs created at the minimum wage of €586, an additional 100 full-time private sector jobs would be created. At the higher minimum wage, an additional 100 private sector jobs would be generated by 347 JG jobs.[19] These increases in total employment give rise to additional tax receipts, which represent about 10 per cent of additional GDP, which is close to the overall tax share of GDP (Eurostat 2015c).[20]

Antonopoulos et al. (2014b) assume that the outcomes can be proportionately adjusted across the 4 scenarios associated with each level of the minimum wage.[21] Table 5.3 shows the macroeconomic outcomes in 2012 associated with the implementation of a JG scheme which yields the labour

Table 5.3 Macroeconomic outcomes associated with JG implementation

Gross wage	*JG jobs*[a]	*Indirect jobs*[a]	*ΔGDP (m)*	*ΔG(m)*[b]	*ΔT(m)*	*Deficit/ GDP*[c]	*Debt/ GDP*[c]
€ 586	674.95	151.83	13018.77	10083.75	1286.83	12.68	151.28
€ 751	641.94	184.83	15866.24	12289.98	1567.43	13.43	150.14

[a]Denotes measure in '000s
[b]Denotes all-inclusive JG cost
[c]Denotes measure expressed as a percentage

market outcomes recorded in Table 5.1. GDP growth rates are respectively 8.72 and 10.48 per cent for the current and previous levels of the minimum wage.

The deficit and debt ratios were respectively 9.0 per cent and 156.9 per cent in 2012. Taking account of the additional tax revenue generated by the JG program, the deficit to GDP ratio rises to 12.68 per cent and 13.43 per cent, respectively. On the other hand, debt ratios fall to 151.28 per cent and 150.14 per cent, respectively.

Watts and Sharpe (2013: 83–84) show that the following condition (5.1) must hold for a fiscal stimulus to reduce the debt ratio in a one sector macroeconomic model, when there is no distinction between gross government outlays and the level of government outlays which are subject to the multiplier.

$$\beta - t = (1 - c)(1 - t) + m < d_0 \tag{5.1}$$

where β, c, t, m and d_0 denote the inverse of the multiplier, marginal propensity to consume out of disposable income, tax rate, marginal import propensity and the initial debt to GDP ratio, respectively. A simpler derivation of this condition is shown in the Appendix.

As noted, Antonopoulos et al. (2014a, b) differentiate between the all-inclusive cost of the JG program, which directly contributes to the increase in the deficit, and the program cost, which excludes social insurance contributions and administration costs, and is subject to the multiplier.

If δ denotes the share of ΔG which is subject to the multiplier, then the condition for a fiscal stimulus to reduce the debt ratio is:

$$\beta - \delta(t + d_0) < 0 \tag{5.2}$$

In the calculations by Antonopoulos et al. (2014a, b), δ takes the value of 77.3 per cent under both minimum wage scenarios. Then for values of β, δ, t and m of 0.60, 0.773, 0.10 and 0.30, respectively, the inequality will hold for gross debt ratios above 67.6 per cent.

The above calculations have been made on the basis of relatively conservative calculations. Notwithstanding the impact on the deficit to GDP ratio, the decline in the debt ratio of between 5 and 6 percentage points provides a most persuasive argument for the gradual adoption of a JG, which is likely to be accompanied by rising private sector investment, i.e. crowding in, when capacity shortages appear. This in turn will further improve the debt ratio and moderate and ultimately reverse the increase in the deficit ratio.

Conditions (5.1) and (5.2) refer to the instantaneous impact on the debt ratio following the implementation of stimulatory fiscal policy, and thus do not reflect the longer term deficit-debt dynamics in which the relative magnitudes of the real interest rate and real growth rate are crucial (Watts and Sharpe 2013). However, Cline (2015) quotes Greek debt projections from IMF (2015) which assumes that the associated interest burden only rises to an average of 4.4 per cent of GDP (2021–2024), despite a debt ratio in excess of 150 per cent.[22] Thus, given buoyant GDP growth from the ongoing adoption of a JG plus rising private investment, the longer term deficit-debt dynamics will contribute to an ongoing decline in the debt ratio. On the other hand, ongoing austerity measures are likely to raise the public debt ratio and at best marginally improve the deficit ratio.

While the European Commission (2015) cautions against both excess deficits and debt, by its own admission, it is borrowing costs which constrain current spending. The introduction of a JG promotes GDP growth and the level of borrowing costs, relative to GDP falls, assuming that bond rates do not increase.[23] The Commission concludes with the somewhat bizarre statement that '[s]ound public finances encourage growth because borrowing costs money. By avoiding excessive deficits and excessive debts, governments can spend more on useful things like education, or infrastructure, and less on interest charges to banks'.

Referring to the EDP requirements, Watt (2015) argues that even if member countries reduce deficits, the debt rule is quite punitive with countries being required to reduce their debt ratios by around 2 percentage

points per annum (France, Belgium and Spain) and 3.5 percentage points (Portugal and Italy), which would require a marked acceleration of GDP growth.[24] It is somewhat naïve to believe that significant crowding in would occur, so that a reduction in the budget deficit as a share of GDP is accompanied by a fall in the debt ratio.

However, under the terms of the €86bn bailout for Greece (August 2015), defence spending and subsidies for farmers must be cut as part of a fresh package of austerity measures. Greece is required to post a primary deficit (G-T) no larger than 0.25 per cent of GDP in 2015, followed by a surplus of 0.5 per cent of GDP in 2016, rising to 1.75 per cent in 2017 and 3.5 per cent in 2018. These deficit targets could only be achieved by accepting a rising debt ratio—in the absence of a private sector revival in response to more punitive austerity measures.

Conclusion

The austerity measures which have been imposed on Eurozone member countries since the onset of the GFC have been a manifest failure, particularly in the peripheral economies. Most member countries exhibit public debt ratios well in excess of the SGP reference value of 60 per cent. Consequently, they are required to continue austerity measures to maintain structural deficits of at most 0.5 per cent of GDP and to make significant reductions in their debt ratios under the Fiscal Compact. Labour market prospects are bleak with the peripheral economies suffering sustained high unemployment and, in some cases, reduced wages as well as increased pension contributions and higher taxes.

The fiscal governance constraints on net spending must be relaxed, since the prescriptions of the Fiscal Compact rely on the discredited 'expansionary fiscal contraction' strategy that necessitates growing non-Government spending to offset austerity measures. Simple modelling suggests that austerity may reduce the deficit ratio but will raise the debt ratio. The acceptance of OMF would enable higher net government spending and a reduced debt ratio, and would finesse the usual consequences for the deficit ratio.

This chapter makes the strong case that, given the hysteretic inertia generated by sustained high unemployment, the phased implementation of a Job Guarantee will have the most beneficial effects in achieving higher rates of employment, which will provide the basis for a sustained recovery, once capacity constraints are relaxed following a resurgence of private investment. The implementation of a JG will be accompanied by a falling debt ratio and is superior to 'pump priming' measures.

Finally it has been demonstrated that fiscal policy cannot both guarantee a sustainable public debt and ensure that fiscal automatic stabilisers can operate to cushion country-specific economic shocks under the conditions of the Fiscal Compact (Juncker et al. 2015b).

Appendix

Assume that the budget surplus, gross public debt and GDP in 2012 can be denoted as B_0, D_0, and Y_0, respectively. Consider the implementation of a JG scheme which entails a government outlay of ΔG, which under a simple linear expenditure model leads to a multiplied increase in the level of output of magnitude $\Delta Y_0^{'}$:

$$\Delta Y_0^{'} = [\Delta G/(1 - c + m)] = \Delta G/\beta \tag{A.1}$$

where $\beta = (1 - c^{*} + m)$, $c^{*} = (1 - t)c$ is the marginal propensity to consume and m is the marginal propensity to import. Then the new level of GDP in period 0 is:

$$Y_0^{'} = Y_0 + \Delta G/\beta \tag{A.2}$$

Then the change in the primary budget surplus can be written as:

$$\Delta B_0 = \Delta T - \Delta G = (t\Delta G/\beta) - \Delta G = -\Delta G(\beta - t)/\beta \tag{A.3}$$

Public sector debt can now be written as:

$$D_0^{'} = D_0 + \Delta B_0 = D_0 + \Delta G(\beta - t)/\beta \tag{A.4}$$

Then the change in the debt ratio associated with the implementation of the JG program can be written as:

$$\Delta d = d_0^{'} - d_0 = \frac{D_0^{'}}{Y_0^{'}} - \frac{D_0}{Y_0} = \frac{D_0 + \Delta G(\beta - t)/\beta}{Y_0 + \Delta G/\beta} - \frac{D_0}{Y_0} \tag{A.5}$$

It can be readily shown that the debt ratio declines if:

$$(\beta - t - d_0) = (1 - c^{*} + m - t - d_0) = (1 - c)(1 - t) + m - d_0 < 0 \tag{A.6}$$

Notes

1. At the time of writing, Greek elections had been scheduled on 20 September 2015, following the resignation of the Greek Prime Minister Alex Tsipras of the ruling Syriza Party, so the political outcome is unknown.
2. Deposit facility rates have also been reduced to −0.20 per cent to maintain the 'corridor' in the interbank money market.
3. Small and medium-sized enterprises (SMEs) remain particularly vulnerable, which is problematic given their major contribution to value added and gross job creation (and destruction) in the Eurozone.
4. The subsequent overvalued (undervalued) real effective exchange rates for the periphery (core) economies have led to calls for a two-tiered Euro-system (see Mazier and Petit 2013).
5. The low or negative real interest rates would ensure that the resulting deficit/debt dynamics would be benign, with a falling debt ratio, in the presence of a positive real growth rate.
6. Watt (2015: 22) argues that these bonds would be purchased by the private sector which would be non-inflationary because private-sector liquidity would be absorbed. However, it is the level of expenditure *per se* which is relevant to the inflationary outcome and not the form of financing.
7. Watt (2015: 23) anticipates that there would be legal challenges to the 'fudge' (Buiter 2014: 45) of secondary-market purchases. These occurred when OMT was proposed in 2012 and when QE was introduced in early 2015. He is optimistic that political interests will prevail and his scheme would be introduced. However, both OMT and QE entailed an asset swap by the ECB, as opposed to additional spending by member countries.
8. The JG wage should be adjusted on a regular basis, perhaps annually.
9. Space constraints do not permit a more detailed discussion of the design and implementation issues associated with the JG, but see, for example, Quirk et al. (2006), Murray and Forstater (2013) and, more recently, Juniper et al. (2014–2015).
10. The Europe 2020 targets include: (1) 75 per cent of the population aged 20–64 should be employed, and (2) 20 million less people should be at risk of poverty.

11. The ESM, which was established in September 2012, provides assistance to Member States experiencing financial difficulties.
12. The effectiveness of this mechanism depends on the size of the 'buffer stock'. It is highly likely that the announcement of a comprehensive JG programme will lead to increased labour force participation and an associated increase in the JG sector.
13. Even if the minimum wage equalled the level of unemployment benefit, so that *ceteris paribus*, private sector spending was unchanged, the implementation of a JG would raise GDP because transfers to the unemployed have been replaced by an equal payment for productive work. Here we are ignoring outlays for other inputs.
14. It is important to note, however, that no realistic mass job creation programme can provide jobs which perfectly match the skills and attributes of all persons ready, willing and able to work.
15. Over 66 per cent of the underemployed sought full-time employment in 2013 (Antonopoulos et al. 2015).
16. Over this period, part-time employment rose from 5.7 percent to 7.8 per cent of total employment.
17. Antonopoulos et al. (2014b) caution about interpreting this employment growth as signifying 'increased entrepreneurial activity' as opposed to a coping strategy reflecting employment distress.
18. '[T]he microsimulation model selects individuals among the unemployed who are most likely to apply … for work through the JG's new direct job creation initiative' (Antonopoulos et al. 2014a: 39). We would argue that all the unemployed should be able to undertake a JG job and the better qualified will be able to secure the additional private sector jobs which are generated.
19. Under a higher multiplier of 2.32, more full-time private sector jobs are created per JG job at the different minimum wages (Antonopoulos et al. 2014b: 7).
20. Antonopoulos et al. (2014a, b) include the social insurance contributions as part of tax receipts, even though the former represents a contingent liability. This inclusion raises the implied tax rate to about 30 per cent (Eurostat 2015c).
21. Whilst the additional tax receipts associated with each scenario are presented in the paper, the estimates of net government outlays which are required to estimate the changes to deficit and debt to

GDP ratios ignore these additional tax receipts (see, for example, Antonopoulos et al. 2014b: 10, Table 3).

22. Greek debt owed to the European Financial Stability Facility and the European Stability Mechanism pays a low interest rate averaging 1.6 per cent in 2015–2020 and 2.6 per cent in 2021–2024 (Cline 2015; see also IMF 2015: 2)
23. The ECB has demonstrated its capacity to constrain bond rates through, for example, OMT.
24. Germany does have scope for additional government spending, but intends to pursue surpluses for the foreseeable future to address the debt brake. Its promise of a €10bn investment programme for three years starting in 2016 will have a very modest domestic impact. Watt (2015) argues that even a major investment programme in Germany will have very limited spill-over effects in the peripheral economies.

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CHAPTER 6

How to Fight Unemployment with the Minsky Alternative in Italy and in the EU

Giuseppe Mastromatteo and Lorenzo Esposito

Introduction

Everyone has the right to work—Universal Declaration of Human Rights, 1948

The crisis erupted in 2008 has produced financial and social instability ever since, seriously calling into question the *New Economic Consensus* (NEC) principles[1] and conclusions. From central banks to academic research, economic thought has become receptive to a re-reading of economists that, like Minsky, building on the heritage of Keynes, have contributed to an alternative and better understanding of economic and financial instability. Unfortunately, the EU is stuck in the pre-crisis theories and practices.

The views expressed are those of the author and do not involve the responsibility of the Bank of Italy.

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Minsky's contribution is already at the centre of the debate on financial stability. In this work we will deal with his suggestion to give the State the role of "Employer of Last Resort" (ELR), the part of the Minskyan tradition that has raised the most controversies.[2] We will try to show that the "responsible Big Government" advocated by Minsky is an essential part of the conceptual framework needed to put economy back on its feet.[3] In addition, in passing the main objections to ELR policies, we will try to show how deepening the analogy that "last resort" entails can help to shape the proposal in an efficient way.

NEC tenets included, among others, that unemployment is basically voluntary, income and wealth distribution flows from marginal productivity and does not affect economic growth and financial markets are efficient and stable. In the 1990s, free market policies were the theoretical backbone of economic and financial deregulation and globalization. Active policies like the ELR were considered useless at best. A famous OECD study (1994) marked the death knell of job guarantee schemes substituted by job search tools. All these assumptions are now history. One can compare the heuristic strength of this scientific paradigm with that of Minsky who, well beforehand, pointed out that modern economic theory is useless because it does not have an endogenous explanation for instability (Minsky 1986).

After more than three decades where full employment has virtually disappeared as a policy goal, and while the academia was still reflecting on its faults, central banks and governments rushed back to the business of cutting unemployment with monetary and fiscal policy. All of a sudden, a fairer income distribution, full employment and financial stability were back on the agenda because this is what world economy needed (Ostry et al. 2014). Now we know again that unemployment is not the result of real wages being too high but of a lack of aggregate effective demand due to low wages (Seccareccia 2004). However, full employment can be reached only with a deliberate active policy. In this regard, we should come back to what Keynes and Kalecki explained about the role of investment for business cycles. Investments play the key role in the determination of effective demand but also for the profit rate as they modify productivity and income distribution. As Kalecki put it, crises are caused by the fact that investments are not only produced, they are also producing. To use Minskyan words (1975b): "instability exists because investment—which is always a decision to use current resources for a payoff in the often quite distant future—is a speculative activity in all economies". This dynamic explains labour markets trends.

The basic idea of Keynes about public capital expenditures to achieve full employment was specified by Minsky who would have the State to provide: "an infinitely elastic demand for labor at a floor or minimum wage that does not depend upon long- and short-run profit expectations of business" (Minsky 1986, see also Minsky and Whalen 1996–1997). Even limiting the analysis to the *latu sensu* Keynesian policies, we can ask why no effective solution has been found to counteract unemployment and the related problem of poverty. Minsky thinks that the lack of a solution arises from a problem of priorities. Job creation should be a direct goal rather than the indirect result of growth-related policies, as was clear to him assessing the War on Poverty programs.[4] In this regard, Minsky's critical approach is very different from the policies proposed in this field, comprised these with a Keynesian flavour, as he thinks that these policies do not have a substantial impact on the differences between the well-off and the poor (1965b). Recent contributions (Pigeon and Wray 2000; Brady 2003; Bell and Wray 2004) have confirmed this insight.

ELR and Its Critics

> *Work should be made available for all able and willing to work at the national minimum wage*—H. Minsky, 1965

ELR programs have been the object of an extensive and detailed debate (for instance, Sawyer 2003 and the reply by Forstater 2005). In the following nine sub-sections, we will analyse the main features of the ELR proposal, the critiques it received and how it could be implemented to overcome them.

Wage Determination

ELR gives a base wage to anyone willing to work. The State hires all unemployed workers at the ELR wage, thereby guaranteeing effective full employment. ELR wage is lower than the prevailing private sector wages.

The first objection to ELR is that it can increase wages directly (i.e. because ordinary wages should be raised above ELR wage) and indirectly (i.e. eliminating the fear of unemployment). Here we deal with the first point and in the next sub-section we will discuss the second. The ELR does stabilize minimum wages and this is a good thing: given that almost one in ten employees in the EU is a working poor.[5] Setting a State wage can help to create a *de facto* minimum wage for unskilled informal workers and

for low-wages job in general. This helps to reduce poverty and overall demand volatility (UNPD 2010). A key positive feature of the ELR is that, with the reduction of unemployment, wages differentials narrow and this is exactly what is needed: to facilitate the rise of wages in low-wages industries to tackle poverty. In general, however, ELR means a low wage. The general principle is that "the movement from private sector employment to [an ELR job] must present a cost to the worker in terms of income loss" (Kriesler and Halevi 2001). However, the wage cannot be too low otherwise it does not eradicate poverty. Moreover, it cannot be too low because, "as Keynes (1926) had argued, flexible labour costs do not move the economy closer to full employment. Because of the negative feedback effects on aggregate demand, just the reverse would be true, especially if the gap between wages and profits might be widening in the long run owing to the proliferation of low wage jobs" (Seccareccia 1999). The ILO guide on public employment programs suggests using the minimum wage where present as in most EU countries (Devereux and Solomon 2006; see also Mitchell 2007).

What about inflation then? First of all, even if ELR wage does increase wages in general, the present Phillips curve is so flat that inflation is irrelevant to labour market and vice versa (Bayoumi et al. 2014), so the effect would be positive for the economy as a whole. This is because the organized strength of labour has been largely shattered after the 1970s and the ELR cannot change this historical trend.

Moreover, the scheme anchors inflation expectations in many ways. ELR wage is not linked to the specific balance of forces in each sector, nor is it to short-term profitability and investment, so it helps to stabilize the labour market. ELR programs act as buffer, contributing to price stabilization as long as ELR wage is correctly fixed (Tcherneva 2007; Mitchell 1998a; Wray 1998). Thirdly, as the scheme reinforces the range of public service provision "in kind", it reduces inflationary pushes coming from tariffs and prices of public services. Finally, as ELR is an institutional agreement among all social stakeholders, it reduces inflation stemming from social conflict. Overall, in Minsky's view, inflation comes from the resistance against profit erosion and a lower unemployment is not necessarily linked to lower profits. This is not a natural process, nor does it exist as a "natural rate" of unemployment; on the contrary, inflation comes from the specific behaviour of firms and workers: "if business and labor begin to act as if inflation will take place once unemployment rates are down, then inflation will take place" (Minsky 1965b).

Another objection against ELR is that it breaks the link between wages and productivity. However, the origin of wages differential is scarcely connected to individual productivity. As Minsky noted, high-wage industries are often highly unionized, so that high wages can depend on the relative strength of the employees, not on their productivity. Moreover, in a situation where the financial sector is worth 40 % of total profits of the US economy, and a similar situation elsewhere, what "productive" means is at least unclear. Thirdly, the real problem, and a major cause of the crisis, is exactly that wages do not grow anymore with productivity (for instance, Pessoa and Van Reenen 2013).

A similar critique is that ELR can deal only with low-skilled job unless workers are properly trained, therefore it is doomed to produce low-productivity jobs or, looking at the problem from the supply side, many unemployed people are highly skilled workers, therefore ELR means an inefficient use of human capital and a way to lower wages. It is true that the scheme takes the workers as they are and puts them to work immediately, thus preventing their potential to lower until they drop out from the labour market. The issue is that, besides the simple fact that a basic wage is better than no wage, ELR is the only way to put these people back to work. After a while and a good retraining, they will be able to find the right work for their skills. Indeed, the program is not a substitute for job training, on the contrary it is its natural complement; however, while job training is a good long-term strategy, there are limits to the ability of these programs to transform workers from jobs in over-supply to jobs with an excess of demand (Minsky 1965b). In other terms, "The war against poverty must not depend solely, or even primarily, upon changing people, but it must be directed toward changing the system" (Minsky 1965b). After securing full employment, to avoid *lock-in effect*, job training can be useful. More generally, education is a bulwark against inequality and helps to build human capital.

Other critiques come from the left. In fact, some argue that ELR could push down public salaries during a crisis as, for instance, a local government facing cuts to its budget could substitute its workers with higher wages and trade union protection with low-wage ELR workers. Trade unions sometimes are critical of ELR programs because they fear this *displacement effect*. Seccareccia (2004) is afraid that "there is nothing that would prevent government authorities to set the ELR level below a "living wage". To avoid this problem, ELR projects should not overlap to "normal" public services, and the pay should be very close to the minimum wage with participants entitled to join trade unions. Anyway, the situation without

ELR is not better, as the substitution happens right now every day in the public as well as in the private sector using downsizing, outsourcing, casual labour and so on. We also think that the threat of ELR wage to private sector retributions is not material. A compromise is needed to balance the predictable protests by employers if the ELR wage is "too high" and the threat of a downward pressure to wages if it is too low. We can see an analogy here with decisions on the policy rate by the central bank made considering the needs of debtors and creditors alike vis-à-vis its institutional goals.

Full Employment and Unemployment

ELR can achieve full employment. This is its more important and strongest feature. This is particularly important to working poor: the ELR is effective in fighting poverty because it increases the number of workers per family. Full employment is the natural first best in any society because it means the best uses of productive capacities and national income is at its maximum. For the single entrepreneur, full employment is the best situation; the problem is that, as Lunghini (1995) puts it: "what is convenient to the single capitalist it is not for the capitalists as a whole". In other terms, if we exclude voluntary unemployment theories, the only objection to full employment is that it is politically unfeasible, that is the Kaleckian argument. Back in 1943, analyzing counter-cyclical policies, Kalecki pointed out that "industrial leaders" are against government spending in general, and they particularly dislike subsidization of mass consumption but, above all, they fear that long-term full employment would eliminate the threat of unemployment which serves to discipline the wage-setting process. This fear helps to explain why employers give up the first best, that is, maximum productive potential, renouncing to part of their profit. So unemployment is inefficient but inevitable in a market economy and where full employment policies are implemented investment strikes or inflation drive back wages and employment where they are supposed to be. Social peace is more vital than full employment; that is why when the former is assured the latter comes along as well: Fascist regimes can have both (Feiwel 1974).

