

MODERN MONETARY THEORY AND ENERGY CONSERVATION: AN INSTITUTIONALIST APPROACH TO FISCAL POLICY AND ENERGY CONSERVATION

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Abstract

This paper will set out to develop a policy proposal that is couched in the Modern Monetary Theory (MMT) framework of fiscal policy analysis. MMT teaches us that a sovereign government that issues a free-floating currency is not bound by the tenets of what can be termed "sound finance." Sound finance suggests that all government spending is preceded by the taxing or borrowing of the currency being spent. According to MMT, since the currency is issued by the sovereign nation during the process of spending, then this spending must take place before any taxing or borrowing is done. A federal deficit is not something to be eliminated but is the normal situation, with inflation being the only real measure of spending exceeding economic capacity. Sovereign governments are currency issuers, and the money has value if the government is willing to accept it in payment to itself. This creates policy space for spending programs that are socially and ecologically beneficial. Similarly on the tax side, there is policy space to structure the tax system in a politically determined way. The tax system is one way in which the citizens of a nation engage economically with the government. The tax obligation serves as a value anchor for the fiat currency. The tax system can be designed to incentivize behavior in line with a more ecologically sustainable future. This paper will suggest that by taxing living space in a progressive manner, multiple social and economic goals can be accomplished as the economy is transitioning toward a more environmentally sustainable future.

I. INTRODUCTION

TAXES are said to be the cost of civilization, but what are they *for*? How do they affect socio-economic and environmental outcomes? If we can divorce ourselves from the conventional wisdom of taxes being used to pay for government spending and instead understand that what is needed is a tax *system*, regardless of exact revenue raised to engage in public spending, then we can envision a tax system that could also incentivize a reduction in energy use. Carbon taxes have such a goal in mind, but the proponents of the carbon tax see a problem on the horizon if carbon is reduced too significantly, there will be no taxes to pay for spending. What is needed is an incentivizing tax that also will not be eliminated. The Living Space Tax, a tax on the total living space of each citizen, could satisfy this policy need.

According to the well-respected institutionalist economist Paul Dale Bush (*The Theory of Institutional Change*, 1987) . . . institutionalists lay stress on the term "socially prescribed." While it is entirely possible for human behavior to exhibit random characteristics, institutionalists argue that all behavior within a community is ultimately subject to social prescriptions or proscriptions. This is especially true of all problem-solving (purposive) behavior. The community at large has a stake in its life processes. Those patterns of behavior perceived to be vital to the survival of the community are the most carefully prescribed and carry the heaviest sanctions." The social prescriptions that are required to not suffer the worst consequences of a changing global climate include reducing energy consumption in all its forms. The Living Space tax would seek to accomplish this dual function: to serve as

a base tax to drive the currency so that spending could be used to accomplish transitional goals (such as an environmental jobs guarantee), and to also itself serve as a policy that incentivizes less energy consumption, as it is a progressively-designed tax on total living space and energy consumption.

II. TAXES

There are competing views regarding the function of taxation that derive from differing fundamental understandings of money, such as the nature of money, how it enters the economy, what effects money has on economic activity, and importantly for our purposes here, what drives the value of money? Depending on the point of view one takes on the nature of money, policy options will either be constrained and ineffective or freed to perform an important social role in the economy¹. Much has been written regarding the Modern Monetary Theory approach to money, or MMT. Most of the MMT literature focuses on one side of fiscal policy, namely that of the federal government's spending. A sovereign government with a free floating, non-convertible currency can spend whatever is required to fully employ all those who are willing and able to work for the government's currency (Wray, 1998). The only true constraint to fiscal policy in this framework is inflation via real resource constraints.

But what gives the currency its value? Why do people accept the government's money, even when the money is not backed by gold, silver, or another currency? 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 nation to extinguish tax liabilities. Smith (1776) writes, "A prince who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind might thereby give a certain value this paper money, even though the term of its final discharge and redemption should depend altogether on the will of the prince. "The government does not require the currency to pay for its spending, but rather the citizens require the government currency to pay their tax liability. Seen from this point of view, taxes are not a function of 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 to raise Aggregate Demand (Kalecki, 1937)? Can they be useful in changing the behavior of economic actors via incentives?

