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

Bibliography

Harvey, P. 2013. Wage Policies and Funding Strategies for Job Guarantee Programs. In *The Job Guarantee, Toward True Full Employment*, eds. M.J. Murray, and M. Forstater. Basingstoke: Palgrave Macmillan.

Hicks, John R. 1983. The Keynes Centenary: A Skeptical Follower. *The Economist*, June18, 17–19.

Kaboub, Fadhel. 2009. Employer of Last Resort Schemes. In *International Encyclopedia of Public Policy, Volume Two: Economic Policy*, ed. Philip O'Hara. Perth, Australia: GPERU.

Mosler, Warren. 1995. *Soft Currency Economics.*

Wray, L.R. 2013. The Euro Crisis and the Job Guarantee: A Proposal for Ireland. In *The Job Guarantee, Toward True Full Employment*, eds. M.J. Murray, and M. Forstater. Basingstoke: Palgrave Macmillan.

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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.

He has extensive experience as a consultant to the Australian government, trade unions and community organizations, and several international organizations (including the European Commission, the International Labour Organisation and the Asian Development Bank).

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