At first, the Kaleckian argument seems powerful; however, let us look at the facts on the ground. For decades after World War II, most economies experienced strong employment growth and price stability and yet, social unrest started when full employment was disappearing. Secondly, do traditionally low-unemployment countries like Japan, Switzerland or Norway

experience more social unrest than high-unemployment countries or have less profitable firms? When in the 1950s in Sweden the unemployment rate was under 1 %, did the country experience civil war? Social unrests are more likely with high unemployment. Overall, the scheme creates a more balanced situation of sectorial wages where labour costs are under control but not because of unemployment. Moreover, the argument is based on full employment created by the private sector, not by the State (Mitchell 2007).

As for the totalitarian flavour that some feel in the ELR, comparing it to the Nazi Arbeiter Front (Kriesler and Halevi 2001) or to Soviet experience, we stress that the voluntary nature of participation distinguishes the scheme from any forced labour system. ELR programs do not side-line jobs offered by the private sector more than central banks' lending prevent a bank to use other form of funding, it simply offers work opportunities that are not given by private enterprises (Wray 1998; Kaboub 2007a). Moreover, as no alternative to ELR has ever been presented to grant full employment in a market economy, the example of the 1930s can easily be overturned: mass unemployment helped Hitler to power.

The same reply can be given to them who state ELR is another name for underemployment but do not have viable alternatives. It is better to be partially employed than totally idle. Moreover, even when the labour market is recovering, it is common that a significant proportion of the jobs being created involves under-employment and low-wages jobs (Lal et al. 2010).

Cost and Benefits for the State

The State put the ELR workers in social projects. This means that the focus of the ELR is not on money but on work: ELR is not an indiscriminate contribution. We will deal with the political issue of how the scheme fits into the Big Government issue later. Here we concentrate on costs and benefits of the program.

After that free market policies have forced the States to mobilize trillions of dollars to save world economy, this objection does not seem unassailable. Anyway, there are studies that try to do a cost-benefit analysis of the ELR based on different tools. For instance, Majewski (2004) and Fullwiller (2013) use the Fair econometric model; Godin (2012) uses the Stock Flow Consistent approach; Papadimitriou (2008) reports simple simulations for USA, Australia and UK. All these analyses conclude that an ELR program should lead to burdens varying between 1 and 3.5 % of GDP at its peak, with a benefit at least double in terms of GDP. This was also the

original calculation of Minsky (1965b) even in the most cautionary hypothesis of the Okun's Law (elasticity equals to one between unemployment and real GDP). Therefore, ELR would be more than self-financing. In addition, ELR eliminates other State expenses, some direct, such as unemployment benefits or (part of) the Cassa Integrazione Guadagni in Italy (Mitchell and Watts 2004), other indirect, like the costs linked to misery and unemployment in terms of health, criminal activities and so on. More generally, unemployed workers are fed by the employed people one way or another; therefore, ELR wages are not an added social cost (Lal et al. 2010).[6]

In the medium and long run, ELR is not a cost but an investment that enormously increases the economic potential of a nation because it: (1) is effective in increasing social and collective productivity by supplying public services and/or goods (Minsky 1965b); (2) prevents unemployed people from becoming unemployable. In fact, as the ILO has observed, prolonged unemployment transforms a proportion of the unemployed into a permanently excluded class.[7] It is a waste to pay people not to work not only because the output is inferior to its true potential but because human capital depletes. The ELR allows for human capital accumulation, thus improving the productivity of every sectorr: the labour force as numerous analyses have underscored the role of welfare and public expenditure as a means of assuring a greater range of opportunities for development (Vatter and Walker 1990, 1997; Lindert 2004, 2005). This increase in the social and economic potential would ensure that public budget stays sustainable. This is another reason why ELR is not inflationary: it does enlarge the wealth of a nation, increasing the workforce and allowing a significant expansion of services to the local communities, thereby improving the quality of life and productivity. (see the Appendix for a cost-benefit analysis for Italy).

More generally on the "cost" of fiscal policies, many authors underline the close ties between ELR programs and the modern monetary theory or the functional finance approach (Mitchell 2007; Murray and Forstater 2013). We broadly agree with the connection: the ELR is part of an alternative theoretical framework to implement economic policies.

Big Government Versus Local Communities

ELR is not mainly about Big Government, it is about the empowerment of local communities. This means that the scheme should be decentralized, helped by grassroots activism although nationally accountable (more on that in section on How to Make ELR Work). The recent historical example of Argentina with the *Plan Jefes* reached what was aimed at with

"overwhelmingly positive results" (Tcherneva 2012) exactly because it was focused on local projects. This has many advantages. First of all, local projects are more rapidly scalable if needed, so that fluctuations of unemployment can be easily adjusted adding or subtracting workforce to the projects without major disruptions to the public sector projects. Secondly, local projects are more directly linked to social needs such as crèches, primary schools, support for the disabled, energy saving, renovation and restoration of the art and architectural heritage, environmental protection and safeguards, and so on.[8] Local communities never object to such programs, whereas big infrastructural projects very often bring about polemics and even social unrest and do not bring with them many local jobs. As the UNPD (2010) puts it: "Implementing agencies must be made aware that, for equivalent amounts of resources, social sector public works deliver more jobs than do infrastructure projects".

Poor communities can see immediately how ELR is improving their life as it provides jobs and services to them and they feel more involved in the overall economy in a way State benefits cannot do. To attract local communities as workers, as "clients" but also as supervisors of the projects, they should be in charge of choosing the priority order of the projects themselves to increase the accountability of the ELR and the active participation in it by the community. ELR empowers especially poor people and women, ameliorates their environment as it supplies public goods and services that no one wants to produce, enabling all people to participate in the development of society. In this regard, the scheme is very different from the National Investment Board envisaged by Keynes. This does not mean the two proposals are mutually exclusive; on the contrary, they complement each other well. The NIB looks after structural investment shaping the future economy, whereas ELR cares about anyone left behind (Lal et al. 2010).

Assessing whether the ELR increases the overall weight of the State, one must remember that Minsky was not very fond of the Big Government entailed in the approach traditionally defined as Keynesian (Minsky 1986). Even if from Reagan onwards, criticism to this approach became equivalent to laissez-faire paeans, Minsky underlined its weaknesses in advance, pointing at the negative effects of an elevated deficit and of an increasing public sector debt that undermined the State stabilizing role in the case of severe recessions. Minsky's assessment of Big Government therefore underlines the need to focus public action towards specific objectives, chosen for the quality of their social impact. However, the roll back of the State, considered a political must from the Reagan presidency onwards, was

never achieved (Dymski 2002; Kregel 1998): the rise of the neoliberal era merely resulted in channelling public expenditure in a different direction, mainly towards defense and firms (Minsky 1986). From his point of view, Minsky urged a drastic scaling down of public monetary transfer payments to big companies and the military complex, arguing for an ELR scheme instead in order to combine the objective of holding recessive situations at bay and combating social insecurity (Minsky 1986, 1992).

As we have said, after trillions have been spent to save the banks, replying to critics of the ELR as a waste of money is at least whimsical. However, ELR should pursue efficiency focusing on clear and well-defined objectives because, as Minsky himself pointed out, public investments are often poorly targeted, and in less homogeneous social situations they may act to the advantage of privileged workers and firms, failing to heal misery. We will now deal specifically with this issue.

Fairness and Efficiency: A Balanced Labour Market

Economists can safely assume, once again, that fairness and efficiency are both key goals for public policies just like any normal person knew before the crisis or, to put it as the former CEO of Deutsche Bank did, we no longer believe in the market's self-healing power. IMF itself recently stated that "Equality enhancing interventions could actually help growth" (Ostry et al. 2014). In this regard, criticism of ELR as a program against labour market free functioning has been countered by the crisis itself. In fact, labour market policies are under reconsideration by the same IMF (Blanchard et al. 2013). Public policies that redistribute the benefits of growth to medium- and low-income citizens help economic development. Because they give more possibilities to all, these policies allow for a bigger accumulation of human capital and for better selection of talents. With ELR, labour force is larger and better, wages are more equal and price expectations are less volatile (Minsky 1965b). Let us see these characteristics in turn.

The scheme helps to increase the labour force pool. In fact, one of its best features is that it removes entry barriers that inhibit or interrupt participation in the labour market especially for segments like women or long-term unemployed. When workers entering the labour market are growing, wages are unlikely to go up disorderly.

As for wage dispersion, ELR would also act against the phenomenon whereby wage growth in high-wage sectors pushes down retributions in

non-protected sectors, with the ensuing increase in the public budget deficit. A similar scheme works in the EU between North and South. The scheme creates a more balanced situation of sectorial wages where labour costs are under control but not because of unemployment. By the way, even the IMF has recently accepted that casualizing labour is not efficient in the long run (Blanchard et al. 2013). By stabilizing the labour market among sectors and regions, ELR also reduces the pressure to emigrate, depleting poor regions of human capital, or to accept jobs in the informal sector often linked to organized crime. Helping many discouraged people back to a stable work increases long-term growth.

All in all, ELR helps to stabilize the base wage and decreases the spread of retribution between skilled and unskilled workers. It is likely that, as Keynes said long ago, workers are more concerned with their relative wages than with the absolute level, but ELR would create a lower floor so that normal wage earners would be better-off precisely according to the Keynesian argument. Moreover, the program employs people that are not working, mostly for a long time. They are competitors of employed workers much like a T-bond competes with a CDO to attract investors; after all, it is likely that a worker would be happy to see an unemployed taking €1000 to take care of a public garden instead of being idle but still be paid.

ELR is universal but its primary target should be those that are the worst-off in the labour market. A careful targeting is essential to ensure that ELR can work. For instance, in the aforementioned example of Argentina: "the target population was well focused on poor households with children ... over 75 percent of program beneficiaries had not completed secondary education and over 65 percent were in the bottom quintile for national income" (Papadimitriou 2008).

ELR is Superior to Any Comparable Alternative

We think ELR is better than any other policy aimed at curing unemployment and poverty. This is first of all true by design, so to speak, because ELR is the only policy that tackles together all the different aspects of a labour market policy: unemployment and employability, human capital preservation, misery prevention, consumption smoothing (Lal et al. 2010). It is at the same time a demand-side and a supply-side policy, where a subsidy or job training is one of the two. So the ELR is the right framework to achieve the Millennium Development Goals adopted by the United Nations as well as the Lisbon Agenda at the EU level.

ELR can be adjusted rapidly to the situation on the ground just like unemployment subsidies, but it is superior to these subsidies because their corresponding output is none. The role of ELR as a buffer stock program is important to reduce the amplitude of the business cycle (Mitchell 1998b). However, the ELR workforce inherently fluctuates. Of course, nothing prevents, even during period of good employment, the State from hiring people for these projects. In any case, we agree with the two-tier system proposed by Mitchell and Wray (2005): a core component based on the average unemployed workforce along the cycle and a transitory component that fluctuates with the ebbs and flows of the cycle. Adjusting the length of the workday along the cycle can help too. The general point is that the ELR is a fetter against the situation where the market has the final word about quality and quantity of jobs.

Moreover, ELR delivers what it is created for: full employment and human capital preservation, whereas money transfer schemes do not (Minsky 1968, 1973, 1975a; Wray 2007b). In a nutshell, ELR takes the workers as they are and puts them to produce social services; basic income guarantee and the like leave workers where they are, that is, without a job if they did not have one beforehand.

As for job training, it can be useful but on the long run. It cannot cure unemployment rapidly due to the limitations we have already described. With regard to classical demand management, it is unlikely that indiscriminate demand expansion in isolation will lead to full employment any sooner, as generalized expansion fails to address regional and sectorial labour market disparities (Mitchell 2007). Inflation starts to grow in the areas with lower unemployment before jobless people in the poorest areas can find a job.

Hence, Minsky (1965b, 1968, 1973) pointed out that all war on poverty programs should concentrate on labour rather than monetary transfers or other forms of money aid.[9] Differently from what free market zealots think, no one is happy to be paid not to work. Not because it is unethical, but because it is inefficient in the long run: the more he or she endures unemployment the less he or she can escape it, so unemployment reduces his/her human capital. Moreover, unemployed people can feel that, especially where austerity holds sway, it is politically unpalatable to receive public money for nothing. In fact, Americans and Britons welcomed the cuts in welfare subsidies in the 1980s and 1990s. Bringing back people to work is not only a civic duty, it is useful for local communities because the scheme allows expansion of the supply of public services, responding to needs for

which the market does not provide adequate answers. ELR provides services that improve the living standard of poor people, helping income redistribution towards greater equity in a way that has often been underestimated (Bosi 2005). Empirical analyses (for Italy see Baldini et al. 2006) have shown that these measures have a greater distributive impact than money transfers in the field of education and health care. So the most concrete and significant redistribution takes place through the production, both quantitatively and qualitatively, of public services that are of greatest benefit for those who are economically and socially most disadvantaged but also for the taxpayers as a whole.

As for cost-effectiveness, ELR is cheaper than the classical NIB scheme because it is a labour- not capital-intensive program: "Comparative studies carried out in different countries . . . show that labour-based options are, on average, about 10–30 per cent less costly in financial terms than equipment-intensive options" (Devereux and Solomon 2006). Moreover, huge investment projects require years to start to cure unemployment.

Financial Stability

The crisis poised Minsky's *Financial Instability Hypothesis* back at the centre of theoretical and political debates. It is not by chance that Minsky also proposes ELR because it is a scheme able to counter the fragility of the economic units and support their cash flow (Minsky 1982); in fact, this is the scheme best designed to secure financial stability. Without full employment and a stable income distribution, the only way left to workers to keep on with their normal life is increasing their debts with the consequences we have seen after 2008 ("let'em eat credit" as Rajan puts it). In other terms, without full employment and good wages, financial stability is impossible. As for pump priming policies, they too can have a negative impact on financial stability,[10] triggering inflation and less-stringent credit and market risk criteria. This in turn would lead to an increase in the leverage ratios and severe disruptions of distributive equilibria, with significant effects on the liquidity situation of the economic units (Wray 2007b). In a world of high financial leverage, public policies should be aimed at lowering financial fragility. ELR does it in many ways, improving the income of the poor and pushing for a fairer wage growth of different sectors. In other words, it helps income redistribution without triggering inflation associated with the more traditional "Keynesian" measures for the labour market.

ELR at the International Level

Globalization was the reason—or better, the excuse—used by many countries to dismantle welfare state and to deregulate the labour market. These policies, together with the weakening of the unions, provoked an unprecedented collapse of the workers' share of national income. ELR critics warn that such a measure would determine capital flight, a decline of investment and all the classical threats used against redistributive policies. The idea that globalization means the end of welfare state and State regulation also helped to deregulate the international banking system with disastrous consequences. Now banking regulators did a U-turn. It is time to change course also in the labour market policies. In addition, ELR creates jobs in local communities to produce social services, something that is not much affected by globalization.

As for the balance of payment, the competition on labour standard, linked to the export-led approach to growth, has been a major factor behind the crisis because it worsened income inequality. The ELR scheme highlights a different approach where full employment and strong investment in education are the key to increase productivity. If the application of an ELR program in a country succeeds in reducing unemployment, this would be a proof of the need of extending the ELR program abroad: a concerted policy of full employment would help the economic growth of all countries, included imports and exports.

Secondly, stabilizing the labour market and demand also stabilizes currency rates, helping an orderly dynamic of the balance of payment. Finally, given that the ELR stabilizes public deficit and demand, it can also reduce fluctuations in world financial flows (Minsky 1986[11]).

ELR and Growth

ELR can positively affect economic growth on many counts. Above all, it enlarges the workforce employed immediately and employable in the future. Critics say ELR entails jobs with low productivity, but this is not the case. First of all, low productivity is better than no productivity and the productivity of an unemployed worker is by definition zero. Secondly, something than is not produced by the market may not have a price but it does have a value, as many studies have shown.[12] This is especially true for domestic works that women are forced to do for free. ELR would ensure that women have equitable access to jobs by addressing gender-differentiated

labour supply constraints; as UNPD (2010) puts it, the program would ensure an "Equitable Wages and Equal Pay for Comparable Work". The positive consequences for women's empowerment would be far higher that enforcing "pink quotas". Moreover, these unpaid jobs have a very low productivity. Their socialization by the ELR would enormously increase the productivity of women. We knew it all along; that is why kindergartens were created after all: "We do not believe that low pay in the ELR program necessarily ensures low *social* productivity of the ELR program. For example, a childcare program employing ELR workers could have very high social productivity" (Mitchell and Wray 2005). Broadly speaking, ELR projects reduce the costs of reproduction of the labour force, improving its quantity and quality.

As for objections that ELR distorts GDP composition: not many would take an ELR job with a low wage if other jobs were available, so ELR does not interfere with technological change or flows of workforce among sectors, it only prevents unemployed people from becoming useless for themselves and for society.

How to Make ELR Work

We think we have shown that ELR is an effective way to cure unemployment and it is better than the conceivable alternatives. Many agree in general with the scheme but feel that in an era of public budget restrictions and howls against public works and bureaucracy, the program can be politically untenable. If the crisis has shown the colossal failures of the market, we are also aware of the possible government failures. This is a crucial issue. Waste of public money is unacceptable in this epoch. ELR to work must be efficient, accountable and transparent. We will propose a number of measures that can help to meet these goals.

The first aspect is institutional design: Who is in charge of the program? Which State institution decides on hiring, wages and investment allocation? We think the best arrangement is to split responsibilities as follows: the "centre" (*latu sensu* the government or a central body like a ministry) should be in charge of the general framework in terms of resources, rules, and so forth; local authorities and communities should be in charge of the practical tasks: priorities, hiring, paying wages, and so forth. This is useful to ensure "popular participation" and a "sense of ownership and participation", as the ILO has pointed out (Devereux and Solomon 2006). This differentiation also borrows from the wide scientific literature on the central

planning economies' flaws. However, this bottom-up approach should not imply, in our opinion, a devolution of the State tasks to nonprofits organizations; otherwise, the ELR program would amount to a privatization of the production of public goods. In any case, we agree that in many aspects "To execute a grassroots job guarantee program, one does not need big government planning and decision making" (Tcherneva 2012).

The second point is accountability and transparency. This is a multifaceted theme. First of all, there should be transparency towards the people entering the scheme. In fact, the ILO guide on ELR suggests that the duration and termination of employment should be transparent, that recruitment should not be based on distinctions such as gender and ethnic or social origins and so on (Devereux and Solomon, cit.). The ELR should be transparent towards its employees, but also vice versa. This means that ELR jobs have strings attached. For instance, in the case of Argentina, eligibility for employment was conditional on proof that the workers' children were attending school and were receiving appropriate medical treatment such as vaccinations (Papadimitriou 2008). In the same way, in discussing a job guarantee scheme for UK, the TUC points out that since what was on offer involved real jobs, there were no problem with sanctions faced by people who turned them down. Unemployed people that refuse an ELR job could maintain access to the welfare state in terms of universal basic services (i.e. health care and so on) but not cash subsidies. Thirdly, transparency is also due to taxpayers as, in many cases, "The main criticism against these programs have been that they are expensive, ridden with corruption and therefore benefits often do not reach the beneficiaries" (Dasgupta and Sudarshan 2011). To avoid this outcome, it is vital to ensure clear and simple rules and empowerment of local communities. ELR should be seen not as something coming from far away but a program that it is built step-by-step locally in terms of project selection, implementation and monitoring. The lack of local involvement downgrades it to a simple distribution of benefits and makes easier corruption and waste.

The accountability–transparency issue and the efficient institutional design issue converge when discussing who is concretely in charge of the scheme. Given that every good feature attached to LLR can be easily transferred to an ELR program, to complete the analogy, we think to a sort of central bank and how to create something similar to banking regulation. It is therefore time to deepen the "last resort" analogy. Many economists that are in favour of ELR schemes prefer to call them differently (Job Guarantee Schemes, Employment Programs and so on), as "last

resort" has a negative connotation (Kaboub 2007a). On the contrary, we think the analogy should be explored in a far deeper way. The ELR aims at treating unemployed people as the banks are. They are strictly (but not always effectively) regulated in good times and they are saved with public money through lending of last resort (LLR) in bad times. Central banking has the goal of financial stability, the ELR that of social stability. They complement each other and in many senses cannot work if not together.

Acting as lender of last resort, the central bank is ready to lend unlimited amount of money against collateral at a punitive rate. These punitive features are retrievable in the ELR program too: ELR jobs have strings attached and are low paid. However, also the LLR limits the punishment to single banks in ordinary business conditions. When there is a serious threat of a financial meltdown, as in 2008, central banks lend to everyone against any collateral at very low rates. ELR cannot be different. Here we see many ways to push the analogy further.

LLR shows that free banking is "is simply a libertarian fairy tale" (Calomiris and Haber 2014); ELR accepts that a "free" labour market is tantamount to using unemployment to cut wages, thus wasting potential production and total income. Just like the interest rate charged by the central bank is aimed at restoring financial stability, ELR wage is aimed at stabilizing the labour market. How much the central bank has to lend depends on the condition of the markets. The more depositors and banks calm their anxiety, the less vital is LLR, just like the more the private firms hire, the less crucial is ELR to full employment. However, just like central bank lending, ELR is useful in every economic situation as a counter-cyclical tool. ELR wage stabilizes the labour market just like the risk-free rate is a guide for every financial instrument's yield. In a nutshell, if banking in modern times is inconceivable without LLR, we argue that full employment is inconceivable without ELR.

If our analogy works, for the overall management of the ELR program, the government should create a State agency similar to a banking supervisory authority or a central bank. Kaboub (2011) calls it ELRA (ELR authority); we prefer a denomination that more strongly embeds the analogy with LLR, such as State Employment Bank (SEB). The SEB should have the statutory mandate to cure unemployment just like the central bank has that of price stability. Therefore, coordination among them would be needed, as it happens where banking supervision and monetary policy are not followed by the same authority.

What should be the practical tasks of the SEB? Basically: to define the ELR wage (just like the central bank defines the policy rate) and to supervise the projects where ELR workers are employed. Day-by-day supervision of these projects is fundamental to ensure the efficiency of the program and the social and political appetite for it. As for the practical toolkit of this supervision, the experience of banking supervision can easily help: on-site inspections, off-site analysis of a structured series of efficiency indicators, analysis of the quality of management, consumer protection tools and so on. This is the central part of the accountability and it would help greatly, but it also would fail sometimes just like it happens to banking regulation. How to avoid these failures?

As Tcherneva (2012) and others point out, ELR is not about Big Government but about social and local empowerment. ELR allows local needs and local unemployed to meet. It would be inefficient to control these projects only from the centre. It would also keep local communities in a state of passivity. Therefore, besides the SEB regulation, the ELR functioning should also include the active control of local community that have the unique position to ensure the input to the scheme (workers) and to receive the output (i.e. the social services). So we think in any district where an ELR project is going on, a small local control commission should be set up, made by local citizens adequately trained by the SEB, SEB-nominated experts and representative of ELR workers (approximately, a third each, say nine overall). This commission should be in charge of verifying the effectiveness of the local ELR project and could be in a sense a local branch of the SEB. The active participation from below and the expertise and coordination from the SEB could ensure that the ELR is effective and efficient. In Kaboub (2011) the *local programme administrator* of the ELRA is responsible for recruiting and training. These are important tasks; however, we think that the same importance should be given to accountability and efficacy aspects. So the SEB local commission should enforce a quality assurance mechanism based on the specific features of each situation where work can be organized and managed in unconventional ways without being "unproductive" (Lal et al. 2010).