Taxes may be used to "tax bads" to incentivize a reduction of some undesirable activity. The progressive or regressive impacts of each tax must be considered as well. For instance, the income 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. Income taxation places a higher proportion of the tax on those that work and earn an income, which ignores significant wealth disparities. The income tax also does nothing to reduce energy consumption. The income tax, for the purposes of this paper, is not an effective tax. Various tax schemes will be explored further, but the point is that discretionary taxation becomes an option under the Modern Monetary Theory policy framework.

III. MODERN MONETARY THEORY, CHARTALISM AND FUNCTIONAL FINANCE

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. Often, however, these same constraints are assumed to exist for a sovereign government. If money is understood to be a finite stock of some commodity (such as gold), then it will have a price determined by its relative scarcity. 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 which can be represented in the form of debts and credits on balance sheets (Innes, 1913).

MMT follows in the theoretical and descriptive footsteps of Abba Lerner and his approach to fiscal policy that he called "functional finance." Functional finance is the idea that the government's spending, taxing, and borrowing

¹To provide background to the heterodox approach to economics, this work will outline what is meant by envisioning the economy not merely as an allocator of scarce means among competing ends, but as a much more broadly understood social and material provisioning process. By recognizing the social and technical interdependencies throughout the economy, this work, as well as most heterodox theory, attempts to build upon the foundation laid by Political Economists from Quesnay to Keynes.

should all be conducted with an eye only on the effects these actions have on real economic outcomes (Lerner, 1943). According to Lerner,

“The central idea is that government fiscal policy, its 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. This principle of judging only by effects has been applied in many other fields of human activity, where it is known as the method of science opposed to scholasticism. The principle of judging fiscal measures by the way they work or function in the economy we may call Functional Finance. . . Government should adjust its rates of expenditure and taxation such that total spending in the economy is neither more nor less than that which is sufficient to purchase the full employment level of output at current prices. If this means there is a deficit, greater borrowing, ‘printing money,’ etc., then these things in themselves are neither good nor bad, they are simply the means to the desired ends of full employment and price stability.” (Lerner, 1943)

Importantly for the present work, the value of the currency is derived from the work required to obtain that which is necessary to pay taxes. Due to the ability of a government to impose a tax liability on its citizens, it can then declare what is required to pay these taxes. The taxes 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. 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 Monetary 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 must exist in the first instance 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 paper will outline the environmental dilemma and further discuss Environmental Tax Reform, the ‘single-tax,’ and a comprehensive proposal.

IV. ECOLOGICAL IMPERATIVES

The form of Capitalism that currently dominates the modern world is in crisis. Not only does it face a deep and long-lasting cyclical downturn, but 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 share holder value and growth (Eichner & 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 can 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 (Kapp, 1971). 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 costs of inflation and unemployment brought forth by ‘uncompetitive’ wages and environmental regulatory costs. The combination of this dual threat was grouped under the common heading, ‘planning.’ Economic planning, at least regarding 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, 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 growth and prosperity. The political actions that are being taken to mitigate climate change effects such as Carbon Trading and REDD+, have been a public relation '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 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, Burger, Field, Norgaard, & Policansky, 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 shown, 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, but the survival of our natural world. The Post Keynesian notion of uncertainty has an increasingly prescient meaning in an environmental context.

Dr. James Hansen 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 & Reisinger, 2007). Ocean acidification is a process where the natural capacity for the ocean to function 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 most of the world's coral reefs will disappear within the next 10-20 years, which is directly attributable to 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 such as hurricanes, floods, and droughts. The year 2022 saw one of the highest numbers of natural disasters worldwide on record and this will 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 an economic 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 probable 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 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 rather leads to more (Jevons, 1865; Foster, 2002).

The movement toward new forms of production and social provisioning will require a transition 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 paper 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).

V. POTENTIAL TAX REFORMS

i. 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 challenging 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 via the price mechanism. However, the idea that taxes can be levied on undesirable economic behavior may be potentially useful. First, 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 & Schleiniger, 1999). And if the taxes were levied on the industry, 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 350ppm. The ecological taxes would work best as part of a larger, more comprehensive approach to greening the economy. This approach would include a publicly financed Green Jobs program based on Minsky's Employer of Last Resort model (Forstater, 2006).