Conclusions: ELR and the Future of Capitalism

During the years of wild globalization optimism, the ELR scheme would have been considered useless at best. The crisis changed everything. As *Newsweek* puts it, "we are all socialist now".[13] In fact, with the crisis, the

role of the State as producer and public ownership have been accepted as the only way out from the mayhem by government of any political affiliation. This recalls the New Deal situation.

The New Deal, described by Minsky as "paternalistic capitalism" (Wray 2008) created a new environment to economic and social development. Roosevelt understood that only society as a whole could withstand such a terrible situation. He encouraged cooperation among firms and trade unions, assured rising wages as a means to increase demand, together with the creation of a social security network. He supervised the creation of the infrastructures that gave the USA decades of economic supremacy. With the loans to students, he pushed up their future earning capacity and human capital; he encouraged a more strongly rooted sense of shared responsibility for bringing up children and caring for the elderly and the disabled; he forced financial capital to strongly retrench, ensuring the end of bank runs and decades of financial stability to the world. Taken together, these policies contributed to reducing uncertainty, and helped to reinforce trust and promote economic stability (Krugman 2007). Theoretical and practical reasons for the demise of New Deal policies proved to be baseless, especially against the issue of long-term stability. Long in advance, Minsky connected financial instability and active policies for the labour market, while mainstream economics forgot both until the crisis (Wray and Tymoigne 2008).

If before 2008 these suggestions were forgotten, even now they are not properly understood in the discussion about counter-cyclical policies. The State intervention is not only the last resort to stop financial panic and to avert the drama of a great depression, it is also the basic pillar to ensure stability in normal times, because today financial leverage is so high that financial fragility is structural. The paradox is that precisely because during banking panic, the role of the State was decisive in terms of financial resources, public finances will be fragile for decades and austerity measures risk to be as lasting, especially in the Eurozone. State intervention was directed mainly towards financial sector to prevent banks' meltdown. As an emergency measure, this was inevitable, but world economy could have avoided this disastrous path. As a counter-proposal to the NEC, Minsky in his later works put forward an alternative in the form of a regulated economy where the government's task is to set up structural macroeconomic programs that directly control fundamental elements of the economic activity. In particular this with regard to the: (1) employment of the available labour force; (2) level and composition of investment; (3) financial stability. Only through bold and innovative forms of public intervention can

we leave behind us the crisis and open an epoch of social and economic growth.

Minsky's ideas are a viable alternative to the NEC but also to ordinary Keynesian policies that are not Keynesian in their spirit as they cannot really face capitalist instability (Dymski and Pollin 1994). Uncertainty and the intrinsically conventional nature of capitalist economy are by far more complex than the standard, nominal rigidity models that pass as Keynesian can grasp, let alone the EMH-REH paradigm-based laissez-faire policies.

Notwithstanding his strong interventionist stance, Minsky opposed Big Government based on monetary and fiscal stimuli but also the Reaganomics that, as history revealed, was just the most unequal form of Big Government with its agenda of wars, financial deregulation and employment casualization. Minsky argued in favour of a structural, systematic and decentralized intervention by the State, which should embrace an approach retaining a certain degree of socialization of investment in order to lead the economy towards full employment. Using the ELR approach, the State can create a context favourable to labour but also to individual initiative (also that undertaken by disadvantaged members of society). Hands-off public policies aimed at concentrating wealth are inefficient because they create a more unstable economy. State intervention is especially important in labour market to prevent misery and to push advanced economies towards technical innovation not low-wage shortcuts (Minsky and Whalen 1996–1997). The idea Minsky put forward, shortly before his death, is that competitiveness should be guided along "high performance" paths where the economy can express its better qualities through shared prosperity. ELR programs can give an impulse in this direction. By creating the conditions for stable full employment, they contribute to facilitating a lifelong learning approach; therefore, they lay the premises for individuals to be integrated or re-integrated in a working environment.[14] Reinforcing social cohesion, ELR raises social capital, improving the quality of life and economic potential. Thus, expenditure on such programs is the highest form of social efficiency attainable, fostering increased productivity and wealth (Minsky and Whalen, cit.).

It is important, after decades of deregulation ideas, to go back to what Minsky pointed out on freedom. State intervention in the economy increases productivity and economic efficiency, and achieves a fairer distribution of incomes and wealth. This ensures genuine individual freedom, that is, citizens free from economic want and free to truly pursue their destiny (Bellofiore 2009). The path suggested by Minsky is also the only

one compatible with the solvency of public finance as the crisis has destroyed a quarter of century of people sacrifices at the altar of free market policies. A stricter regulation of financial markets is a step in the direction of a freer society. For pre-crisis orthodoxy this could be unsound just like in the 1930s, public deposit insurance seemed curious. Nowadays, not many object to the scheme.

ELR program, ensuring full employment, is not only compatible with public finance health but a way to promote it as well as price stability. It entails the Minskyan framework of a "shared prosperity" that starts precisely tackling the situation of hardship that afflicts individuals and families who have fallen into poverty as a result of involuntary unemployment, underemployment and job insecurity. His proposals, in line with the thought of Keynes, pre-figure a society that sets itself the goal of reducing inequality and of moving in the direction of a person-centred approach, with awareness of people's concrete needs within the context of families and the community.

We explained why the State should have a joint target of full employment and financial restraints to ensure economic and financial stability and the crisis has proved that Minsky was prescient in predicting that if financial stability and full employment are neglected, the outcome is disastrous. In this context, full employment via ELR programs is a cornerstone of long-term economic stability. We also discussed the need for an effective institutional design for the program not only for immediate financial reasons (a sensible use of public money) but for political reasons as well (the need to counter the mantra of public equals inefficiency). This is because the trillions used to save the banks are not looked at as a demonstration that laissez-faire policies are not a good bargain for the government in the long run, but as an unpleasant arithmetic: public coffers are empty. However, without full employment they will stay so forever.

We gave some suggestions on how to implement ELR effectively but we are aware that future researches are needed on many aspects. First of all, further analyses are needed in terms of how to fit ELR jobs in the general situation of the labour market to avoid ELR projects being considered inferior jobs only useful when no "real" jobs are around. Market forces are unable to produce an efficient outcome either with low or high unemployment rates. In other words, ELR goes beyond the Keynes' conclusion that the existing system has broken down "in determining the volume, not the direction, of actual employment". On the contrary, there is also an issue of composition. So the ELR should be considered not only a different way to ensure a basic income to unemployed people but part of the increasing

role of public investment in the economy, to revert to the social philosophy of Keynes.

A second key point is accountability. We used the analogy with banking supervision to propose a ready-made set of tools that could help to promote a more efficient use of public resources. However, we are well aware of the limitations of financial regulation, especially in countering the general trends of financial markets (Wray 2011). That is why, besides State supervision, we stressed the importance of grassroots activism to make the ELR work. Accountability and transparency will be achieved not by the length of the regulation but by the participation from below.

A third and final point is ELR cost vis-à-vis economic growth. Empirical simulation yields positive results, but more detailed analyses are needed to assess how ELR could help in different countries and economic situations.

These studies will increase our knowledge of the functioning of the economy and they will help a more precise formulation of economic policy decisions. However, the fundamental issue is the overall idea that contrary to the famous Thatcher's aphorism, society does exist and cannot go forward until prosperity is not shared. The empowerment of the poorer strata of population is efficient and the only way forward in the long run. This is a vision solidly inscribed within the liberal tradition, but it is one that strives at the same time, in full respect of individual liberties, to reduce economic and social inequality and to grant to all citizens the best opportunities for development. ELR pushes unemployed people to go back to active life starting with the management of the immediate needs of their local communities. With the right State supervision, grassroots energies that the scheme releases will bring prosperity and social stability. It can reinforce the turnaround of banking regulation aimed at ensuring financial stability. Both kinds of stability are needed for the economy to work.

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Appendix: How Much Would the ELR Cost to Italy and to the EU

In the section Cost and Benefits for the State, we mentioned the empirical literature on ELR. In this appendix, we will conduct a similar appraisal for contemporary Italy. In doing this, we can borrow from a very recent case study on Greece (OESD 2014). This thorough reading on how to tackle the terrible situation of unemployment in Greece after years of austerity, points out that a full-scale ELR program would cost between 1.5 and 5.4 % of GDP; moreover, 40 % of this cost would be recouped by the State in taxes, and so forth. It also estimates that at a current minimum wage, for every ten ELR new jobs, around four indirect jobs are created and that the GDP increase is 2.3 times the cost of the program. Simulation results are based on the Eurostat I-O tables of the country. Comparing the I-O tables of the specific sectors used by the study as ELR jobs creators, we can see that for all the differences between Greek and Italian economies, there is a strong similarity. In fact, these five sectors[15] have a very similar weight on the economy and their input composition is also similar (see Table A.1).[16]

Therefore, we can confidently use the multipliers of the original research to simulate the cost of an ELR program for Italy. In particular, we base our analysis on the following assumptions:

Using these coefficients we can simulate the impact of the scheme. We present the data (for 2013) in the following table[17]:

The gross cost of an ELR program is therefore less than 2 % of the GDP, close to the estimates made by Papadimitriou (2008) for USA and UK. To put this number in context, we should consider that in 2012, the total cost of employment policies for the Italian government was more than €29 billion, of which €23 billion was for unemployment benefits. This means that the ELR labour cost would not increase the *gross* bill for the State. As for the net cost, considering only the direct GDP growth, the situation would be by far better, as now these benefits are paid without any increase in the GDP, while the economic growth stemming from the ELR could be in the range of €64 billion per year, that means, inter alia, more than €25 billion of new revenues for the State.

Table A.1 Input composition of the *synthetic sector*

	Greece	*Italy*
Intermediate consumption	46.30 %	50.13 %
Compensation	35.09 %	33.00 %
Gross operating surplus	18.53 %	15.31 %
Weight on the GDP	12.46 %	12.59 %

Table A.2 ELR program multipliers[a]

GDP multiplier	*2.3*
Overhead costs add-on	40 %
Indirect to direct jobs ratio	40 %
State recouping	40 %

[a]The overhead costs add-on was estimated by Minsky at 25 %. State recouping is circa the fiscal pressure

What About the EU?

To assess to what extent the calculation we made for Italy could be used for the EU as a whole, we take the first four economies of the area besides Italy (i.e. Germany, France, UK and Spain) and we extend the Table A.1 to them (the last column is the weighted sum of the four countries' data):

As we can see, also for these countries the results are not much different and the weight of the five ELR sectors is even higher than in Greece. Given that the six countries we discussed so far make more than 70 % of the EU GDP, we will apply the "Greece multipliers" to the EU economy as a whole (see Table A.2). Using these coefficients we can simulate the impact of the scheme. We present the last disposable EU data in the following table[18]:

The gross cost of an ELR program for the EU would be around 1.5 % of the GDP. To put this number in the European context, we should consider that in the period 2008–2011, the average annual cost of employment policies by EU countries has been more than €61 billion. Around €200 billion per year to fund the program could seem a huge number. However, we should recall that between October 2008 and October 2012, EU countries mobilized €4500 billion to save their banks. This means almost 22 years of ELR funding in just four years. At the end of the day, employment of last resort would be cheaper than lending of last resort and we think at least as important.

Table A.3 Results

Variable	*Value*	*Comment*
Hourly wage (a)	€8	In Italy there is no legal minimum wage. We reached this figure using France's SMIC for 2013 less 15 %[a]
Hours worked per year (b)	1500	The hours worked in 2013 have been 1578 in the industrial sector and 1570 in the service sector
ELR workers (c)	1,700,000	Total labour force is 25.533 million; unemployed people 3.113 million; leaving aside 3 % of the total labour force, as suggested by Minsky, yields approximately 2.4 million workers of which around 70 % covered by ELR as direct jobs
*ELR annual wage (W = a*b)*		€12,000
*ELR overall cost (T = W*1.4)*		€16,800
*ELR gross cost (G = T*c)*		€27.6 billion
Increase in GDP (Y = G*2.3)		€63.5 billion
*State recouping from ELR (S = Y**0.4)		€25.3 billion
ELR net cost (G − S)		€2.2 billion

[a]http://www.insee.fr/fr/themes/tableau.asp?ref_id=NATnon04145

Table A.4 Input composition of the *synthetic sector*

	Germany	*France*	*UK*	*Spain*	*EU4*
Intermediate consumption	42.83 %	43.35 %	49.12 %	45.5 %	45.0 %
Compensation	44.27 %	43.60 % %	36.40 %	32.4 %	39.8 %
Gross operating surplus	13.49 %	12.49 %	14.01 %	21.7 %	15.0 %
Weight on the GDP	11.51 %	15.57 %	16.79 %	20.1 %	15.04 %

Table A.5 Results

Variable	*Value*	*Comment*
Hourly wage (a)	€8	We use the same figure of Table A.3
Hours worked per year (b)	1750	
ELR workers (c)	10,600,000	See Table A.3 for the calculation
*ELR annual wage (W = a*b)*	€14,000	
*ELR overall cost (T = W*1.4)*	€19,600	
*ELR gross cost (G = W*c)*	€208 billion	
*Increase in GDP (ϒ = G*2.3)*	€478 billion	
*State recouping from ELR (S = ϒ*0.4)*	€191 billion	
ELR net cost (G − S)	€16.6 billion	

Notes

1. See for instance, the IMF recent papers listed in the bibliography.
2. See Tymoigne (2006), Assenza et al. (2010), Bellofiore et al. (2010), Ferri (2010).
3. For further in-depth analyses see Tymoigne (2008) and Tymoigne (2010).
4. On the difficulty of implementing self-sustaining growth models, see Minsky (1965a, [1982]). An approach to the fight against poverty as distinct from economic growth is shared by a vast literature (Bell and Wray 2004; Wray 2007b; Tcherneva 2007, Kaboub 2007b; Dodd 2007, section 4).
5. http://epthinktank.eu/2014/08/13/in-work-poverty-in-the-eu/.
6. For a general analysis see Wray (1998) and his critical assessment by Aspromourgos (2000).
7. http://www.jobsletter.org.nz/jbl05210.htm.
8. We do not touch the aspect of the kind of works the ELR can bring about as it is an issue addressed in depth by the literature. For instance, a UNPD (2010) study proposes more than 50 different sectors of intervention.
9. The supporters of the basic income guarantees believe such measures to be effective against the drift towards job insecurity (Aronowitz and DiFazio 1994; Van Parijs 1995; Widerquist 2004). The debate on these themes is extensively illustrated by Tcherneva (2007).
10. For a more detailed examination of these issues, see Mastromatteo (2009) and Wray (2007a, b).

11. The importance given by Minsky to this issue does not imply the acceptance of Ricardian equivalence, crowding-out effects or budget constraints. See Arestis and Sawyer (2003, 2004) for more detailed investigation on the issue.
12. See, for instance, the documents of UNECE (http://www.unece.org/) and European Commission (2012).
13. http://www.newsweek.com/we-are-all-socialists-now-82577.
14. Pasinetti (2007) speaks of *hyper-integrated human activity*.
15. Environmental services; Constructions; Security and investigation services; Services to buildings and landscape; Office administrative and support; Education services and Social work.
16. The synthetic sector is built using the single sectors data weighted for their share of the total output.
17. Source: Bank of Italy *Annual Report for 2013*, *Statistical Appendix* (http://www.bancaditalia.it/pubblicazioni/relann/rel13/rel13it/app_13_totale.pdf).
18. Source: Eurostat (http://ec.europa.eu/eurostat/web/labour-market).

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CHAPTER 7

Paltamo Full Employment Experiment in Finland: A Neo-chartalist Job Guarantee Pilot Program?

Antti Alaja and Jouko Kajanoja

Finland faced a severe financial and economic crisis in the early 1990s, which led to unprecedented growth of unemployment in modern Finnish history. During the period 1989–1991, the rate of unemployment was around 3 percent, but unemployment reached even 18 percent in 1994. The early 1990s' crisis in Finland was a debt-deflation crisis caused by uncontrolled financial liberalization, and growth of foreign debt in the late 1980s. Fiscal policy of the late 1980s, on the other hand, did not react aggressively enough to the financial boom. In the early 1990s, the financial crisis was prolonged by the collapse of the export market in the Soviet Union, hard currency policy[1] and harsh fiscal austerity policies (See Jonung et al. 2008).

After the depression, Finland experienced an era of strong export-led growth boosted by the ICT, metal and forestry sectors in the late 1990s and early 2000s. Finland joined the European Union in 1995, and decided to join the European Monetary Union in 1998. Interventionist developmental state growth policies (see Jäntti and Vartiainen 2009) were replaced with a

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new emphasis on liberalizing direct foreign investment and on building national innovation system and clusters.[2] Supporting the growth of private and public R&D expenditure became an economic policy priority (Pohjola 1996). Few were able to predict during early 1990s' depression that Finland would become a well-known high-tech exporter in only a few years.

On the other hand, the Finnish economy experienced an era of growing inequality in the late 1990s. It must also be emphasized that despite the export-led boom, the rate of unemployment was stuck at around 10 percent still in 1999, and long-term unemployment had become a permanent social problem. As both Koskela and Uusitalo (2004) and Lindvall (2006) have noted, the Finnish and Swedish unemployment levels reached "the European level" in the 1990s. The era of mass unemployment emerged, and the Finnish economy never returned to low unemployment rates of the 1980s.

Paltamo is one those small municipalities in Northeastern Finland that has suffered from intolerable unemployment rates.[3] Initially, a debate emerged in the regional council of Kainuu on the high costs of long-term unemployment in the late 1990s. This debate led to the Paltamo full employment experiment, which took place in 2009–2013. Paltamo operated a public employment program that aimed at providing a suitable job for all unemployed jobseekers, improving the health, well-being and employability, and replacing various social and unemployment benefits with a single wage income. In the Finnish debate, the experiment has been portrayed as a full employment and active labor market policy (ALMP) model, but also as a new structural solution to social policy. Subjective right to work was realized in practice. Everyone who applied for a job was employed, if the applicant was able to work at least 4 hours and 45 minutes a day.

The experiment brought unprecedented publicity to the small municipality of Paltamo in Finland, and it also started a debate about full employment and "activating" or "holistic" alternatives to current employment and social policies. Finnish policy makers, journalists and civil servants were eager to know, if the much talked "human experiment" in Paltamo would be a success or failure. The experiment was small in size (its gross cost was €17.1 million in 2009–2013), but it has been thoroughly researched by various ministries, research institutes and universities in Finland. This chapter refers extensively on the final report of the Paltamo Project Evaluation Study Group to which large number of researchers contributed (Kokko et al. 2013). The chapter also continuously cites Anne Huotari's final report (Huotari 2014). Huotari was one of the main initiators of the experiment as

a local MP, and she also played a major part in planning and implementing the experiment at the ground level.

The chapter is organized as follows. The section History and Main Characteristics of the Experiment provides a short history of the experiment. The section House of Active Employment Became a Large Workshop discusses how a workshop of over 300 people was practically organized in Paltamo. The section Did It Work? Effects on Health, Well-Being and Employability and Subjective Experiences in Different Age Groups discusses the research conducted by the National Institute of Health and Welfare. The section Nature of the Experiment: Active Labor Market Policy, New Structural and Holistic Solution in Social Policy, or Neo-chartalist Job Guarantee Pilot? discusses whether the experiment should be seen as a new form of social policy, active labor market policy, or rather as a neo-chartalist Job Guarantee (JG) program. The section Job Guarantee Programs, and the Dangers of Workfarism in an Advanced Welfare State debates public employment policies in the context of workfarism. The section Thought-Provoking, but Expensive: Paltamo in the Public Debate discusses public reactions to the experiment. The section Practical Lessons asks, which kind of problems should be taken seriously when developing local public employment schemes? Lastly, we discuss political possibilities for implementing a nation-wide JG scheme in Finland.

History and Main Characteristics of the Experiment

Since the late 1990s, the policy makers in the Kainuu region became more and more aware of the cost of long-term unemployment.[4] It was estimated in 2003 that the annual price tag of unemployment to the taxpayer had reached €100 million in the region, and the employability and well-being of the long-term unemployed were eroding. In this context, MP Anne Huotari and local entrepreneur Arto Okkonen proposed that a new active employment policy and social policy experiment should be tested in Paltamo. A concrete regional project to plan and organize the project was started in 2006, and it included participants from the Paltamo municipality, trade unions, local entrepreneurs organization, local employment office, and from the regional government. (Huotari 2014; Laurikainen and Huotari 2010.)

A concrete application to get funding from the state was submitted in summer 2007, and after the plans were concretized, the Finnish parliament granted the funding in May 2008. The initiative was fortunate to find support from Mr. Raimo Sailas, who was an influential State Secretary at the Finnish Ministry of Finance at the time. Sailas, often presenting the harsh "Treasury view" in Finnish public debate, especially in the late 1990s, became the "godfather" of the experiment. According to the original plans, the experiment was supposed to run from 2009 to 2012, but it turned out that there were enough funds available to run an extra year in 2013. (Huotari 2014.)

Preparations began after the financing was secured. General goals for the experiment were defined by the stakeholders. The idea was to find new approaches to employment and social policy that could be also be adopted at a national level. *Koulutusavain Ltd* and Anne Huotari won the bid to start preparing the implementation of the experiment. Huotari visited federal state Sachsen-Anhalt in Germany to search for inspiration in terms of practical implementation. Sachsen-Anhalt had operated in the municipality of Bad Schmiedeberg the *Bürgerarbeit07* experiment, which aimed at activating the long-term unemployed. (Huotari 2014, 11.) Both Sachsen-Anhalt and Kainuu region are peripheral areas in their respective countries, where the rate on unemployment is at a higher level than the national average.

The practical implementation of the experiment was given to the *Paltamo Employment Association*. The executive committee of the association was formed by the Paltamo municipality, the social partners and the entrepreneurs' representative, but the municipality was responsible for the implementation. Starting 1.1.2009, the municipality first directed the jobseekers to *Jobseeking Club*, which first aimed at surveying individual's strengths, skills and education, and then tried to find the person a suitable job from the private sector or so-called open labor market.[5] In the second stage, if there were no opportunities in the open labor market, the municipality would hire the jobseeker directly for the *House of the Active Employment* (HAE). Some jobseekers would, however, skip the Jobseekers Club and join the HAE directly through local employment office. (Hämäläinen and Hämäläinen 2012; Nenonen and Kajanoja 2012.)

At the HAE, daily minimum working time was 4 hours and 45 minutes, and maximum 8 hours. Rehabilitating activities were organized for those individuals who could not work. Gross minimum wage of the program was

€918, and average minimum wage was €1079 a month in 2011. Some participants could even receive maximum gross wage €2260 a month based on their earnings-related unemployment allowance. Different work histories, and thus differing unemployment benefit levels, explain much of the wage range.[6] It was ensured with the trade unions that wages were in accordance with sectorial tariff agreements. Wage incomes received from the HAE always exceeded unemployment allowance and other income from social benefits. (Nenonen and Kajanoja 2012; Hämäläinen and Hämäläinen 2012.)

The experiment was a success in terms of securing a subjective right to work and in decreasing the rate of unemployment. Before the experiment began (31.12.2008), the rate of unemployment was over 19 percent, but in 2010 and 2011 the unemployment rate reached even below 4 percent. However, after the experiment ended, the rate of unemployment reached 20.1 percent in April 2014 (Kalliokoski 2014). Individuals who did not enroll in the program usually had well-justified reasons for not taking part. High-school graduates were, for example, waiting for their studies to start. Individuals who enrolled had different kinds of education and career profiles. There were youth with little work experience and with no secondary education. Participants also included 50 year olds long-term unemployed with alcohol problems, and competent middle-aged people with long working careers. (Nenonen and Kajanoja 2012, 4.)

One central goal of the experiment was also to provide welfare, health and career advice services "under one roof" (Nenonen and Kajanoja 2012). Finland is a modern Nordic welfare state, and in the Finnish model municipalities have been in charge of providing, or at least financing and organizing, primary and secondary education, as well as universal social and health services. It has been noted, however, that the socially excluded individuals such as alcoholics and disoriented young people are not always aware of their social rights and the welfare and health services they are entitled to. The idea was that if the municipality would be able to bring socially excluded parts of the society to the HAE and to meet the social workers, authorities could then find ways to help them. HAE, in other words, brings social problems "into to the light". At the HAE participants were provided occupational healthcare, and working at the HAE accumulated earnings-related pension benefits.[7]

House of Active Employment Became a Large Workshop

How was the experiment organized? What kind of tasks and jobs did the participants perform at the HAE? What other activities took place during the 5 years? HAE itself was operated in a renovated old school building. It practically became a large workshop, which employed over 300 individuals. Workshops became the main activity at the HAE. The Paltamo Employment Association first hired supporting staff, who were instructed to run various workshops for the jobseekers. Other activities included education, training, rehabilitation, jobseeking, outsourcing work for local businesses and organizations, and mentoring. (Huotari 2014.) The idea was to find the right job for the individual, but also to promote social interaction and community building, and to develop activities that stem from local needs and priorities.

During 2009–2011, workshops were established for carpentry, construction, repairing, textiles, fishing equipment, and bike repairs. HAE also operated a bakery and a local shop. The participants also planned and operated local activities for the municipality, ran an Internet site, and offered office and cleaning services locally. In 2011, HAE started new activities such as second-hand shop, cafeteria at the market place and more traditional public work labor programs outdoors. Jobseekers also performed subcontracting jobs for businesses nearby. Participants built fish traps, and parts for snow shovels, and ski poles. Some participants built outbuildings for the businesses. (Huotari 2014.)

The experiment also aimed at opening new job opportunities in the private sector. Supporting staff at the HAE also included a person, who would visit local firms, and look for employment opportunities for the HAE program participants. It was possible for the jobseekers to work a month at a local business with HAE wage. The participants saw these "paid internships" in different ways. Some thought that private sector employers were only interested in free workforce, while others saw a genuine possibility to show their capabilities and skills (Nenonen and Kajanoja 2012, 44). Local businesses employed more participants from the HAE during summer time. Youngsters were able to get summer jobs, and construction sites were, of course, more active in the summer. The municipality also hired HAE jobseekers to kindergartens, schools and social services. (Huotari 2014.)

HAE offered a possibility to acquire certificates on different skills (such as "computing card"). There were also courses offered on how to help the

elderly, improve social interaction skills and on how to encourage entrepreneurship. The experiment also aimed at building a community through supporting different kinds of hobby groups. It was hoped that the participants could build social networks through these activities. A karaoke group visited the elderly and the kindergartens. There was an English-speaking club to improve English-speaking skills. The young participants started and operated several art and culture projects. (Huotari 2014; Kokko et al 2013.)

There was dissatisfaction with the director of the HAE in 2010 and 2011, which led to his dismissal in November 2011. Supporting staff and HAE participants felt that their concerns were not being heard, and new director Anne Huotari embraced the idea of participatory leadership. Efforts to provide personal counseling at the HAE were intensified. New forms of HAE activities were also being considered. The online magazine *Paltari* was started by three participants. There were also new efforts to promote entrepreneurship and commercialization. Participants, for example, innovated and built a new kind of "barrel sauna", and they managed to sell 10 of these in 2 years. Other participants started an education to become practical nurses, who are needed in a rapidly aging Finland. (Huotari 2014, 17–18.)

Did It Work? Effects on Health, Well-Being and Employability and Subjective Experiences in Different Age Groups

Research on the effects on well-being, health and employability was executed by various research groups, but it was coordinated by the National Institute of Health and Welfare. In this section we provide a short overview on the effects based on the final report by The Paltamo Employment Project Evaluation Study group. (Kokko et al. 2013.) The evolution of health and well-being of the HAE participants was, most of all, compared with the employed population of Paltamo and unemployed persons from the comparable municipality of Sonkajärvi. Altogether, researchers were interested in the evolution of employability, labor market status, family relations, housing conditions, subjective well-being, psychological well-being, and personal lifestyles.

Evaluation study's chapter on health and well-being emphasizes that there is some empirical proof that health and well-being of the HAE participants progressed more favorably in comparison to employed

population in Paltamo. High-risk use of alcohol decreased, eating lunch and using occupational healthcare became more common, trust toward public institutions strengthened and share of those feeling lonely decreased. On the other hand, there was no sudden change in personal lifestyles or in the health of the participants.

It seems that different age groups had different perceptions and subjective experiences. The Paltamo evaluation study evaluates that for many young persons (16–24 year olds) joining the HAE was a welcome "'pitstop" before joining the open labor market or before attending a university or a vocational school. Youngsters often enjoyed "'tinkering" at the HAE, but working at the HAE is hardly a permanent solution for most young people. A debate emerged that the HAE might be a safe solution for many youngsters, but it is not ideal to stay for too long. The experiences were more mixed within the age group 25–50. Many individuals thought that work tasks at the HAE were not challenging enough, and they felt they had performed more challenging tasks before. There was also dissatisfaction with the wage level. In the age group of over 50 years, large number of individuals experienced the HAE as a chance to return to the open labor market. Social interaction was seen as an important aspect of the program among the older participants.

Nature of the Experiment: Active Labor Market Policy, New Structural and Holistic Solution in Social Policy, or Neo-chartalist Job Guarantee Pilot?

The Paltamo experiment has been characterized as the first full employment experiment in Finland, but the idea of creating employment opportunities for the long-term unemployed at the local level was not entirely new in the Finnish context. Before the birth of the modern welfare state in the 1960s, Finland had operated public works programs in the 1950s (Kalela 1989). A more recent precedent for the experiment was the Finnish "full employment act" of 1988, dubbed as *Lex Leppänen*, which had obliged municipalities to provide employment opportunities for the long-term unemployed. During the 1990s' depression and mass unemployment, however, the obligations for the municipalities to employ were dismantled.

The experiment should also be analyzed in the context of active labor market policy (ALMP). Two Swedish trade union economists, Gösta Rehn

and Rudolf Meidner, had outlined the main features of ALMP during the Swedish full employment era in the 1950s, and the OECD adopted their approach in 1964. The influence of neighboring Sweden and the OECD, as well as the emergence of tripartite social corporatism in the 1960s and 1970s, contributed to the adoption of modern ALMP policies in Finland. The emphasis of the Finnish ALMP policy has naturally evolved over time. Reforming the work incentives became a central concern for policy makers in the mid-1990s. (Heinonen et al. 2004; Kananen 2011.)

It is clear that various stakeholders perceived the Paltamo experiment as a form of ALMP. According to Paltamo Project Evaluation Study Group (Kokko et al. 2013) the "Paltamo full employment experiment is conceptually part of active labor market and social policy, and its central purpose is to improve the services provided to unemployed persons who are in danger of social exclusion. The idea is that in order to receive social benefits, which are paid due to unemployment, the unemployed person should be active in job searching and in sustaining employability. The basic idea of active labor market and social policy is to support social and occupational skills, and to support voluntary integration back to working life".

Finnish ALMP often emphasizes the need to build intermediate labor market, which refers to subsidized labor markets, in contrast to nonsubsidized open labor markets (Von Herzen-Oosi et al. 2010; Oksman 2011). In this context, the Paltamo experiment can be seen as part of the wider effort of ALMP proponents to create subsidized employment opportunities. During the experiment there were also other national initiatives in this field in Finland. The Ministry of Employment and Economy, and the Ministry of Social Affairs and Health operated a nation-wide program in 2007–2013 to develop subsidized intermediate labor markets to help the long-term unemployed back to open labor market (Kokko et al. 2013). The Finnish government also introduced a youth guarantee program in 2011, which aimed at providing a place to study, internship or a job for every unemployed young person.

The Paltamo experiment has also been portrayed as a new alternative in Finnish social policy. According to Kokko et al. (2013), "the project has introduced a new structural solution to the social security of the unemployed and a new wage model where funds are initially re-allocated to employment services". The Paltamo model was seen as an active, holistic form of employment and social policy, in contrast to systems of passive unemployment benefits (Huotari 2014). Of course, there are already

"active" elements in the Finnish social security, and many unemployed are already obliged to take part in different "activation" measures (Kananen 2011).

But what similarities does the Paltamo experiment have with JG and ELR programs that have been suggested by scholars who theoretically stem from Post-Keynesian, neo-chartalist and right-to-work traditions? It is, first of all, clear that, both, Anne Huotari (2009), initiator of the Paltamo experiment, and neo-chartalist and right-to-work JG proponents (Wray 2007; Minsky 2013; Harvey 2005; Tcherneva 2012) see that employment is crucial for the well-being and health of individuals. Both also see that jobs should be tailored to the characteristics of jobseekers and that unemployed persons should be taken "as they are". As it has been emphasized, program participants in Paltamo were paid decent wages in accordance with tariff agreements, and they became entitled to occupational healthcare and earnings-related pension insurance. Neo-chartalist scholars have suggested that job guarantee participant should get paid decent minimum wages, and that they should be entitled to occupational benefits.

In this sense it seems justified, as the title of this chapter suggests, characterizing the Paltamo experiment as a neo-chartalist job guarantee pilot program. There is, however, a clear tension between Finnish ALMP and social policy thinking and neo-chartalist theory concerning the role of aggregate demand management, and the need for permanent JG programs in a capitalist economy. Neo-chartalist authors emphasize that market processes do not automatically bring the economy to true full employment (Wray 2012). There is a permanent need for JG programs that automatically stabilize private demand fluctuations, and operate as "buffer stock" of labor (Mitchell 2000). In contrast, it is common for ALMP scholars to portray standard Keynesian counter-cyclical fiscal policies as outdated and promote employability as the key question in employment policy (Morel et al. 2012). The main idea of Finnish ALMP is not to achieve full employment and stabilize the aggregate demand fluctuations through public employment programs, but to promote employability of the unemployed individuals so that they could move to open labor market in the near future.

It was one of the original aims of the experiment to help individuals back to open labor market (Huotari 2014). But this aim turned out to be especially difficult to achieve after the global financial crash of 2007–2009 and during the Eurozone crisis, which hit Finland especially hard. The Finnish economy experienced a double dip recession and structural crisis

during the Paltamo experiment, which also weakened the labor market in Paltamo and in the whole Kainuu region. Major local companies were also laying-off employees. This offered a chance for the critics to claim that the whole Paltamo experiment had been a failure (Ikonen 2013). Initiators of the experiment had not adequately addressed the question that a capitalist monetary economy can be permanently stuck in a high unemployment and underemployment equilibrium without activist Keynesian policy.

Job Guarantee Programs, and the Dangers of Workfarism in an Advanced Welfare State

The Paltamo experiment was motivated by the progressive idea that everyone should be entitled for a job (right-to-work philosophy), but critics have pointed out that in practice the experiment included significant workfarist elements. Enrolling in the HAE was originally intended to be voluntary, but there were cases where the unemployed person would lose unemployment benefits for a limited time period if they would not take part in HAE. Most participants, however, enrolled voluntarily. (Kokko et al. 2013.)

As it has been pointed out, workfarist ideas have had a major influence on Finnish tax, employment and social policy reforms and debates since the 1990s (Kananen 2011). In recent years, policy proposals based on the non-accelerating inflation rate of unemployment (NAIRU) theory such as labor market deregulation, expansion of low-wage sectors and cutting earnings-related unemployment allowance have been highly influential in the debate (Vartiainen 2013). During the 2011–2015 electoral term, there was also a big debate about "participatory social security" in Finland,[8] and the Finnish government is introducing new workfarist sanctions for unemployment benefit claimants. There is a real danger that progressive right-to-work employment programs (ideally paying decent wages and supporting individual's employability and well-being) are turned into programs that simply make the unemployed work for their unemployment and social benefits, and that pressure individuals to accept jobs with worse working conditions.

Harshest critics have claimed that both participatory social security and the Paltamo experiment are the Trojan horse to make people work for their unemployment benefits. On the other hand, it can be said that the workfarist elements of the Paltamo experiment were exaggerated by its critics. The highest-ranking civil servant in Paltamo, Arto Laurikainen, has

noted that before the experiment started, there was local criticism that HAE would even use "forced labor". But when the experiment was about to end in late 2013, questions were raised what would happen to the unemployed persons afterwards (Huotari and Laurikainen 2013).

The longer historical development of the Finnish welfare state also explains much of the pessimistic debate around public employment programs. Before the Nordic extensive welfare state and social security systems emerged in Finland during the 1960s, the Finnish state used public works programs, such as road building, as antipoverty policy. In the histories of social policy, these programs are usually seen as old-fashioned,[9] and moving toward unemployment insurance systems was seen as part of Finnish society's modernization process (Kalela 1989). Finnish history with public works programs is in fact rather different from the US experience, where President Roosevelt's New Deal era public works programs are often seen as the great progressive achievement that helped to bring people back to work, and build key infrastructure.

In the context of Finnish historical experience and the influence of workfarist ideas in various OECD countries, we wish to emphasize that enrolling in public employment programs such as in Paltamo should always be voluntary, and that progressive JG proposals necessitate basic income or basic social security that is provided, even if the unemployed person is unwilling or unable to take part in the employment program. In practice, the welfare state should always provide a decent social security, and jobseekers should have the possibility to earn a more generous wage income through public employment programs. Decent social security and JG schemes should be seen as complementary, not contradictory, policies. This approach would also help building an alliance between supporters of Job Guarantee and Basic Income schemes. Basic Income has become a major social policy debate in Finland during the past years. Current government in Finland has decided to launch a small-scale basic income experiment during the electoral term.

Thought-Provoking, but Expensive: Paltamo in the Public Debate

One of the main economic goals of the experiment was to reduce the costs of unemployment to the taxpayer, and the society as a whole. Arto Laurikainen has emphasized that Paltamo municipality expected that the

experiment would be cost-neutral for the municipality, and that public employment would pay itself back especially in the long run. (Kokko et al. 2013; Hämäläinen et al. 2013.) Anne Huotari (2014) stated that the original premise of the experiment was to ask, if it is in fact expensive to guarantee a job for everyone.

The Paltamo evaluation study estimated that the gross cost of the experiment was €13.8 million in 4 years (2009–2012), but the experiment also reduced public sector expenditure with around €8 million (reduced social benefits, increased tax income, etc.). The experiment, in other words, returned 60 percent of the invested expenditure (Kokko et al. 2013; Hämäläinen et al. 2013). It was estimated by the other author of this chapter that the annual net cost for employing a person was around €4000 (Kajanoja 2014). Even though the experiment returned 60 percent of the expenditures invested, it was a disappointment to various policy makers and civil servants that the experiment did not turn out to be cost-neutral in the short term. The expenditure on basic unemployment allowance, general housing assistance and social assistance (the social security of last resort in Finland), for example, did not decrease as much as expected. The expenditure on earnings-related unemployment allowance, however, decreased significantly (Hämäläinen et al. 2013).

A research conducted by the city of Helsinki estimated that the implementing of the Paltamo experiment in Helsinki would be more expensive than in a small town like Paltamo. This is mainly because housing costs are higher in Helsinki. The same research also compared the costs of Helsinki's current ALMP and the Paltamo experiment. Helsinki is currently running rehabilitating activities for the long-term unemployed, and according to Oksman's calculations in 2010, the monthly costs of rehabilitating activities is €2098 per person, whereas implementing the Paltamo experiment would cost €2682 per person. Oksman also emphasizes that the Paltamo wage model based on different work histories would create distorted incentives. Student aid provided by the Finnish state is much lower than the minimum wage at the HAE, which might create incentives to stay at the HAE instead of studying. HAE wage might discourage individuals from taking low-wage jobs in the private service sector. (Oksman 2011)

Pekka Tiainen, a high-ranking civil servant from the Finnish Ministry of Economy and Employment, is the only one who has publicly presented initial calculations concerning implementing a wider JG scheme in Finland.

According to his calculation in 2013, the net cost of employing 200 000 individuals with a €10 hourly pay would have been €2.2 billion (Teittinen 2013). Tiainen (2011) has been one of the few voices who see a nation-wide Paltamo model as a realistic and affordable solution, if the long-term benefits are taken into account.

A common view in the Finnish press emphasized that the experiment was interesting and thought-provoking, but it would be too expensive to introduce it as a nation-wide full employment program. Anna-Sofia Berner's (2014) article in Finland's biggest daily *Helsingin Sanomat* stated that "human experiment in Kainuu enhanced self-esteem of the unemployed, but it cost too much". Journalist Heikki Ikonen (2013) wrote in *Aamulehti* that the experiment did not reduce the need for social assistance as much as it was hoped, and emphasized that the experiment was expensive, because of the cost of administration and counseling staff at the HAE. Several economists in business daily *Taloussanomat* commented that it would be too costly to implement the experiment at a national level (Teittinen 2013).

There were, of course, also voices that defended the experiment in the public debate. The proponents of the Paltamo model have emphasized that calculations only take into consideration the short-term increase of the public expenditure, but not the long-term benefits on employability, health and well-being of the unemployed individuals. It is, for example, possible to point out that social exclusion becomes extremely expensive for the society in the long term (Turun Sanomat 2013). In recent years, there has been a crisis debate concerning social exclusion of Finnish youngsters, who do not finish secondary education, who have never worked for a living. Public spending that prevents this kind of social development can be characterized as social investment.

Practical Lessons

Empirical academic literature on JG schemes often refers to New Deal era public works programs, or to Argentina's Jefes employment program in the early 2000s (Tcherneva and Wray 2005). But there are fewer recent cases of JG being locally implemented in OECD countries with highly developed and complex welfare state structures. In this section we wish to draw a few practical lessons from the Paltamo case, which could be useful in designing JG schemes for countries that are comparable to Finland.

The Paltamo experiment demonstrates that local municipal level is much suited to implement the JG. Activities can be planned with local needs and

priorities in mind, and JG programs are useful tools in community building. Locally provided welfare and health services can also support JG schemes in various ways. This is the case in the Finland, where municipalities have traditionally been in charge of providing universalistic welfare and health services for the whole population.[10] It is preferable that social and health services are easily available under one roof as was the case in Paltamo. JG can also bring local social problems into light, because socially excluded parts of the population are not always aware of their social rights in welfare states.

In Paltamo activities were much too focused on various workshops. It would have been preferable to use more local companies, public administration and NGOs in implementing the employment program. Staff leasing is also a viable alternative. But this was difficult in Paltamo, because it is a remote municipality far from big cities and centers. It should also be possible to let those who are employed in workshops to pursue other employment possibilities simultaneously. Those employed in a workshop in Paltamo were encouraged to have other temporary jobs or have their own microenterprise or freelance activities outside the workshop. JG could be a home base also for those creating jobs for themselves outside the traditional paid work.

The critics claimed that it may be too easy and safe to stay at the HAE and not try to find employment possibilities outside. Whether we agree with this concern or not, it is clear on the basis of the Paltamo experience that competent counseling personnel are needed to take care of the guidance of the employment program participants. Solving the everyday problems and presenting the future education and employment opportunities for the program participants requires high-level professionalism. It was not an easy task to hire high-level counseling personnel in Paltamo.

Many individuals experienced that their choice to enroll into the program was not voluntary. The majority of the program participants at the HAE said that it would have been better to join the HAE voluntarily. The sense of coercion created motivational problems among the employed, according to the survey. It was argued that almost everybody would have entered the experiment voluntarily anyhow.

Conclusion

Debates around the Nordic model or Nordic model of welfare capitalism often emphasize historical and institutional similarities of the Nordic countries. It still holds true that Nordic countries are among the most prosperous and equal societies in the world and despite recent reforms Nordic countries are still characterized by extensive welfare states and organized labor markets.[11] It is, however, often forgotten or neglected in theses analyses that in Nordic countries such as Finland and Sweden, mass unemployment became a pervasive problem after the 1990s' depression. This chapter introduced Paltamo experiment, which was a local attempt to find a new model to deal with high regional unemployment.

The Paltamo experiment had similarities with JG literature's policy recommendations, because the emphasis was on finding the right job for the jobseeker, and employment was seen as the key question in improving health and well-being of unemployed individuals. The experiment should also be seen in the context of the Finnish ALMP policy, which emphasizes that public employment programs should be only temporary solutions for individuals. The Finnish ALMP debate hardly addresses the question of permanent mass unemployment, which has been the case in Finland since the early 1990s. When the employment opportunities outside the HAE were scarce, the situation offered the critics the chance to state that the experiment had been a mistake, and that public employment programs do not bring lasting returns.

The economic rationale for the experiment was built on the premise that it would be cheaper for the taxpayers to adopt a holistic employment-based approach, in contrast to prevailing "passive" systems of unemployment insurance. Proponents of the experiment emphasized that social exclusion and erosion of employability, especially among the young, becomes extremely expensive for the society in the long term. But reactions in the press concentrated on the short-term costs, and it was widely seen that the "human experiment" in Paltamo would be too expensive to be implemented at a national level. This reaction was by no means surprising, because despite the high level of taxation and extensive welfare state in international comparison, Finnish policy makers have only rarely endorsed counter-cyclical fiscal policy. When politically arguing for a public employment program or a JG scheme, it is important to include the long-term economic benefits in the calculations.

It is clear that the implementing of a larger-scale or a nation-wide public employment program would require a significant change in macroeconomic thinking in Finland. A nation-wide JG scheme would lead to higher fiscal deficits at least in the short term, but the orthodox "Treasury view" proclaiming the large "sustainability gap" of public finances is highly influential. The current government in Finland also claims that oversized welfare state crowds out private economic activity, and that the share of public sector should be smaller.[12] During the last and current electoral terms, Finnish governments have been ready to implement bigger public spending cuts than the EU Commission and Eurozone fiscal treaties would require. It should also be discussed whether a small and open Eurozone economy could move ahead with a nation-wide JG or a large public employment program on its own, or if this would require a wider change in the institutional set-up of the Eurozone and policy making in the EU.

Notes

1. In the end, *Bank of Finland* devalued *markka* currency in November 1991.
2. It has been rightly argued by Jukka Pekkarinen and Juhana Vartiainen (1993) that neoclassical synthesis Keynesianism and counter-cyclical fiscal policy were never really endorsed in Finnish economic policy making even during 1950s and 1960s when it was popular in many Western countries. There were, however, significant Keynesian elements supporting growth of investment demand in the Finnish growth model from the 1950s until the 1980s. State-owned enterprises and highly regulated financial system contributed to the high investment rate and rapid industrialization.
3. During the 1990s' depression, rate of unemployment in Paltamo reached 25 percent, and it remained well above 15 percent throughout the 2000s (Hämäläinen and Hämäläinen 2012).
4. Kainuu is a peripheral region in northeastern Finland with around 80,000 inhabitants. There were 3917 inhabitants living in Paltamo by the end of 2009 (Oksman 2011).
5. The concept of open labor market refers to nonsubsidized labor market.
6. Huotari (2014, 11–12) writes that the other possibility was to build a wage model that would be based on compensation from different

job positions and tasks. The experiment's steering group, instead, chose the wage model based on work history and unemployment benefit levels, because it was believed to provide better work incentives.