From the Modern Monetary 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. This would have the ultimate effect of driving the value of the government's currency downward. For this reason, ETR should be a part of a comprehensive plan, but not relied upon as the base tax. Also, 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 one hundred percent of their income, while Capitalists would pay a much smaller proportion of their income on the tax. Those who can save a portion of their income would be avoiding paying the tax on income that is not consumed. This distributional effect would have negative consequences for the economy as saving would be desirable over consumption and production (Kalecki, 1937).

ii. 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 the 'best use.' The best use from this standpoint is, of course, the most economically productive use (Gaffney, 1999). Ignoring issues of exploitation, distribution and increasing energy consumption, 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 used 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. Lower taxed, but higher priced land on the periphery of town would then be comparatively more expensive. This would decrease the amount of land that is used productively on the periphery as 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 current trend toward "15-minute cities" could be strategically designed.

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 & Coughlin, 2005). The result has been a reduction in capital improvement taxation, a reduction in employment taxes and a slight increase in the tax on land rent. 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 must be overly 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 U.S. is contained in the form of land and buildings (Feder & Hudson, 1997).

Most programs for a single tax on land are pushed as local or state taxes, but under Modern Monetary 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 from moving to a different state to avoid taxation 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 left and the right. The political left in the U.S. sees it as an opportunity for the appropriation and redistribution of wealth and those on the right can see it 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 over 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. There may be elements of the single tax that would be worth

preserving, but at this point the better tax to serve as both a driver of the currency and a promoter of environmental conservation is the square-foot and energy tax.

iii. 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 Monetary Theory, the idea is that the tax must be a liability that most everyone must pay to derive the greatest purchasing power for the government money. Since all human beings require some form of residential housing, 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 from 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 10.6 percent (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, but lot sizes have stayed the same, leading to the effect of less yard space. This has peripheral effects that may be related, such as childhood obesity rates from less outside 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 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.

iv. The Living Space Tax

A federal property Tax being tiered, first by land value, then square feet of building size, and finally 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) fairly distribute wealth and increase aggregate 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 & Hudson, 1997).

A progressive tax based on the living space of adult citizens in the U.S. could be designed to eliminate excessive investment in real estate, reduce energy consumption through a reallocation of existing structures to those that need shelter, a reduction of homelessness and an economical reallocation of living space. The tax would be progressively designed so that the more total living space one person owned, the higher the tax bracket, with the highest brackets paying significantly higher rates of tax. This would only affect those that own multiple properties and engage in land and property speculation. It would serve as a speculation tax, reducing the tendency for the economy to suffer through significant economic cyclical activity (Leamer, *Housing Really Is the Business Cycle: What Survives the Lessons of 2008-09*, 2015). The Living Space Tax would be designed to reduce energy consumption and therefore could be paired with tax credits for energy-efficient investments to counter-act the Jevon's paradox effects of energy efficiency leading to increased space and countering the decade by decade increase in the average home size. The Living Space tax, by taxing the total living space would incentivize economizing on space, energy and allow the utilization of resources. This would have a similar effect to the outcomes achieved by "Red Vienna" in the inter-war period. More housing was achieved by a taxation scheme that incentivized a reduction in space and a reallocation of resources toward those that will not waste it. Empty space is associated with increased crime and unsafe neighborhoods as well (Wyatt P. , 2008).

VI. CONCLUSION

Modern Monetary Theory rests on the Chartalist notion that ‘taxes-drive-money’ and, as Joan Robinson asked regarding employment policy, “What should this employment be for?” I am asking 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 Monetary 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 which would eliminate certain highly destructive activities through ‘command and control’ legislation. This combination of employment, taxation and direct command policy options must be combined to achieve the goal of transition to a sustainable economy. Any one policy alone cannot do the job adequately.

The development of a feasible Ecological Base Tax would be a positive first step toward this end. The environmental effects would be obvious, but the fact that in taxing residential property, tax avoidance would be far more difficult and easier to enforce. The tax could be designed in such a way to promote progressive taxation to increase aggregate effective demand. Another aspect of a tax on real wealth versus income is that it would be less pro-cyclical. The current crisis has shown that the level of tax revenues for the government declines severely during a recession as unemployment increases. This effectively increases the size of the government deficit, which economically is not a problem, but severely restricts the political will of the population at large, as they see the debt as something that must be ‘paid off.’ The Ecological Base Tax would work toward providing a more stable, simple, ecologically friendly federal taxation scheme which will drive the value of the currency and stabilize the economy.

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