7. The Finnish welfare state is often classified as "universalistic", because municipalities have been in charge of providing universal welfare and health services for the whole population. Secondly, unemployed individuals, for example, are eligible to receive either basic unemployment allowance or labor market subsidy, and the national pension is a form of statutory basic security for the elderly. Social assistance is a last resort form of income security in Finland. On the other hand, there are various elements in the Finnish welfare model that are based on past and current employment status such as occupational healthcare, earnings-related pension and earnings-related unemployment benefits.
8. Former Minister of Social Affairs and Health Paula Risikko from the center-right National Coalition Party even stated in 2013 that Finland should "get rid of passive social security".
9. In the 1950s, unemployed men were forced to go road and infrastructure building to other cities away from home, which was very unpopular and one of the reasons for the rise of the populist party *Suomen Maanseudun Puolue*.
10. This characteristic of the Finnish welfare state might change in the near future, because the current government is working on a grand social and health services reform.
11. See, for example, Freeman 2013.
12. The current Prime Minister of Finland, Juha Sipilä, and former Finance Minister Alexander Stubb have continuously stated that the public sector is too big, and that tax-to-GDP level is unsustainably high.

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CHAPTER 8

Financial Sovereignty and the Possibility of Full Employment in Saudi Arabia

Fadhel Kaboub

Introduction

The mainstream of the economics profession has been very successful at convincing, even the most progressive, policymakers that one cannot achieve full employment without causing inflation, and by the same token, it has established that any serious attempt to fight inflation will inevitably lead to higher levels of unemployment. In other words, we are doomed to accept this inevitable trade-off between unemployment and inflation, and to rely on an independent central bank authority to fine-tune the economy around the so-called natural rate of unemployment, or NAIRU (Mitchell 1998). Needless to say that fiscal austerity, balanced budgets, and limits on the national debt are now considered the golden rules in the realm of public policy guided by the principles of "sound" finance. Progressive calls for government action to address unemployment, poverty, hunger, homelessness, inequality, education, public infrastructure, environmental degradation, and the lack of adequate healthcare and retirement benefits, among other pressing issues, are always met with the same set of answers: "these demands are too expensive; we cannot afford them; the government doesn't

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have the money; such expenditures lead to large budget deficits and unsustainable national debt, which will causes inflation, weaken economic growth, and will ultimately require a higher tax burden on future generations." (Mitchell and Muysken 2008).Ironically, these answers also prevail when economists are asked to give advice to a country like Saudi Arabia, which enjoys large trade surpluses, close to zero national debt, and at least $600 billion in currency reserves. Yet, nearly two million young Saudi men and women suffer the social and economic costs of unemployment (Sen 1997) because we fear that if they are given decent paying jobs the economy will experience spiraling inflation.

This paper aims to challenge the above-mentioned neoliberal policy framework by building on the theoretical foundations of functional finance theory (also known as Modern Money Theory, or MMT). Under the principles of functional finance, we will demonstrate that a financially sovereign government can afford to simultaneously create full employment and price stability. This chapter will be organized as follows. The section Full Employment Is Cheaper than Unemployment presents estimates for the economic cost of unemployment and the financial cost of a Job Guarantee program in Saudi Arabia. The section Alternative Financing Models outlines a set of financing mechanisms ranging from a full-scale MMT-style financing mechanism to more hybrid versions of private–public partnerships, social venture partnerships, and social impact bonds. The section Strategic Programs for Jobs and Sustainable Prosperity outlines a set of strategic industries that should be prioritized in the process of diversifying the structure of the Saudi economy and ensuring not only full employment and price stability, but also sustainable prosperity. The chapter closes with a summary and concluding remarks.

Full Employment Is Cheaper than Unemployment

The Economic Costs of Unemployment

In estimating the pecuniary costs of unemployment, economists generally focus on the lost output arising from unemployment and underemployment in an economy. One method of estimating lost output is the "average product" method, which estimates the average GDP per worker and multiplies that by the number of unemployed workers.[1] This requires an estimate of how many people are unemployed and underemployed in the Kingdom of Saudi Arabia (KSA, hereafter).

In 2011, labor market reforms were implemented in KSA with the stated purpose of increasing private sector employment and providing a safety net

for the unemployed. The Ministry of Labor introduced the *Nitaqat* program according to which, private firms are expected to increase Saudi employment and achieve an expected Saudization rate depending on the activity of each private entity. The program classifies the companies into four ranges (red/yellow/green/excellent) according to their Saudization rates and provides companies with exceptional records with benefits and incentives, while penalizing companies with poor Saudization rates. In conjunction with the *Nitaqat* program, the Ministry of Labour introduced the *Hafiz* system. The *Hafiz* system was designed to connect unemployed Saudi nationals with potential employers. This program was started in November 2011 to help jobless Saudis, ages 20–35, by paying a monthly financial assistance stipend of 2000 SAR ($533) for a period of one year, conditional upon participation in training. In a working paper for the Jeddah Human Resources Forum 2013, Kawar and Jafar report that more than 5 million Saudis originally registered with *Hafiz* in 2012.[2] Of those, 1.4 million actually received assistance. According to *Hafiz*, the number of people enrolled in the program in 2012 was 1,365,391. We will use this number as the lower bound for the number of unemployed persons in KSA. There are several reasons to believe that the actual number of unemployed is higher than the *Hafiz* enrollment. Only those between the ages of 20 and 35 are eligible for *Hafiz* payments, and they last for only one year, so the total number of unemployed is larger than any single year enrollment in *Hafiz*. Taking into account these factors, we will use the estimate of 2,000,000 unemployed as an upper bound. We still believe this to be a very conservative upper bound estimate given that (1) 5 million people actually registered with *Hafiz*; and (2) according to the Saudi Arabia Monetary Authority (SAMA), only 2.61 million out of 20.27 million Saudi citizens were employed in 2013.

Economic Loss in Real GDP Per Unemployed Worker in KSA (Method 1)

According to the Saudi Arabia Department of Statistics & Information, the GDP of KSA in 2013 was $757.805 billion (2.807 trillion SAR).[3] According to the Saudi Arabia Department of Labor (Information Center), the total number of employed persons in 2013 was 9,679,635.[4] Based upon these numbers, the real GDP per person employed in KSA in 2013 was $78,289 (293,584 SAR).

Table 8.1 provides an estimate of lost GDP in 2013 in the KSA based upon a lower bound estimate of 1,365,391 unemployed and an upper bound estimate of 2,000,000 unemployed (Table 8.1). This estimate

Table 8.1 Cost of unemployment in KSA (Estimate 1)

Economic loss in real GDP/output per worker (economy-wide)	
GDP: KSA (Department of Statistics and Information)[a]	$757,805,000,000
Total domestic labor force[b]	
Total employment	9,679,635
GDP per person employed	$78,289
Number of unemployed	
Scenario 1[c]	1,365,391
Scenario 2[d]	2,000,000
Loss in output	
Scenario 1	$106,894,539,593
Scenario 2	$156,577,184,987

[a]Central Department of Statistics & Information, Ministry of Economy and Planning
[b]Saudi Arabia Department of Labor (Information Center)
[c]https://www.hafiz.gov.sa/
[d]Authors' calculations based on KSA databases

further assumes that the average productivity lost per unemployed worker is, on average, equal to GDP per worker employed in KSA. For Estimate 1, the economic loss in real GDP to the KSA is between **$106.9 billion and $156.6 billion annually,** which is the equivalent of 400.8 billion SAR and 587.2 billion SAR, respectively (Table 8.1).

In Estimate 1, we assumed that the average productivity lost per unemployed worker is, on average, equal to the GDP per worker employed in KSA. Given that the unemployed Saudis, especially women, are fairly well educated, we would not expect this difference to be extreme.[5] To account for differences in output per worker in the oil sector and non-oil sector, we present an alternative estimate of GDP per worker based upon employment levels in the non-oil sector.

A claim can be made that the unemployed worker in Saudi Arabia would be employed in the non-oil sector of the economy and the lost GDP per worker estimate should reflect that. According to the Central Department of Planning and Information, the non-oil sector accounted for 55.2 % of the GDP of Saudi Arabia; the non-oil sector GDP in 2013 was $418.555 billion ($757.805 billion *times* 55.23 % *equals* $418.555 billion). According to the Saudi Arabia Department of Labor, the number of people employed in the non-oil sector was 9,587,239. Based upon these numbers, the real GDP per person employed in the non-oil sector in KSA in 2013 was $43,655 (163,706 SAR).

Table 8.2 provides an estimate of lost GDP in 2013 in the KSA in the non-oil sector based upon a lower bound estimate of 1,365,391

Table 8.2 Cost of unemployment in KSA (Estimate 2)

Economic loss in real GDP/output per worker (non-oil sector)	
GDP: KSA (Department of Statistics and Information)[a]	$757,805,000,000
Non-oil sector GDP percentage[a]	55.23 %
Non-oil sector GDP	$418,535,701,500
Total domestic labor force	
Total employment: Non-oil sector[b]	9,587,239
GDP per person employed in non-oil sector	$43,655
Number of unemployed	
Scenario 1[c]	1,365,391
Scenario 2[d]	2,000,000
Loss in output	
Scenario 1	$59,606,825,282
Scenario 2	$87,310,997,775

[a]Central Department of Statistics & Information, Ministry of Economy and Planning
[b]Saudi Arabia Department of Labor (Information Center)
[c]https://www.hafiz.gov.sa/
[d]Authors' calculations based on KSA databases

unemployed and an upper bound estimate of 2,000,000 unemployed (Table 8.2). This estimate further assumes that the average productivity lost per unemployed worker is, on average, equal to the GDP per worker employed in KSA in the non-oil sector. For Estimate 2, the economic loss in real GDP in KSA is between **$59.6 billion and $87.3 billion annually,** which is equivalent to 223.5 billion SAR and 327.3 billion SAR, respectively (Table 8.2).

Economic Loss in Real GDP in KSA: Okun's Law (Method 2)

A second method of estimating the lost output due to unemployment is based upon the relationship between GDP and unemployment. Okun's Law is a generally accepted empirical observation that describes the negative correlation between changes in unemployment and changes in GDP. In Okun's original work, he found that a 3 % increase in real GDP corresponded with a 1 % reduction in the unemployment rate, which would imply an "Okun coefficient" of 3.[6] Since Okun's original paper, there have been a number of revisions to Okun's methods and extensions to other countries and periods of time. Okun's coefficient has varied by time and country, but most often the coefficient estimate falls between 2.0 and 3.0.

In an update of Okun's Law utilizing data from 1960 to 1996, the Cleveland Federal Reserve Bank showed that a 1 % reduction in the

unemployment rate was associated with a 2 % increase in real GDP.[7] Jim Lee (2000) tested Okun's coefficient for 16 OECD countries and found that the mean Okun coefficients under alternative econometric specifications (Difference Model and Gap Model) ranged from 2.04 to 2.64.[8] In an empirical study of Okun's coefficient for four Mediterranean countries (Italy, Spain, Portugal, and Greece), Dritsaki and Dritsakis (2009), found a range of estimates from 1.6 (Portugal) to 2.4 (Italy).[9] In a report on the Saudi Arabian Economy, Dr. Mohamad A. Ramady estimated the potential output losses to Saudi Arabia using an Okun coefficient of 2.0.[10]

Given the differences in Okun's coefficients, we decided to use a more conservative estimate of our lower bound estimate of an Okun coefficient for Saudi Arabia. In the study by Jim Lee (2000) of 16 OECD countries, Dr. Lee's average Okun coefficient for 14 of those countries was 1.75.[11,12] We use a lower bound estimate of 1.75 and an upper bound estimate of an Okun coefficient for Saudi Arabia equal to 2.00. This means that a 1 % drop in unemployment would lead to a 2 % increase in GDP, or $13.26 billion (49.7 billion SAR).

In order to compute the total cost of unemployment using this method, we need to use the countries' overall unemployment rate. According to SAMA, the overall unemployment rate in 2013 in KSA was 5.6 %, which implies roughly 646,875 unemployed people. Since the *Hafiz* data suggest a larger number of unemployed, they would also suggest a higher unemployment rate. Based on scenarios 1 and 2, we estimate that the unemployment rate is between 12.36 and 17.12 %.[13]

Based on an Okun's coefficient of 1.75, going from the current unemployment rates to zero unemployment would result in a 21.63 %–24.72 % increase in GDP, which amounts to an additional **$163.94–$227.09 billion annually** (or 614.7–851.5 billion SAR annually). Based on an Okun coefficient of 2.0, going from the current unemployment rates to zero unemployment would result in a 29.97 %–34.25 % increase in GDP, which amounts to an additional **$187.36–$259.53 billion annually** (or 702.6–973.2 billion SAR annually). The results from Okun's method are displayed in Table 8.3.

Let us emphasize an important point about the first two methods. The average product method basically says that increasing employment by [X] percent will also increase GDP by [X] percent. Our estimated range of the unemployed in KSA (1,365,391–2,000,000), if employed, would represent an employment growth of 14.11 %–20.66 % and GDP growth of the same magnitude. Okun's coefficients take into account actual historical

Table 8.3 Economic loss in real GDP in KSA (Okun coefficients analysis)

		% change in GDP		*$ change in GDP (in billions)*	
Unemployment estimates	*Current unemployment rate*	*Okun coefficient: 1.75*	*Okun coefficient: 2.0*	*Okun coefficient: 1.75*	*Okun coefficient: 2.0*
Scenario 1	12.36 %	21.63 %	24.72 %	$163.91	$187.33
Scenario 2	17.12 %	29.96 %	34.24 %	$227.04	$259.47

patterns. One of the theorized reasons why the coefficients are consistently above 1 is that as more jobs become available, more people will enter the labor force to look for jobs. Thus, an economy will actually have to be employing a higher number of people in order for the unemployment rate to fall each additional percentage point.

Under Method 1 (average real GDP loss per worker methodology), the estimates suggest that the cost of unemployment (assuming 1,365,391 unemployed), in terms of lost output, ranges from **$59.606 billion to $106.894 billion annually** (or 223.5 to 400.8 billion SAR). Under Method 1 (average real GDP loss per worker methodology), the estimates suggest that the cost of unemployment (assuming 2,000,000 unemployed), in terms of lost output, ranges from **$87.310 billion to $156.577 billion annually** (or 327.3 to 587.2 billion SAR).

Under Method 2 (average real GDP lost utilizing an Okun coefficient of 1.75), the estimates suggest that the cost of unemployment, in terms of lost output, ranges from **$163.94 billion annually** (614.7 billion SAR or 21.63 % of GDP) to **$227.09 billion annually** (851.5 billion SAR or 29.97 % of GDP). Under Method 2 (average real GDP lost utilizing Okun coefficient of 2.00), the estimates suggest that the cost of unemployment, in terms of lost output, ranges from **$187.36 billion annually** (702.6 billion SAR or 24.72 % of GDP) to **$259.53 billion annually** (973.2 billion SAR or 34.25 % of GDP).

Finally, we should stress that in addition to the value of lost output, there are numerous other direct and indirect economic and social costs due to unemployment and underemployment. Many of these are more difficult to measure or estimate precisely, while others can be quantified only with data unavailable for Saudi Arabia. Yet we can be certain that consideration of these additional factors increases the total social and economic burden of

unemployment for Saudi society and the Saudi people well beyond the calculations for lost output estimated above, which alone are high enough to justify a strong policy focus on job creation. Some of these costs may even feedback through the economy to amplify the total impact of unemployment in terms of lost output. For instance, unemployment tends to heighten the sense of financial insecurity and diminishes consumer and business confidence in the economy, all of which translate into muted economic activity. Furthermore, unemployment negatively affects the physical and mental health for the unemployed and their families. One could argue that unemployment has severe public health effects including: stress, anxiety, depression, malnutrition, prenatal stress, early childhood development, domestic violence, child abuse, and suicide. Needless to say that with the rise in unemployment, we typically observe higher levels of inequality, poverty, crime, incarceration, and all the public health effects mentioned above, all of which translate into massive financial burden and social costs to Saudi society (Darity 1999; Feather 1990). However, we should also recognize that a full employment program will not necessarily eradicate all of these problems, but it will certainly eliminate most of these issues over time.

The Job Guarantee Program

Under the Job Guarantee program, community service employment would be provided for anyone ready, willing, and able to work who cannot find a job in the private sector or regular public sector. The program, therefore, acts as a powerful automatic stabilizer, with JG employment fluctuating counter-cyclically (Wray 1998a, Mosler 1997–98, Kaboub 2007a&b, Minsky 1965, Minsky 1966, Harvey 1989, Fullwiler 2007). When the economy is growing, the non-JG demand for labor increases and so the JG program will shrink as non-JG employers hire workers out of the JG program; if the economy should enter a recession, the non-JG demand for labor will fall, but instead of entering the ranks of the unemployed workers will flow into the JG program. Full employment will always hold, with only the ratio of non-JG to JG employment varying over the business cycle. Instead of some workers alternating between employment and unemployment with the expansion and contraction of the macroeconomy, they will alternate between non-JG employment and JG employment (see Fig. 8.1).

JG experience prepares workers for post-JG work, whether in the private sector or in government. Thus, JG workers should learn useful work habits and relevant skills. Training and retraining should be an important component of every JG job. Actually, just remaining employed rather than entering

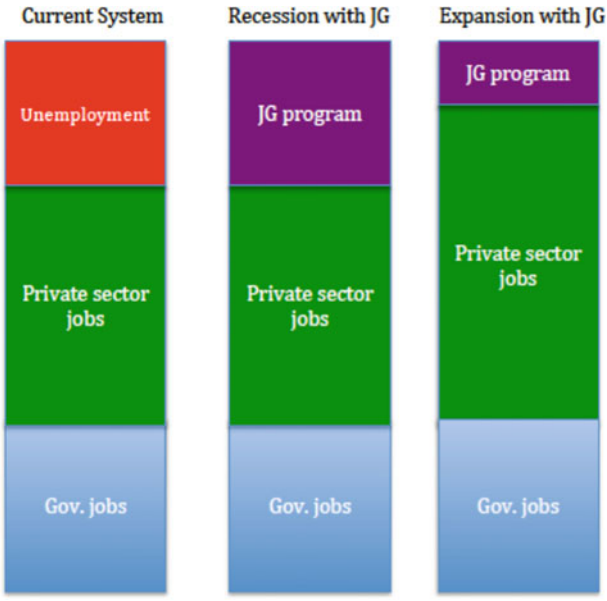

Fig. 8.1 Employment fluctuations during the business cycle

the ranks of the unemployed will serve to maintain the human capital of workers, as unemployment has been demonstrated to result in the deterioration of skills and knowledge.

JG workers will be engaged in socially useful activities, but they will not duplicate things already being done in the private sector or regular public sector (unless there is a severe shortage of such services). Importantly, JG activities will not compete with the private sector and the public sector will not be permitted to substitute government employees with JG workers.

The JG program provides full employment, but with flexible labor markets. With the JG, labor markets are loose because there is always a pool of labor available to be hired out of the JG program and into private firms. Currently, this kind of flexibility can only be maintained by keeping people unemployed. Thus, in the present system, flexibility comes at an unacceptably high cost. Firms will be much happier to hire out of the JG program rather than out of a pool of unemployed workers (Forstater 2000).

The Job Guarantee also allows for geographical flexibility and, therefore, minimal dislocation for JG workers and their families, neighborhoods and

communities. Firms are constrained by competitive pressures in their decisions concerning where to locate, but the same is not true of the public sector, including the JG program. Of course, there are still constraints on location for some public sector activities, and certain types of activities cannot be located just anywhere. However, many activities have no locational restrictions, and decreased costs of transportation and the expansion of information complexes have reduced such restrictions for many others.

There are significant regional and local differences in unemployment rates. Locational flexibility means that JG employment need not cause disruptive dislocation for workers. Rather, employment opportunities can be located where there are unemployed. The local administration of JG programs will facilitate this approach.

The national government pays the basic JG wage-benefits package, but local governments and neighborhood associations administer the program. Local administration has a number of advantages over a centralized bureaucracy. Local communities know what needs should be prioritized, and local traditions will be respected. The program promotes increased interaction with one's neighbors, and in this and other ways can strengthen community ties. The program therefore promotes mutual aid and reciprocity. Family and neighborhood empowerment follows from a program based on cooperation and local development. Numerous environmental benefits are also possible (Wray and Forstater 2004).

There are two main ways in which the JG program can promote ecological sustainability (Forstater 2006). First, JG workers can be directly employed in activities that enhance the environment. Examples include recycling, cleanup, community gardens, and so on. Second, even if JG workers are not directly engaged in activities related to the environment, an economy brought to full employment through the JG will be more sustainable than one in which the job creation comes through stimulating private sector growth. JG activities need not use scarce natural resources or methods of production that pollute. There is a whole spectrum of near-pure services that use virtually no natural resources at all.

Price-Stabilizing Features of the Job Guarantee Program

The Job Guarantee not only provides full employment, it also gives price stability (Wray 1998a&b, Wray 2012). This section briefly summarizes several strong price-stabilizing characteristics of the JG. First, JG workers may be engaged in public works such as infrastructure revitalization that

promote private sector productivity growth. Rising labor productivity, by lowering costs, serves to dampen inflationary pressures. Related to this is that the JG program, unlike unemployment, maintains and even enhances human capital. Education and training can be part of the program, which contribute to further increasing skills and labor productivity. Second, JG workers may be employed in activities that help reduce expensive social and environmental costs, such as environmental protection. Lowering these costs will also assist in stabilizing prices. Third, the increase in expenditure on Job Guarantee workers will be at least partially offset by decreases in other forms of expenditure on the unemployed, or the effects of unemployment. Thus, expenditures on *Hafiz* and some other forms of general assistance will decline significantly with the JG program. There may also be expected savings in the form of decreased expenditures on the indirect costs of unemployment. These factors range from reductions in spending on crime prevention and prosecution, and criminal justice related to unemployment, reductions in medical bills, and savings on other social and economic costs of unemployment. Fourth, the JG will tend to be less inflationary than income support for the unemployed such as the *Hafiz* because the former increases both supply and demand, while the latter increases only demand. This is another important anti-inflationary aspect of the JG program. Fifth, JG activities may be designed to avoid bottlenecks and structural rigidities, a frequent source of rising prices. Thus, the JG program provides for flexible full employment. Sixth, by setting the nominal value of the JG wage-benefits package, the JG program serves as a buffer stock of labor. The perfectly stable JG wage serves as an anchor for the price level.

The Cost of a Job Guarantee Program in Saudi Arabia

Calls for a Job Guarantee program are often dismissed because of two misperceptions: (1) the program will be too expensive, and (2) the wage will be too low to make any difference in the workers' lives. What we will demonstrate here is how false such assumptions are. We will propose a generous wage and benefits package for all the unemployed and demonstrate that the cost of the program is far less than the economic cost of unemployment. For the sake of argument, we will use the upper bound estimate for unemployment that we referred to above, namely two million unemployed Saudis. Additionally, we will propose a 5000 SAR ($1350) monthly salary for the JG employees as an approximation for a decent living wage in Saudi Arabia. Our estimates will also take into account an additional

15 % benefit costs per worker (750 SAR, or $202.5), which would cover healthcare and retirement insurance benefits. As a result, the gross annual wage and benefits bill for two million JG workers will amount to 138 billion SAR ($37.2 billion, or 4.9 % of GDP). Furthermore, we will also allocate an additional 10 % to account for all the logistical and material costs associated with planning, executing, and assessing the JG program. This brings the annual cost of the JG program to **151.8 billion SAR ($40.9 billion or 5.4 % of GDP**; Fig. 8.2).

When we used the most conservative Okun's coefficient for KSA (1.75), we found that the cost of unemployment (for 2 million unemployed), in terms of lost output, is **$227.09 billion annually** (851.5 billion SAR or 29.97 % of GDP). That is to say that the economic cost of unemployment is more than 5 times larger than the cost of implementing a Job Guarantee program in KSA (Fig. 8.3).

We must also underline that our estimates of the economic costs of unemployment did not include any of the social costs associated with unemployment. In other words, the actual total cost of unemployment is much higher than 851.8 billion SAR. We have, therefore, made a very conclusive case for the financial affordability of the JG program. We shall now turn to a presentation of alternative financing mechanisms that can facilitate the implementation of a Job Guarantee program in Saudi Arabia.

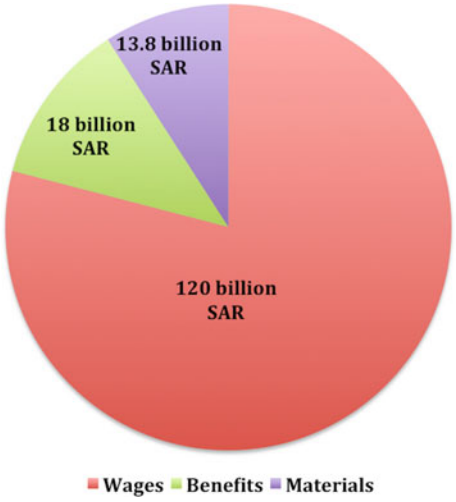

Fig. 8.2 Cost of employing 2 million JG workers in KSA

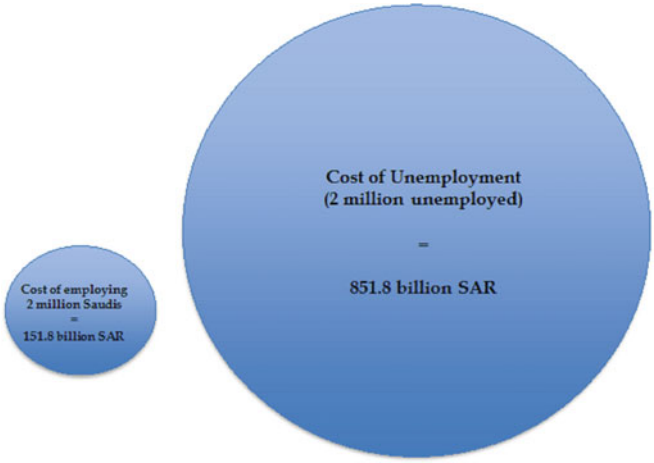

Fig. 8.3 Cost of Job Guarantee program versus cost of unemployment in KSA. Author's calculations

Alternative Financing Models

We have so far demonstrated that the cost of the JG program is far more affordable than the social and economic costs of unemployment. However, we do recognize that policymakers may still have some technical concerns about financing the JG program. We must first stress the fact that the private sector, left to its own devices, will not automatically create a sufficient number of jobs to absorb all the unemployed population. Therefore, we are left with two options. The government can either act as an employer of last resort or the non-profit sector (in coordination with both government and private sector entities) can act as a catalyst for job creation in the field of social entrepreneurship. In what follows, we present two models for financing a Job Guarantee program: (1) financial sovereignty, and (2) social venture partnerships.

Financial Sovereignty

A financially sovereign country is defined by the following characteristics: (1) it prints its own fiat currency; (2) it collects taxes and fines in its own currency; (3) it only issues bonds in its own currency; and (4) it operates under a flexible exchange rate regime. We can think of a spectrum of financial sovereignty rather than simply considering a country as either financially sovereign or not financially sovereign (Fig. 8.4). For example,

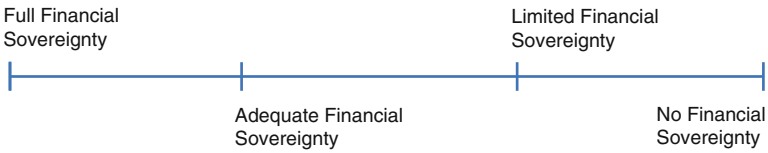

Fig. 8.4 The spectrum of financial sovereignty

countries like the United States, Japan, Canada, and Australia, among others, enjoy full financial sovereignty, which gives them a wider fiscal policy space to finance a Job Guarantee program or other social, economic, and environmental programs. However, countries that have completely given up their financial sovereignty are subject to very severe fiscal policy constraints that can only be relieved by generating substantial trade surpluses and foreign currency reserves, or through adequate access to international capital markets, IMF loans, or other bilateral loans (e.g., Greece, Spain, and Portugal, who now use a foreign currency (the euro), or Ecuador, which uses the US dollar as its national currency). Most developing countries have limited financial sovereignty, which limits but does not entirely prevent them from introducing a scaled-down version of the JG program (Wray 2007).

Saudi Arabia has an adequate level of financial sovereignty because of its substantial trade surplus and foreign currency reserves. It is the fixed exchange rate policy that precludes Saudi Arabia from having full financial sovereignty. However, because a speculative attack against the Saudi Riyal is nearly impossible thanks to the existing foreign currency reserves as well as the proven oil reserves (which also translate to future currency reserves), it is reasonable to consider that Saudi Arabia essentially enjoys the same fiscal policy space as countries that have full financial sovereignty.

The macroequilibrium accounting identity is defined as follows: *Government Sector Balance + Private Sector Balance + Foreign Sector Balance = 0.* This accounting identity holds true for *every* country and in *any* given year. Figure 8.5 shows the KSA data, which naturally confirms the validity of the accounting identity. KSA is one of few countries that have recorded a surplus in all three sectors in recent years: a government surplus, a private sector surplus (households and firms combined), and a foreign sector deficit (which is the equivalent of KSA's trade surplus with the rest of the world).

Let us now assume that KSA will finance the JG program through direct government spending in the amount of 151.8 billion SAR ($40.9 billion or 5.4 % of GDP). Using the macroequilibrium condition and the 2013 data from Fig. 8.5, this would reduce KSA's government surplus from 6.4 % to

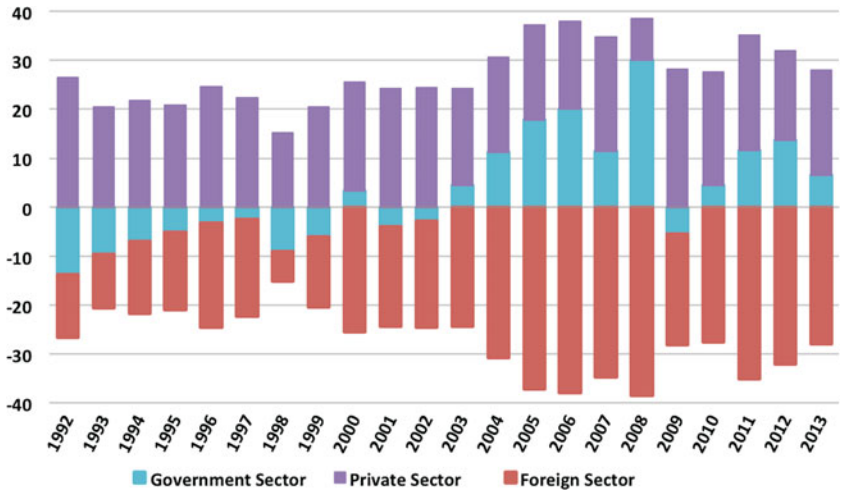

Fig. 8.5 KSA Sector Balances (1992–2013)

1 % of GDP. In other words, the impact would be either an increase in the private sector surplus (from 21.5 % to 26.9 % of GDP), a decrease in KSA's trade surplus (from 27.9 % to 22.5 % of GDP), or a combination of the two.

As a financially sovereign nation, KSA can simply spend money into existence and can afford to purchase anything that is for sale in its own currency. To put it simply, anything that is physically and technologically possible is also financially affordable for countries that enjoy full financial sovereignty. KSA is blessed with the financial resources that allow it to end unemployment and all the negative social and economic consequences that stem from it.

The increase in government spending will naturally translate into increased purchasing power in the private sector, which will in turn lead to an increase in demand for goods and services. If the domestic productive capacity is capable of handling this increase in consumer demand, then the result would be a boom in economic activity in the private sector rather than an increase in inflation. However, if the private sector is unable to meet the demand, then there will be an increase in imports, which would reduce KSA's foreign currency reserves. In the long run, if oil revenues drop dramatically and currency reserves are depleted, then an increase in imports would also mean higher levels of inflation. That is precisely why Saudi

Arabia must take advantage of the increased fiscal policy space that it enjoys today by investing in diversifying its economy and capitalizing on domestic resources and human capabilities. A recent report by Ernest & Young[14] shows that the economic multiplier effect of $1 invested in the GCC oil industry adds only $1.30 to GDP and affects seven industries; whereas a dollar invested in the construction industry yields $1.80 and affects nearly all other industries. Our detailed proposal for some strategic investments is outlined in section Strategic Programs for Jobs and Sustainable Prosperity.

Finally, we must also stress that Saudi Arabia can deal with any inflationary pressure arising from increased purchasing power by issuing government bonds at attractive interest rates, which would allow it to withdraw some of the excess purchasing power from the system (reduce inflation). Inflation is an inherent aspect of the economy. It is to be managed rather than feared. We should not let the fear of inflation stand in the way of full employment and sustainable prosperity.

Social Venture Partnership

Implementing a Job Guarantee program does not necessarily need to be exclusively financed by a sovereign government. What we are proposing here may actually be conducive to more effective and impactful implementation. Social Venture Partnership (SVP) is a financing mechanism aimed at capacity building in the non-profit and charitable organizations. The SVP structure would be decentralized and community focused.

There would be an SVP organization in every major city. Each SVP office is to be managed by a team of experienced business leaders, community organizers, philanthropists, and even government officials drawn from the local community/region. Funding for each SVP comes from a combination of government grants and philanthropic donations from banks, businesses, and individuals. SVP essentially acts as a regional community development agency focusing its activity on social entrepreneurship with the goal of improving quality of life for all members of society by investing in community-oriented services.

By design, the JG program is very decentralized. Every local community will have a number of social enterprises (SEs) that will match the existing skills of the local unemployed population with the pressing needs of the community. The idea is to take workers as they are, provide on-the-job training and professional development, and improve the overall quality of life for the local community. SEs will provide useful and productive

employment opportunities in a way that complements rather than competes with government and private sector activities. If the needs of the community involve public infrastructure or other forms of mainline government services, then those requests will be referred to the government for standard government appropriation.

The local SEs will select, implement, manage, and assess their own community projects; however, SEs may be linked at the regional and national levels to share expertise and learn from each other's successes and failures.

Funding and operations of the SEs will be based on an SVP business model. Each SVP office will periodically issue a Request for Proposals (RFP) calling on local SEs to submit grant applications to fund the implementation of their community projects. SVP will review the applications and interview the candidates to assess the effectiveness of the proposed projects and their expected social impact. The key criteria for funding will be capacity building for the SEs and their local communities and the sustainability of the proposed projects beyond the initial grant period. The ultimate goal is to create the maximum positive social impact for the community and to engage young men and women in meaningful and rewarding activities.

Once SEs are selected for funding by SVP, they will enter into contract with SVP to receive both financial support as well as direct consulting, mentorship, and staff training to ensure transparency, maximum capacity building, and successful implementation of the social venture. SVP will also assist SEs to develop the appropriate metrics for measuring KPIs and social return on investment.

SVP will operate as an incubator and an inspirational hub for youth-driven and community-driven social entrepreneurship ventures. Needless to say, the skills and experiences gained in these social ventures are 100 % transferrable into other professional settings including for-profit business ventures. Therefore, the SVP and JG model has the capacity to revolutionize labor market outcomes, spark innovation, reduce economic fluctuations, and improve quality of life for communities in need.

The SVP financing model has the advantage of minimizing the government involvement in financing and micromanaging the JG program. It also allows for complete ownership by local communities who can tailor the program to suit the specific needs of the community. The scope of what those SEs will actually do is unlimited and must be defined by the ingenuity and the creativity of local communities based on their knowledge and

expertise of their own needs, skills, and aspirations. What we will outline in the next section are simply some strategic areas that need to be part of a comprehensive policy framework to ensure sustainable prosperity and better quality of life for all members of society in Saudi Arabia.

Strategic Programs for Jobs and Sustainable Prosperity

In order for the Job Guarantee program to truly succeed in Saudi Arabia it must be designed and implemented in a way that respects and embraces the institutional fabric of Saudi society, culture, and economy. In other words, the specific jobs that will be created under the JG program will be tailor-made for Saudi social and economic realities. What is presented here is a sample of potential JG projects that are both feasible and beneficial for Saudi society. That said, the best way to select projects is through local community dialogue and consultation with all the relevant stakeholders. Furthermore, it is important to recognize that the JG program is not a silver bullet solution to all the economic and social problems faced by Saudi society, but a platform for designing a multifaceted set of policy initiatives that address a wide variety of social, economic, and environmental problems, while at the same time creating jobs, adding social and economic value, and improving quality of life for all members of society (Forstater 2006). That is to say, a problem or goal is identified, and then an employment-focused solution is designed that addresses the root cause of the problem or can achieve the goal. In what follows, we briefly outline a few examples of JG initiatives that can be implemented in Saudi Arabia.

Vocational Education and Job Placement: A School-to-Work System

As important as education and training are for the economy, they alone do not explain unemployment. Rather, there are structural constraints that lead to stubbornly persistent unemployment *even with* (actually, *especially with*) higher and more sophisticated levels of skills and education. Hence the importance of a Job Guarantee program to address the root causes of unemployment and the structural imbalances that may emerge as a result of excessive reliance on a narrow set of industries and skills. The Saudi educational system has a significant imbalance between the university education track and the vocational education track. As of 2013, 78 % of Saudi high school students were enrolling in university, a higher proportion than

any other country in the world (e.g., 56 % in OECD countries). By contrast, only 9 % of Saudi high school graduates were enrolled in technical or vocational training, compared to 41 % in OECD countries (Sfakianakis 2014[15]).

Furthermore, it is no surprise that young university graduates are not as experienced and competitive as foreign workers (from either the university or vocational training tracks). Unfortunately, the current Saudization program does not address the *process* of supplying trained workers to the Saudi economy, but rather focuses on the *composition* of the workforce at the end of that process. Implementing a *School-to-Work Job Guarantee* program can rebalance and diversify the composition of the Saudi economy across a wide range of economic sectors of sustainable prosperity.

The program would consist of an educational track either within the high school and university system or as a parallel track to the traditional education system. It would involve internships, externships, workshops and professional career exploration during years of education, followed by guaranteed employment in preselected strategic industries for up to four years. Upon completion of the program, participants may be awarded an in-kind incentive bonus (e.g., a house, share/partnership in a particular company, or some other incentive) for completing the program and for contributing to the development of the country's strategic industries and human capital.

Examples of these kinds of strategic industries may include sustainable/green construction (including all the vocational subcategories: electricians, plumbers, masons, etc.), sustainable housing (eco-villages), sustainable agriculture (hydroponic systems, water treatment/management, etc.), solar energy, health and wellness (preventative care, prenatal care, anti-diabetes care, elderly home care, and the like), education, hospitality, cultural heritage, digital media, social entrepreneurship, and so on. In addition to rebalancing the composition of the economy away from an exclusive focus on oil, there would also be a standard Job Guarantee program to address social services and local community development as a permanent full employment program. A few decades ago, university education used to be a ticket to the middle class, but this is no longer the case for so many people. That is why there must be additional policies to guarantee and sustain access to a decent middle class status through strategic guaranteed employment.

Green Construction: A School-to-Work System

The construction industry is one of Saudi Arabia's leading sectors. It is a labor-intensive industry that relies heavily on foreign labor. It is also one of the industries that has struggled the most with the Saudization efforts of the last few years. In addition, this sector is a very promising in terms of its future growth potential, Saudization capacity, value creation, and environmental sustainability. However, it must also be acknowledged that there are some very real obstacles impeding this sector's potential for Saudization. There is a cultural stigma against manual jobs related to construction, plumbing, electrical work, masonry, and carpentry. This stigma creates a barrier that prevents young Saudis from considering a career in the industry because of the negative perceptions about the social status associated with manual jobs, harsh working conditions, and low wages. Ultimately, these obstacles can only be eliminated when construction jobs translate into middle class status. This means they must be jobs with decent pay[16] that can support a family, and include retirement benefits, healthcare benefits, disability benefits, safe workplace environment (protective gear, safe equipment, safety training), and a reasonable work schedule (40 hours/week, overtime pay, vacation time). It is important to highlight that the Ministry of Labor has taken some key steps in the right direction, including imposing a de facto minimum wage for Saudis working in the private sector (3000 SAR) and banning outdoor work between noon and 3 pm during the hot summer months, but there is more room for gradual improvements.

The following proposal is a strategic long-term plan to achieve higher rates of Saudization in the construction industry by improving skills, embracing sustainable construction standards, and investing in a new generation of Saudi workers. The idea is simple: tackle the core of the social stigma against manual jobs by guaranteeing a middle class status, decent quality of life, and an honorable and dignified professional career.

This Green Construction initiative would be a partnership between government Ministries (including Labor and Social Affairs, Education, Public Works and Housing, Commerce and Industry, Finance, and Economy and Planning), regional chambers of commerce and industry, Saudi construction companies, and professional vocational education programs (such as the Technical and Vocational Training Corp) to recruit young Saudis (e.g., ages 14–16) to study and practice the construction trade. The green/sustainable curriculum would include hands-on practical

workshops on topics including insulation techniques, materials science, solar technology, water conservation, energy efficiency, and safety.

The Green Construction vocational training program would be offered as a parallel track to standard high school academic training. The training sessions would be organized in the afternoon, on weekends, or during the summer, in conjunction with practical apprenticeship sessions. The program could even offer a modest stipend to participants (e.g., 1000 SAR) as an incentive to join the industry. Furthermore, the Green Construction program should offer a clear, transparent, and guaranteed path to middle class status. After graduation from high school and finishing the required vocational training program (a joint degree or certification), the young graduates would be offered a *guaranteed* employment opportunity in the private sector as a certified Green Construction technician with a specialization (in plumbing, electric, solar, carpentry or another option). After four years of successful full-time employment, the young candidate becomes eligible to own a decent-sized apartment either free of charge or at a heavily subsidized price.

In a matter of 10–20 years, Saudi Arabia can successfully achieve higher Saudization rates in the construction industry, increase homeownership rates, reduce youth unemployment, and strengthen the middle class. Additionally, as an outcome of this program, the participant would be a:

1. young person in their mid-20s with professional skills and experience that makes them highly employable and productive;
2. homeowner who can start a family without worrying about finances, unemployment, paying rent, or borrowing from family or a bank;
3. person who can start their own construction-related business.

They may even decide to pursue an MBA, or a higher degree in a field such as architecture, interior design, solar technology, or materials science, so the standard university academic track is still an option and is not compromised or eliminated for people who opt for this program.

An important criterion for the success of this School-to-Work program would be getting the "right price" (i.e., wage, benefits, incentives) straight from the beginning, so that it is truly attractive as a career choice that leads to a decent quality of life through hardwork in a humane and dignified work environment. Needless to say, very high standards must be set and maintained in order to achieve excellence in terms of productivity and quality of production.

Finally, we should stress that similar School-to-Work initiatives could be developed in other strategic industries that have struggled to attract young Saudi workers in the past. Particular emphasis may be placed on advanced-skills manufacturing employment, healthcare jobs (e.g., surgical technicians, anesthesiologists, medical assistants, and prenatal care professionals), and artisanship (e.g., jewelry design and production,[17] other skilled crafts).

The Solar Industry: The Path to Sustainable Prosperity

To put it bluntly, solar energy is the single-most important natural resource that will dictate the future of the global economy. It is free, renewable, sustainable, and most importantly it has the potential of generating millions of skilled, semi-skilled, and unskilled jobs around the world. Saudi Arabia is fortunate to have the world's largest oil reserves and production capacity, which makes it a prime candidate to transition away from fossil fuels and move to 100 % renewable electricity production.

According to K.A.CARE (King Abdullah City for Atomic and Renewable Energy), Saudi Arabia is set to generate 41 GW through solar energy, 9 GW through wind energy, 3 GW through Waste-to-Energy plants, and 1 GW through geothermal energy by 2032. That is a total of 54 GW, which would be about 50 % of electricity consumption in the Kingdom. While it is an important step forward, we need to *double* our efforts to speed up renewable energy production and improve energy conservation. The good news, though, is that there is a tremendous potential for employment opportunities for young Saudis. These are jobs that not only pay well, but also bestow the pride and dignity that all employees want to have in their profession.

Saudi Arabia's ACWA Power has recently won a bid to build the world's largest solar power plant in the UAE (200 MW). The plant will generate electricity at a record low price of $0.058/kwh, which is 30 % cheaper than today's gas-powered plants in the UAE. This 25-year fixed-tariff deal is a winner for ACWA because the cost of solar power will continue to drop very rapidly, which will give ACWA further advantage relative to its global competitors.

According to a recent study by Deutsche Bank, the total module price for Chinese solar companies went from $1.31/kwh in 2011 to $0.50/kwh in 2014; that is, a 60 % decrease in just 3 years. The study also predicts a further 30 %–40 % price fall in the next few years due to improvements in conversion efficiency and economies of scale (Parkinson 2015[18]). The solar price

decline is not just a Chinese phenomenon, but is happening on a global scale, and it is happening simultaneously as installed solar PV capacity continues to grow at an unprecedented rate. Germany leads the world with more than 38 GW in 2014, followed by China with more than 30 GW. However, China's installed solar PV capacity is expected[19] to produce a record 100 GW by the end of 2018. In other words, accelerating Saudi Arabia's solar PV plans is a tangible reality that can reach 100 % of electricity consumption within two decades. Any additional production capacity can take Saudi Arabia to the next level in terms of economic diversification of industrial production and even export through submarine power cables (possibly to Egypt, Sudan, and Eritrea).

With excess capacity of solar-generated electricity, Saudi Arabia will have an additional competitive advantage. While today's electricity storage technology is still ineffective, solar surplus countries like KSA have the opportunity to invest in energy-intensive industries with a tremendous export advantage. In other words, there is an indirect way of "storing" and "exporting" solar power; it is through industrial production. While this is an important cost-saving advantage for all manufacturing and mining companies, *Al-Ma-aden* in particular will see its aluminum smelting operations not only become truly sustainable, but also more profitable in the long run.

Furthermore, we must highlight the importance of investing in the solar industry in a holistic way so as to ensure that most of the value added and jobs created are based in Saudi Arabia. Such jobs include installation of solar panels for homes and businesses, sales and distribution, customer service, marketing, management, project development, tech support, and maintenance. On the manufacturing side, there is a whole host of occupations that can be staffed by Saudi men and women. Most importantly, however, given the tremendous advantage that Saudi Arabia will have in terms of electricity surplus, it is imperative to exploit this advantage internally for the solar industry by investing in polysilicon manufacturing.[20] Polysilicon is a key input in Solar PV production. It is a hyper-pure form of silicon, but its production requires extremely high temperature to melt the silicon, hence the opportunity for solar surplus to be used in generating energy for Polysilicon production. Investing in Polysilicon will close the solar production feedback loop and will ensure its independence, resilience, and sustainability in the long run.

Finally, we would like to highlight the importance of supplying this industry with young Saudis who are adequately trained and prepared for the industry through competency-based education (CBE). This can also be

done through a School-to-Work Job Guarantee program similar to the Green Construction program outlined above. Therefore, the solar industry must also engage in strategic partnerships with science and technology universities (e.g., KAUST, K.A.CARE), vocational training and education centers, chambers of commerce and industry, as well as the appropriate ministries and government agencies (Ministries of Labor and Social Affairs, Education, Finance, Commerce and Industry, Economy and Planning, Petroleum and Mineral Resources, and Water and Electricity).

Public Health and Wellness

A society cannot be truly prosperous simply by having full employment at decent wages. One of the most important indicators of quality of life is the overall level of public health and wellness enjoyed by all members of society. Unfortunately, Saudi Arabia's number one public health challenge is diabetes. While diabetes is a global problem, Saudi Arabia has a prevalence rate of nearly 24 %, which is the highest in the Middle East and North Africa region, and ranks the Kingdom seventh in the world. According to the International Diabetes Federation,[21] 25,000 Saudis died from diabetes in 2014. About 31 % of Saudi children ages 10–14 are diagnosed with Type I diabetes. There is also a direct link between obesity and diabetes. According to a 2012 public health survey, 3 million Saudi children are obese and half of them have diabetes. The overall obesity rate is 36 %, which ranks the Kingdom fifth globally and third in the Gulf region.

The International Diabetes Federation predicts[22] that if no immediate action is taken to reverse these trends, 50 % of the Saudi population will have diabetes by 2030. Even more alarming, a recent study by Dr. Nasser Al-Salem Al-Qahtani[23] predicts that 75 % of Saudis will suffer from obesity by 2020 if no immediate action is taken. In short, this is a public health crisis that kills thousands of people every year, diminishes the quality of life for millions of Saudis, reduces productivity across the economy, and currently costs $10 billion in healthcare costs (34 % of the Ministry of Health's total budget[24]). The good news is that obesity can be eliminated and diabetes can be reduced through healthy diet and physical exercise. However, this is easier said than done. Fighting diabetes requires a measured and sustained public policy coordination involving several Ministries (Health, Education, Higher Education, and Culture and Information), youth and sports organization, food and beverage companies, medical professionals, and media networks.

A public health epidemic of this magnitude calls for the creation of a national campaign to raise awareness, educate the public, offer creative incentives for preventative action, and gradually influence dietary choices and physical activity levels. While the focus should be on the younger generation, targeted programs should be put in place for at-risk adults and for those who already have diabetes. This public health campaign would employ young Saudi men and women in a variety of capacities and across a broad spectrum of occupations (including marketing, media, social media, public relations, data collection, data analysis, education, training, coaching, and healthcare). Some of these activities could be provided through specialized community organizations funded through government grants or social venture partnerships. In other words, the policy objectives can be set at the national level, but the execution should be done in a decentralized manner.

Obesity and diabetes are not the only public health challenges facing the Kingdom. The list includes other conditions such as high blood pressure, high cholesterol, tobacco use, and all the diseases related to them (e.g., heart disease and cancer). There is the threat of MERS, Ebola, and other contagious diseases that naturally draw national and international attention and lead to fear and panic, but there are also a number of socially stigmatized health conditions that cause a lot of suffering for the patients and their families (e.g., ADHD,[25] drug and alcohol addiction, and psychiatric conditions). In short, a set of national health and wellness campaigns similar to the one outlined above for diabetes should be organized to form a comprehensive public health platform to reduce the incidence of these health conditions and their negative effects on the Saudi society and economy.

Furthermore, we want to stress the importance of staffing these national public health and wellness campaigns with properly trained and motivated young Saudis who can shepherd these initiatives and have a real positive impact for society. Therefore, we also recommend a School-to-Work Job Guarantee program aimed at preparing young Saudis to take leadership in this national public health and wellness campaign. Finally, we want to highlight a wide range of healthcare occupations[26] that require vocational training rather than a university degree and would, therefore, benefit from a School-to-Work Job Guarantee program. These occupations include dental assistants, dental hygienists, diagnostic technologists, EMTs, paramedics, home health aides, medical lab technicians, medical assistants, health information technicians, nuclear medicine technologists, occupational health and safety technicians, pharmacy technicians, Phlebotomists, physical

therapist assistants, radiation therapists, radiologic and MRI technologists, respiratory therapists, surgical technologists, prenatal care associates, early childhood development consultants, nutrition consultants, health and wellness consultants, and elderly care associates.

Cultural Heritage Preservation

Saudi Arabia enjoys the legacy of centuries of world civilizations at its crossroads. As the birthplace of Islam, the country is a major destination for Muslims from around the globe; and as one of the most prosperous countries in the world, the Kingdom's major cities are multicultural melting pots of burgeoning global intersections.

Nearly two thirds of the Saudi population is under the age of 35, while less than 4 % are 65 or older. As the structure of the Kingdom's demographic pyramid shifts and globalization continues to spread, local communities are inevitably influenced and gradually transformed by external factors. While religious traditions are deeply embedded in Saudi culture and are dearly protected by the Kingdom, there are other aspects of Saudi Arabia's culture and heritage that could be eroded and forgotten without a deliberate plan to preserve them. These traditions are usually passed on from one generation to the next by word of mouth and through communal practices. It is those traditions that usually suffer the negative consequences of globalization. The Job Guarantee program can be used as a mechanism to document, catalogue, interpret, and celebrate the Kingdom's cultural diversity, tribal traditions, and multicultural heritage.

About 63 % of college students major in education, humanities, Islamic studies, and social sciences. Critics often complain that too much emphasis is put on these fields as opposed to science, engineering, business, and vocational training. While we recognize that a more balanced distribution of training would be beneficial in the long run, we can capitalize on the existing pool of young graduates who are well qualified for cultural heritage preservation jobs. We can think of a variety of oral history projects that are designed to interview the most senior members of the community about local/tribal/regional/national traditions including: wedding ceremonies, folklore, dietary habits, food recipes, clothing styles, traditional dance/music/poetry, travel patterns, family trees, traditional medicine, proverbs, agricultural history, city/town landscape and architecture, and more. The gathered information can be catalogued and organized as a national archive,

edited into thematic books, published in online magazines and blogs, and disseminated through social media and traditional media channels.

Some of the output generated by this program will constitute a major cultural attraction from tourists coming from other parts of the Kingdom and from abroad. There is an inherent multiplier effect in terms of benefits to local communities and the national economy. At the individual level, many of the professional skills nurtured in this program are *transferrable skills* (writing, communication, organization, time management, professionalism, work ethic, program development, project management, accounting, audit, KPIs assessment, marketing, and social media). We can envision that some of the employees in this program would develop into experienced historians, sociologists, anthropologists, journalists, writers, poets, translators, and social media consultants. Similarly, their professional skills will give them a competitive advantage in the private sector in the fields such as public relations, marketing, management, sales, customer relations, human resources, and market analysis. Furthermore, one of the additional benefits of these jobs is the possibility of working on a flexible schedule from home, online, or by phone (phone interviews).

The creation of these cultural heritage preservation programs should be done in cooperation with the Supreme Commission for Tourism and Antiquities, and with additional coordination and funding from the Ministries of Information, Higher Education, Finance, Economy and Planning, and Labor and Social Affairs. The actual execution of these projects can be done through locally based social venture partnerships, but with the appropriate level of coordination and consultation at the regional and national levels.

Social Media and New Technologies

More than 50 % of Saudis are under the age of 25 and are very *connected*. Saudis are the world's number one YouTube users per capita. Saudi Arabia is ranked third in the world in terms of smartphone penetration[27] with 72.8 % Saudi users, slightly below the UAE at 73.8 % and South Korea at 73 %. However, Saudi women are the number one users of smartphones in the world at 77.4 % and the UAE a distant second at 74.6 %. Saudi Arabia also has the largest number of Internet users[28] (18 million) and active Twitter users[29] (2.4 million) in the Arab region. In other words, Saudi youth are set to become the leading users and generators of social media content in the region. There is an incredible opportunity to leverage their

talent, passion, and creativity in a way that creates jobs, sparks innovation, and nurtures entrepreneurship.

A good example of what Saudi youth can do is UTURN Entertainment, which has more than 280 million views on YouTube and more than 8 million followers on social media,[30] most of whom are Saudis. Some of the Job Guarantee programs outlined above have important social media and new technology extensions, especially in the areas of cultural heritage preservation, health and wellness, environmental education, and public safety. Finding new and creative ways of reaching young people and delivering high-quality entertainment and educational content is also an extremely valuable transferrable skill that can be used for the common good as well as for private business development purposes.

Furthermore, the Saudi economy has one of the most fertile grounds for the development of smartphone applications because the user base is large and the needs are abundant. This is where a School-to-Work Job Guarantee program can be introduced to focus on app development, design, marketing, customer relations, and related areas. The program can be an incubator for young people to learn the trade during their school years and then move into a guaranteed job to develop free apps with a social/cultural/educational mission for one of the JG programs outlined above (cultural heritage preservation, diabetes awareness, etc.). Social Media and New Technologies are sectors that can make Saudi Arabia a regional leader in technological innovation, venture capital, finance, and business development.

Additional Quality-of-Life Enhancing Services

Given the evolving nature of the Saudi economy and society, we did not attempt to provide a comprehensive list of all the possible Job Guarantee occupations, but rather highlight the wide spectrum of possibilities that can be explored. What follows is a brief list of Job Guarantee projects along that same spectrum. First, one of the most important aspects of designing and implementing well-informed public policies is having access to high-quality data sets (socioeconomic indicators, time series, longitudinal studies, surveys, etc.). The process of data gathering, analysis, and research is a very labor-intensive and skill-intensive enterprise that can leverage and cultivate the skills of many college graduates in the Kingdom. Needless to say, such research skills are also transferrable to private sector occupations in market analysis, marketing, big data research, and the like.

Second, two of the most important obstacles to women's participation in the labor force are access to childcare services and public transportation. Therefore, it may be very logical for some communities to provide those services in-house. In other words, some Job Guarantee workers can be hired to provide transportation, childcare, elderly care, community meals, or any other services needed within the Job Guarantee program.

Third, transforming the existing charitable infrastructure from one that primarily relies on volunteers with minimal experience to non-profit organizations that employ professionally trained full-time staff to support the specific mission of the organization and help build and sustain internal capacity. All such organizations contribute to enhancing quality of life for all members of society, including organizations assisting pilgrims, the elderly, people with disabilities, low-income families, orphans, emigrants, and victims of domestic violence. We also should not forget organizations that promote the welfare and protection of animals because animal cruelty is often the first sign[31] for potential violent crimes against humans.

Finally, we must stress the importance of rethinking the concept of "public works" in a way that embraces the skills and aspirations of Saudi youth. In today's Saudi Arabia, public works must produce social value, improve quality of life, protect the environment, preserve cultural heritage, and generate transferrable professional skills. By design, the Job Guarantee program is a transitional employment system; it allows young people to enter the labor market and get on-the-job professional experience while producing something useful for society. In a way, the ultimate long-term benefits of the Job Guarantee program are cultivated by the private sector in terms of added productivity and increased purchasing power for domestic consumers. As a result, it is reasonable to expect involvement and contribution from the private sector to help finance the program through social venture partnerships, but most importantly by providing *pro bono* consulting and mentorship to young social entrepreneurs and local community organizations that are committed to the Job Guarantee program.

Conclusion and Policy Recommendations

Saudi Arabia is at a critical stage in terms of its economic development. Since the 1970s, the Kingdom has built state-of-the-art infrastructure for housing, transportation, telecommunications, public utilities, education, health, tourism, banking, and industry. The rapid pace of economic development, which relied heavily on foreign workers, was initially benign, but as the

demographic balance began to shift, the country inevitably faced a serious youth unemployment challenge, which came with undesirable social and economic costs. This study estimated that the economic cost of unemployment in terms of lost output is **851.5 billion SAR annually** ($227.09 billion or 29.97 % of GDP). This is not only a waste of potential economic output and national income, but most importantly, it is a missed opportunity to leverage human capital and ingenuity and to give citizens a sense of pride, belonging, and civic participation; all of which are important aspects of their dignity.

This study also recommended the Job Guarantee program as a public policy platform for employing young Saudis through social venture partnerships, community development programs, and some strategic industries such as renewable energy, public health, cultural heritage preservation, and new technologies. When we estimated the cost of employing two million Saudis at a living wage of 5000 SAR with benefits, we found that the entire program would cost only **151.8 billion SAR annually** ($40.9 billion or 5.4 % of GDP), which is about one fifth of the cost of unemployment. In other words, not doing anything already costs five times the amount it takes to allow 2 million Saudis to be productive members of society. This study has also enumerated the social and economic benefits of the Job Guarantee program as well as its non-inflationary nature. We must also stress that our estimation of the cost of unemployment in Saudi Arabia is based on a very conservative set of assumptions and is limited to the economic costs. The actual total cost of unemployment is likely to be even higher than 851.5 billion SAR if we include all the social costs associated with unemployment.

After demonstrating that the question of affordability is essentially irrelevant, we turned our attention to some practical aspects of financing the program and to some realistic examples of jobs that fit the needs of the Saudi economy and the talent and aspirations of Saudi youth. In terms of financing the program, our analysis shows that Saudi Arabia enjoys a very high level of financial sovereignty that allows it to finance the program without any pressure on the exchange rate or domestic prices. We have also outlined a more decentralized and participatory financing mechanism that leverages management skills and financial resources from the private sector in a way that helps young Saudis develop transferrable skills while serving as agents of local community development. These social venture partnerships have the advantage of being custom-made at the local level to not only meet the

needs of each community, but also leverage the passion, skills, and creativity of these young entrepreneurs.

Our approach to job creation is tailored to the specific needs of the Saudi economy (Kaboub 2007c). In particular, we have emphasized the need for diversifying the structure of the economy and the composition of the skill-mix that is produced by the educational system. Our proposal includes an incentive-based School-to-Work system to attract young Saudis into vocational training in some strategic industries including green construction, solar industry, public health, and media and new technologies.

In closing, we would like to highlight the importance of some key reforms that must accompany our Job Guarantee proposal. First, education and vocational training reforms must continue to align pedagogical tools and learning goals with the needs of a more diversified economy. Second, Saudization programs that focus on quotas as opposed to the skills needed by the private sector will only marginally improve the chances of Saudis in the labor market while hurting productivity in the private sector (e.g., recent experience in the construction industry). We must recognize that many foreign workers bring valuable experiences and skill sets that are important for the Saudi economy. True Saudization cannot be achieved very quickly without negative consequences, which is why we stress the importance of well-targeted School-to-Work programs that can guarantee adequate Saudization within a 5–10-year frame. Third, Saudi Arabia must continue labor market reforms to regulate standards for work hours, workplace environment, and safety standards. Saudi youth, and women in particular, do not tolerate long workdays, limited holidays, and meager salaries/benefits that are common in the retail industry. Fourth, the Saudi government and the private sector must coordinate their efforts to reduce the compensation and workload gaps between government and private sector jobs for Saudis, and for foreign workers in the private sector. Fifth, improving female labor force participation and employment rate requires additional commitment from both the government and the private sector to ensure reasonable working hours, flexible schedules, telecommuting options, public transportation, adequate working environment, childcare services, and maternity benefits. Finally, we should acknowledge that employment policy cannot be designed and implemented by one or two Ministries; it is rather a national effort that should be coordinated with a number of relevant Ministries, government agencies, educational institutions, and regional chambers of commerce and industry.

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Notes

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13. We use the number of unemployed Saudi citizens for the total unemployed, given the extremely low prevalence of unemployment for non-Saudis.
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15. http://www.arabnews.com/news/588951.
16. Probably a decent starting monthly salary would be around 5000 SAR.
17. http://www.arabnews.com/news/520866.
18. http://cleantechnica.com/2015/01/29/solar-costs-will-fall-40-next-2-years-heres/.
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CHAPTER 9

Who Owns the Intellectual Fruits of Job Guarantee Labor?

Rohan Grey

The Problem

The neatly packaged synthesis of ideas, principles, and politically motivated rhetorical framing decisions that has come to be known as MMT has much to offer a range of political debates, ranging from fiscal policy and banking reform through to environmental, gender and racial justice. Like the various limbs and organs of the human body, these different offerings may appear to be more or less essential to MMT's core theoretical catechism, depending on one's particular vantage point and prior values. Nevertheless, to continue the analogy, it is not unreasonable to view the MMT corpus as being coordinated along two dimensions, and driven by two key forces, much like the human body is coordinated by its cardiovascular and central nervous systems. In particular, MMT's "brain" is its historical and technical understanding of the nature and operational dynamics of money, broadly understood as a mode of, and instrument for, social organization, and its "heart" is its full-throated and unapologetic advocacy for a universal right to dignified and meaningful work, ultimately enforced by the state through direct job creation.

These twin pillars function together in such a way as to bring macroeconomic theory back to its intellectual roots in applied moral philosophy, by

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simultaneously addressing the dual Humean questions of "what is," and "what ought" as they relate to the condition of unemployment under modern capitalism: "Money *is* a creation of the state," MMT tells us, "and employment *is* the act of buying labor with money. Thus, unemployment *is* what occurs when the state refuses to buy labor that is available for sale. Modern democratic-republican states that purport to represent the interests of their people *ought* not to allow this outcome to occur."

MMT's framing of the inherent symbiosis between money and labor is *prima facie* politically powerful: because unemployment is a monetary phenomenon, and money is a state phenomenon, unemployment is always and ever a political question about the monetary structure of the state. On the other hand, if that were all that MMT had to contribute, it would not be particularly original or politically useful, as it is trivially easy to say that the answer to "how to address unemployment?" is to "create more jobs," and that the answer to "but how will you pay for it?" is "create more money." Left unaddressed is how to respond to the obvious and inevitable counter-responses of (1) wouldn't that be make-work? and (2) wouldn't that be inflationary?

Luckily, however, MMT does address these concerns, through a nuanced empirical analysis of price formation, and the relationship between real and nominal growth, and the real social and economic cost of unemployment. To provide a crude summary, MMT argues that by offering a fixed nominal hourly wage rate to all potential workers,[1] a Job Guarantee program provides a real anchor for prices by, at the margin, stabilizing the real exchange rate of the currency at a specific amount of general labor time, provided that the productivity of such labor is, on average, equal or greater than if those individuals remained involuntarily unemployed.[2] In addition, MMT argues that market-based signals are merely one method of articulating preferences, and that it is possible for public, democratically-governed institutions to commit to the achieving and maintaining true full employment for all, while remaining agnostic on the question of which particular JG design model will be most effective in achieving that goal in any particular context.

Both of these responses are, in essence, claims about the viability of particular theories of value. The former asserts that, regardless of whether the labor theory of value is objectively true, it is possible to consciously design social systems that *make it true in practice*—at least, within the auspices of a jobs program.[3] Similarly, the latter suggests that although there is a risk that a JG program will produce signal imperfections, including some degree of make-work, that risk is not necessarily greater than the risk of distorted signaling due to the imperfect nature of market institutions as vehicles for achieving broader social outcomes.

These responses represent some of MMT's most important contributions to the public policy debate. They implicitly answer the question of "what might be"—without which answers to "is" and "ought"-style questions have little practical relevance—and in doing so, build political consciousness and stretch the political imagination with respect to fundamental economic reform. If Walter Lippman is right, and the way that the world is imagined determines in any particular moment what men will do, MMT invites its students to reimagine not only the relationship between money and labor, but also between money and labor on one hand, and the entire system of modern finance capitalism on the other.

In this respect, MMT can be seen, at least with respect to its head and heart, as a Polanyian project. It recognizes that money and labor are "fictitious commodities," and thus, cannot ever be properly integrated into the otherwise totalizing market-logic of capitalism. Instead, it seeks to conceive of, and justify their value system, and resulting regulatory structure, upon alternate, social grounds.

Viewing MMT through a Polanyian lens gives rise to a meaningful observation, namely, that MMT's core catechism deals little, if at all, with the social contradictions associated with land—Polanyi's third form of fictitious capital. For Polanyi, "land" is less a geographic term than a conceptual category; "another name for nature, which is not produced by man."[4] Although physical land clearly meets this definition, arguably so do things that are produced by "mankind" *in toto*, such as language, culture, and the law. All of these examples share in common the fact that they do not come into existence solely through the actions of individuals or private firms, nor do their use values derive from their respective consumptive utility. Instead, they are social institutions, created collectively and given value through their capacity to alter the dynamics of interpersonal relations.

At the same time, however, these various forms of "land," while being recognized as fundamentally social goods, are subjected to the same commodifying logic as chattel commodities. This process begins, and, as Marx observed, is at its most violent, with the process of enclosure that establishes exclusive private property rights in interests that either were not previously legally recognized, or were considered to be held in common on behalf of all people. Such privatization may be initially justified on a range of reasons, or, in some instances, not justified at all. Regardless, once established, private property rights typically are defended on the grounds that enclosure is necessary to prevent a "tragedy of the commons," or more mildly, to encourage via market-mechanisms the most efficient and socially optimal

use of scarce resources. Attempts to counter these critiques via reference to technological solutions, such as the use of dynamic access-based approaches as an alternative to the exclusive licensing of the electromagnetic spectrum, or via political solutions, such as the communitarian commons-management approaches highlighted by Elinor Ostrom,[5] have historically been met with limited success.

The political economy of privatization, broadly speaking, deserves greater emphasis within the MMT catechism, as privatization efforts have the potential to dramatically hinder, if not directly counteract, any positive influence of a job guarantee on the process of decommodification of social life. While this potential exists with all forms of "land" enclosure, broadly speaking, they are perhaps most acutely observable today in the context of intellectual property law.[6] As manual work and data interpretation is taken over by machines and algorithms, respectively, software becomes the primary underlying commodity of production. Similarly, as the rise of the Internet, cheap smartphones, and the "app"-based software economy reduces barriers to cultural production and entry into knowledge-based labor markets, the relative size of the intellectual, or creative, sector, is growing. Consequently, intellectual property assets now permeate the heart of almost every modern commercial industry, and comprise an increasing share of total global assets.

The significance of the digital revolution to the economic debate over the merits of intellectual property rights cannot be overstated. Unlike fisheries, or even the electromagnetic spectrum, ideas themselves are not inherently scarce or rivalrous. As George Bernard Shaw famously quipped, "If you have an apple and I have an apple and we exchange these apples then you and I will still each have one apple. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas." Historically, however, the scarcity, and thus the cost, lay in access to the physical means of reproduction of ideas. To put it bluntly, books were expensive to make, and the political concessions that printing press owners wrought from the public for their industrial investment were significant. Until the twentieth century, only Jesus Christ himself could assert the ability to feed five thousand with merely five loaves and two fish. Today, however, when it comes to intellectual nourishment, a single digital file can be replicated onto every networked computer on the planet, simply by pressing Ctrl C + Ctrl V.

While there are obviously non-trivial costs associated with the underlying infrastructure of the Internet, those costs do not significantly

increase with each new bitstream created. In other words, beyond the cost of maintaining the internet and underlying computer network, it is trivially cheap to infinitely reproduce digital knowledge goods that are already in existence.

Moreover, through the conceit of the facsimile, it is possible to "digitize" even non-digital cultural artifacts. For example, a priceless artwork cannot be replicated, but it can be photographed. A sculpture may be unique, but the .CAD file of its scanned image is not. Thus, as Columbia Law Professor and legal architect of the Free Software Movement, Eben Moglen, notes, "The great moral question of the twenty-first century is this: if all knowledge, all culture, all art, all useful information can be costlessly given to everyone at the same price that it is given to anyone; if everyone can have everything, everywhere, all the time, why is it ever moral to exclude anyone?"

This question is not one that Job Guarantee advocates can afford to remain agnostic about. It is possible, for example, to conceive of two future worlds, both of which have implemented a Job Guarantee, but with vastly different levels of intellectual property protection. In the first, intellectual property rights have been extended in perpetuity, almost all new knowledge and culture is privatized, public libraries are barren and underfunded, and individuals who work in job guarantee jobs retain their own copyrights and patents, and set their own market prices for consumer access upon publication. In the second, public spending and job-guarantee labor has been used to facilitate a revitalization of public knowledge sharing, leading to changing social mores that discourage exclusionary copyright claims over facilitation of sharing. Every individual carries, on their cell phone, a copy of the entire global public library, with every major book, song, academic publication, and poem in existence, and there are a myriad of large, mission-driven technological research programs using public money to disseminate scientific advances across the world at large.

Clearly, the degree of economic inequality and private control over social life in these two visions are vastly different. To the extent that the political goals of MMT including placing appropriate limits on the marketization of social life, and returning to individuals a degree of dignity and autonomy over their private lives, such goals are clearly hindered by a theoretical approach that does not fully address the enclosure of "land," and, broadly speaking, the intellectual property implications of its approach to full employment policy design. Conversely, by explicitly articulating the potential for an macroeconomic policy, centered around public investment and a

Job Guarantee, to actively serve as an engine of decommodification of various forms of "land," beginning first and foremost with intellectual property, MMT can expand its political impact, and establish itself as an heir of the full Polanyian intellectual project.

The Solution

Before diving into the policy details, we will take a brief sojourn into the world of intellectual property theory. At first glance, the intellectual property debate appears to be robust, with many diverse ideological and conceptual positions. With respect to copyright, for example, prominent legal theorists such as Landes and Posner (1989)[7] continue to defend the traditional school of thought that argues copyright can and should balance the trade-off between incentivizing authors and limiting public access to authors' works. Others, such as Frank Easterbrook, adopt a more radical maximalist approach, arguing that stronger and clearer copyrights increase the efficiency of markets and thus increase creative production in absolute terms.[8] At the other end of the spectrum, copyright skeptics like Yochai Benkler, in his magnum opus, *The Wealth of Networks* (2006),[9] argue that in the twenty-first-century networked society, the inhibitory effects of exclusionary copyright restrictions on non-market-based peer production outweigh their potential market benefits, and thus copyright fails to meet its own utilitarian criteria.[10]

In addition to utilitarian justifications, there are other non-economic justifications of intellectual property rights, including natural rights, authorial rights and communicative rights that hold sway in certain jurisdictions. However, the debate over the appropriate scope of copyright law remains dominated by utilitarian economic concerns for maximizing the production of new creative works. Opinions on the effectiveness of "strong" versus "weak" copyright regimes differ widely, while most are in agreement that an appropriate yardstick for comparison is their relative capacity to increase social production of art, culture and knowledge.

Upon closer inspection, these seemingly disparate approaches, in fact, share a common basis: the methodological commitment to approach the "copyright question" from an individualistic perspective. For the incentives theory school, this commitment is captured most clearly in the image of the lone Beethovenian artist, brimming with creative potential but unwilling (or unable) to actualize it in the absence of the external economic benefits

afforded to her by copyright. The public, by contrast, is relegated to the role of passive antagonist, desperate to benefit from widespread dissemination of the artists' work, yet unwilling to voluntarily pay the author the remuneration she desires. Despite the superior resources and coercive capacity of the public's legal and economic institutions, the artist is portrayed as being in the superior bargaining position in the long run by virtue of her capacity to simply refuse to commit to the pursuit of creative labor. Implicit in this framing is the assumption that the essence of the copyright problem is the risk of a Galtian crisis of deliberate underproduction by a specialized class of individuals, the "creators."

The neoclassical property rights school of thought takes the commitment to methodological individualism one step further. They retain the trope of the heroic artist, but reject the incentives theorists' claim that the normative goal of copyright law should be to balance the trade-off between her interests and those of the public. Indeed, with the exception of the "night watchman" functions of property protection and contractual enforcement, the neoclassical school largely rejects the premise that copyright policy should take into account the collectively expressed interests of the public whatsoever.

Instead, they argue that the allocation of scarce resources, including the labor involved in the production of creative works, is best determined by the spontaneous aggregation of subjective individual preferences through the decentralized price mechanism.[11] Consequently, the goal of copyright law should be to extend, to the greatest extent possible, the phenomena of capitalistic markets in real goods and services in the conceptual space. This theory thus places not only the creator, but also the consumer public and even the legal institution of copyright itself in the sphere of capitalistic markets whose dynamic core is the voluntary behavior of freely acting individuals.

The commons-based peer production school, on the other hand, employs an individualistic framework in an entirely different way. As Benkler describes, the focus of their inquiry is on the implications of new forms of social production made possible by the development of computer and Internet technology. Yet with the notable exception of the legal institutions of intellectual property, this approach tends to downplay the mediating role of the state in delineating the boundaries of hierarchical, market and non-market activity, and remains skeptical about its potential to be used as a vehicle for positive change. Instead, they focus specifically on how technological development affects the evolving dynamic relationship

between market and non-market ordering of interactions between individuals.

As Benkler argues, "the necessity for the state's affirmative role is muted because of my diagnosis of the particular trajectory of markets, on the one hand, and individual and social action, on the hand, in the digitally networked information environment. … There is more freedom to be found through opening up institutional spaces for voluntary individual and cooperative action than there is in intentional public action through the state."[12]

Refreshingly, however, Benkler's skepticism toward the relevance of the state to his analysis is explicitly couched in empirically contingent and narrow terms, as evidenced by his acknowledgment of the positive social role played by existing state programs such as public education, healthcare, as well as his advocacy of greater public investment in basic research.[13] Perhaps even more importantly, he emphasizes the state's capacity to interfere and actively harm the development of cooperative modes of production, particularly through the legal institution of copyright. Thus, the commons-based peer production school accepts the need for ongoing critical engagement with the state, but in a primarily defensive way in order to protect the commons and peer production against the encroachment of hierarchical or market forces.

The fact that these three contrasting schools share a commitment to methodological individualism allows theorists from different backgrounds to engage in constructive debate without getting bogged down in fundamental terminological or epistemological disagreements. However, the cost of this analytical unidimensionality is that structural problems that cannot be framed in individualistic terms are largely precluded from discussion. This would not be a major concern if such problems were of little immediate significance, or alternatively, if there was general consensus as to their appropriate remedy. When it comes to the realm of macroeconomics, however, the problems are large and pervasive, and there is significant disagreement even over the basic conditions of social reality. Consequently, the omission of systemic macroeconomic considerations from the copyright debate ends up resembling a debate on the merits of tails, where, after vociferous and prolonged debate on their biological function and aesthetic qualities, everyone comes to the realization that they have, in fact, been talking about the tails of different animals the entire time.

By contrast, the legal debate over the scope of patents is slightly more nuanced, in that it typically acknowledges a structurally significant role for

public investment in various areas of research and technological development. At the same time, however, there is no meaningful attempt to engage with the macroeconomic implications of the state's unique monetary powers, nor its unavoidable role as the investor-of-last-resort with respect to ensuring sufficient effective demand and work opportunities to maintain full employment. Instead, the debate typically assumes conditions of capital scarcity, whereby the funds to pay for public research derive from taxation of private enterprise, and, thus, in the long term, have limited potential to serve as an alternative source of major investment to the private market. Also, typically underlying these discussions is a belief that market forces are *prima facie* more effective aggregating individual preferences than democratic mechanisms, and, consequently, the latter is *per se* more desirable than the former. At the same time, however, there is a growing recognition in some sectors that research funded by public money should be made publicly accessible, as the citizenry writ large has "already paid" for its production, and should not have to do so again at the point of individual consumption. These green shoots are promising, but have yet to flourish into a coordinated, coherent public movement.

Thanks in part to the anemic state of both the copyright and patent discourses with respect to macroeconomic issues, it is possible to make the case for an anti-proprietarian agenda by effectively sidestepping the traditional copyright debate entirely, and framing the issue not as a macroeconomic extension of the intellectual property debate, but as an intellectual property extension of macroeconomic debate. The case for public investment in the creative commons is not grounded in some abstract belief in the superiority of non-proprietarian modes of production, or of public over private investment, but in the need to develop an intellectual property policy response to two incontrovertible macroeconomic facts: (1) in the case of monetarily sovereign nations, public money is not "taxpayer" money, but rather, is a legislative articulation of public will *sui generis*; and (2) the federal government cannot help but engage in an ongoing project of investment and job creation, at least some fraction of which will be spent on labor that involves a creative or intellectual component.

The primary policy implications of this conceptual approach undoubtedly manifests in the way that MMTs communicate and model the Job Guarantee program. Much as other MMT writings have stressed the disproportionate benefits of a Job Guarantee program to gender equality ("the Feminist JG"), racial equality ("the Anti-Racist JG"), environmental sustainability ("the Green JG"), and so forth, it is important to acknowledge

and highlight the potential of direct job creation programs to serve as a primary engine for the production of knowledge and culture (i.e. "the Intellectual JG"). Such an emphasis could be further deconstructed into support for artistic and scientific production, with the former having clear antecedents in the arts projects of the New Deal, and the latter paired with an argument for increased access to public higher education. This would redefine the meaning of "work" to incorporate, both ongoing education, and the production and dissemination of one's accumulated knowledge.[14]

However, in recognition that the Job Guarantee is ultimately intended to "mop up" remaining unemployment, rather than be the first-order source of public investment to reach necessary levels of targeted effective demand, an "intellectual" Job Guarantee can and should be supplemented with additional forms of public money-driven investment in non-proprietarian knowledge production. Many such programs and institutional vehicles already exist in some form, such as the national endowments for the arts, humanities and science, although they rarely are identified and grouped under such a common rubric. Moreover, few are articulated as large-scaled investment programs, in contrast to more robust conceptions, such as Mariana Mazzucato's proposals for "Mission-Oriented Finance for Innovation."[15]

In addition to expansion and greater emphasis on these proposals, another mode of facilitating non-proprietarian knowledge production is to directly provide citizens with an equal "investment vote," and allow communities the opportunity to crowd source investment decisions, with the sole caveat that all such options must be based around non-proprietarian production. One way of doing this would be to issue to every citizen an annual non-refundable investment voucher credit to every individual through a dedicated payments platform.[16] These vouchers could be given directly to creative worker, or alternatively, could be delegated to intermediaries to invest it on their behalf, subject only to registration requirements and minimum procedural oversight to prevent fraud. In exchange for access to such a pool, which at $100 per capita would be around $3 billion in size in the USA (more than ten times the amount annually appropriated for the National Endowment for the Arts), individual creative workers would voluntarily sign onto a government creative worker registry, much like non-profit organizations sign up for tax-exemption status, except the registry would be for identification purposes only—that is to say, administrative quality control would not be allowed. As with creative jobs under the Job Guarantee program, any individual receiving funds through this registry

would be required to publish any and all creative works under a non-proprietarian license.

These three modes of public investment—direct job creation, direct government spending, and indirect, government-financed-but-consumer-driven spending—could be given greater or lesser prominence, depending on the particularities of the political and social context in which they were applied.

Issues

An important issue raised by the Benklerian wing of copyright minimalists is the importance of adopting a "copyleft" approach to non-proprietarian cultural production, rather than merely relying on the traditional public domain. Under this approach, individuals receive copyrights for their work, but release it under conditions which allow anyone to use, modify, and distribute, provided that they, in turn, preserve such freedoms for the work *and any derivative works.* As Richard Stallman, the founder of the Free Software Movement explains:

> The simplest way to make a program free software is to put it in the public domain uncopyrighted. This allows people to share the program and their improvements, if they are so minded. But it also allows uncooperative people to convert the program into proprietary software. They can make changes, many or few, and distribute the result as a proprietary product. People who receive the program in that modified form do not have the freedom that the original author gave them; the middleman has stripped it away. In [our project], our aim is to give *all* users the freedom to redistribute and change [our] software. If middlemen could strip off the freedom, we might have many users, but those users would not have freedom. So instead of putting GNU software in the public domain, we "copyleft" it.
>
> Copyleft [. . .] provides an incentive for other programmers to add to free software. [. . .] Copyleft also helps programmers who want to contribute improvements to free software to get permission to do so. These programmers often work for companies or universities that would do almost anything to get more money. A programmer may want to contribute her changes to the community, but her employer may want to turn the changes into a proprietary software product. When we explain to the employer that it is illegal to distribute the improved version except as free software, the employer usually decides to release it as free software rather than throw it away.

> To copyleft a program, we first state that it is copyrighted; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code, *or any program derived from it*, but only if the distribution terms are unchanged. Thus, the code and the freedoms become legally inseparable.
>
> [. . .] Copyleft is a way of using of the copyright on the program. It doesn't mean abandoning the copyright; in fact, doing so would make copyleft impossible."

Thus, copyleft encourages the growth of the intellectual commons, while defensively protecting it from harmful dilution or theft. In contrast to simply eliminating property rights entirely, it adopts a quasi-ironic strategy of delivering anti-proprietarian outcome through proprietarian means.[17] Moreover, it does so without entering into a politically difficult fight over the limits of intellectual property protection *in general*, but rather exploits the existing protections in order to achieve a non-exclusionary outcome contrary to their original exclusionary intent, such that legal expansions in the scope of copyright laws do not undermine, but instead further defend the copyleft commons from degradation. In this way, the copyleft movement's ironic approach to intellectual property, and MMT's ironic approach to the monetary system[18] are natural siblings.

Another issue to be considered is the political nature of the information architecture itself. Simply because intellectual property rights are typically wielded as a means for legal rent-seeking, does not mean that all information ever produced should be publicly available. Privacy and other ethical considerations in the dissemination and use of information remain important considerations when considering the balance between worker autonomy and the public interest in sharing the intellectual fruits of publicly funded labor. In this way, the idea that an anti-proprietarian full employment agenda can help establish a "knowledge-sharing economy," founded upon scientific principles in accordance with the Deweyian concept of "democratic experimentalism,"[19] and driven by "big data" analytics, must take into account the long-established principles of scientific ethics with respect to experimentation on human subjects, and ensure that they are as fundamental to program design as the principle of information sharing.

Furthermore, when considering what copyleft arrangements to implement, recommend, or require to public workers, it is worth giving serious consideration to the non-economic justifications for various forms of "moral" or "authorial" rights in creative work,[20] as well as the potential

risks associated with conditioning access to public employment to acceptance of a particular vision of intellectual property. Such consideration obviously does not need to result in greater political timidity, or *per se* dilution of the copyleft agenda via accommodation of proprietarian models, but at the very least, it should be given weight when assessing the political costs of implementation, and when crafting the rhetorical and moral justifications used to sell such policies to the public. This is particularly important given that a coherent copyleft agenda would require changing *existing* funding procedures for a range of federal programs and public funding streams, as well as merely incorporating certain features into the design of future programs.

Conclusion

Modern Monetary Theory and its crown-jewel policy, the Job Guarantee, are revolutionary because they invert long-held social presumptions about the nature and source of investment, who bears political responsibility for unemployment, and the kinds of economic institutions that not only may be sufficient to address our macroeconomic woes, but are almost definitionally necessary to do so. Its insights transport existing political debates to new terrains, which have vastly different dynamics and power relations. In doing so, MMT raises the possibility of empowering new conceptual strategies for the promotion of freedom and justice in all of its many extant struggles.

One such struggle that, until now, has received relatively little attention is the fight against land enclosure that imposes private property rights in spaces, and on resources, that previously were public commons, in ways that promote the interests of owners and rent-seekers against the broader public purpose. In the digital age, that process manifests most obviously through the form of legal restrictions on how we create, use, modify and share streams of binary information that, when fed into and interpreted by a computer, spit out comprehensible words, sounds, images and machine instructions.[21]

The non-corporeal nature of the underlying "digital commodities" created by intellectual property rights brings into stark relief the legally (and thus, socially) constructed nature of the "market for ideas." Our capacity to create information is no longer limited by the number of printing presses in operation, or, in the final instance, by the number of trees that need to be cut down to produce the paper upon which the ideas are printed. Instead, it is patently obvious that the only reason we must purchase a copy of an mp3

file from a distributor, rather than copy our friend's version, is because the law tells us we must do so, purportedly out of concern for the need of the original artist to earn a living. The creation of a bitstream requires only a host medium in which for electrons to flow, and, as we enter the twenty-first century, such media are becoming almost as ubiquitous as people themselves. Thus, the only question that remains is: how do we pay for the labor required to make the first copy of the bitstream?

This question brings the intellectual property debate squarely into the realm of MMT. Rather than view the challenge of encouraging investment in creative production as a unique issue, beginning with the Gutenberg Bible in the sixteenth century, MMT correctly embeds it within the broader macroeconomic debate out of which it originally emerged. Creative production is ultimately a special case of production in general, and while a special theory may be warranted, it must be developed against the backdrop of, and in relation to, the general theory.

Thus, MMT has much to offer those involved in the movement for intellectual freedom. But simultaneously, the movement for intellectual freedom has much to offer MMT, inasmuch as it highlights an analytical and operational dimension of macroeconomic policymaking in need of further theorization and debate within the MMT literature. For those seeking to pick up the MMT mantle and carry it into the next generation, much heavy lifting remains to be done in this space. It is my hope that this chapter will serve as a starting point for that discussion.

Notes

1. Or, conceivably, a fixed nominal index of tiered wage rates, based on publicly recognized credentials and/or demonstrated practical competencies.
2. In other words, if the JG wage is $15 an hour, then each dollar is valued at 4 minutes of the average person's time.
3. This observation recalls that well-known economics joke: "That works very well in practice, but is it true in theory?"
4. K. Polanyi, (1944), *The Great Transformation*, Boston: Beacon Press. p. 72.
5. See Elinor Ostrom, 1990, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press: United Kingdom.

6. See, e.g., James Boyle, 2003, The Second Enclosure Movement and the Construction of the Public Domain, 66 *Law and Contemporary Problems*, pp. 33–74.
7. William Landes & Richard Posner, 1989, An Economic Analysis of Copyright Law, 18 J. Leg. Stud. 325, 325–333.
8. Frank Easterbrook, 1990, Intellectual Property is Still Property, 13 Harv. J.L. & Pub. Pol'y 108.
9. New Haven: Yale University Press.
10. See also Eben Moglen, 2003, The dotCommunist Manifesto, available at http://emoglen.law.columbia.edu/my_pubs/dcm.html.
11. For background to this view, see Friedrich Hayek, 1978 The Constitution of Liberty, University of Chicago Press: Chicago.
12. Benkler, 2006, p. 22.
13. *Id*., p. 21.
14. The obvious model for this is the university academic, who, in addition to providing a direct "service" (i.e. teaching students), is expected to continue their own education, and publish scholarship. For an example model of this, see Bernard Lietaer, 2010, The Saber: A Currency for the Educational Sector, available at http://www.lietaer.com/2010/01/the-saber/. Alternatively, one could view the Buckaroo and Denison Volunteer Dollar models as implicit examples of "Intellectual JG" programs. See Warren Mosler, 2010, The UMKC Buckaroo: A Currency Model of World Prosperity, available at http://www.huffingtonpost.com/warren-mosler/the-umkc-buckaroo-a-curre_b_970447.html; Fadhel Kaboub, 2012, Denison Volunteer Dollars: The Currency of Civic Engagement, available at https://www.youtube.com/watch?v=vSQ6POEV86U.
15. See Mariana Mazzucato, 2013, Mission-Oriented Finance for Innovation: New Ideas for Investment-Led Growth, *Policy Network: United Kingdom*.
16. This model is almost identical to Dean Baker's Artistic Freedom Voucher proposal, but where he proposes a refundable tax credit I propose a direct monetary grant issued through a dedicated payments platform. See Dean Baker, 2003, The Artistic Freedom Voucher: Internet Age Alternative to Copyrights, Center for Economic and Policy Research, at http://www.cepr.net/documents/publications/ip_2003_11.pdf.
17. Of course, there are many different forms of copyleft licenses. For more on the philosophical and legal differences between various

them, see Anne Barron, 2012, Kant, Copyright & Creative Freedom, 31, Law and Philosophy, 1–48.

18. Rather than viewing the monetary system as the source of the evils and excesses of capitalism, MMT treats it as its ultimate source of potential redemption.
19. See, e.g., Michael C. Dorf & Charles F. Sabel, 1998, A Constitution of Democratic Experimentalism, 98 Columbia Law Review 2, pp. 267–473.
20. See, e.g., Jane Ginsburg, 2015, The Author's Place in the Future of Copyright, in Ruth Okediji, ed., *Copyright in an Age of Exceptions and Limitations*, Cambridge University Press, 2015.
21. See, e.g., Eben Moglen, 1999, Anarchism Triumphant: Free Software and the Death of Copyright, First Monday ("We need to begin by considering the technical essence of the familiar devices that surround us in the era of "cultural software." A CD player is a good example. Its primary input is a bitstream read from an optical storage disk. The bitstream describes music in terms of measurements, taken 44,000 times per second, of frequency and amplitude in each of two audio channels. The player's primary output is analog audio signals [. . .] Like everything else in the digital world, music as seen by a CD player is mere numeric information; a particular recording of Beethoven's Ninth Symphony recorded by Arturo Toscanini and the NBC Symphony Orchestra and Chorale is (to drop a few insignificant digits) 1276749873424, while Glenn Gould's peculiarly perverse last recording of the Goldberg Variations is (similarly rather truncated) 767459083268. Oddly enough, these two numbers are "copyrighted." This means, supposedly, that you can't possess another copy of these numbers, once fixed in any physical form, unless you have licensed them. And you can't turn 767459083268 into 2347895697 for your friends (thus correcting Gould's ridiculous judgment about tempi) without making a "derivative work," for which a license is necessary. At the same time, a similar optical storage disk contains another number, let us call it 7537489532. This one is an algorithm for linear programming of large systems with multiple constraints, useful for example if you want to make optimal use of your rolling stock in running a freight railroad. This number (in the U.S.) is "patented," which means you cannot derive 7537489532 for yourself, or otherwise "practice the art" of the patent with respect to solving linear programming

problems no matter how you came by the idea, including finding it out for yourself, unless you have a license from the number's owner. Then there's 9892454959483. This one is the source code for Microsoft Word. In addition to being "copyrighted," this one is a trade secret. That means if you take this number from Microsoft and give it to anyone else you can be punished. Lastly, there's 588832161316. It doesn't do anything, it's just the square of 767354. As far as I know, it isn't owned by anybody under any of these rubrics. Yet.").

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Note: Page numbers with "n" denote endnotes.

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